



Yashwantrao Chavan Maharashtra Open University

Principles and Practices in Distance Education

Index

Unit 1 : Learning Methods	1
Unit 2 : Distance Education System	11
Unit 3 : Communication Technologies in Distance Education	23
Unit 4 : Characteristics of Distance Learners	36
Unit 5 : Multimedia for Optimum Learning	46
Unit 6 : Philosophical Perspectives of Distance Education	56
Unit 7 : Andragogical Aspects of Distance Education	68
Unit 8 : Economics of Distance Education	78
Unit 9 : Management of Distance Education	100
Unit 10 : Managing a Need Based Mass Education	115
Unit 11 : Growth of Distance Education	129
Unit 12 : Distance Education in Developed Countries	143
Unit 13 : Distance Education in Developing Countries	166
Unit 14 : Distance Education in India and Around	184
Unit 15 : Growth of Mega Open Universities	204
Unit 16 : Quality Control in Distance Education	222
Unit 17 : Cost Effectiveness in Distance Education	241
Unit 18 : Networking Among Open Universities	260
Unit 19 : Staff Development for Distance Education	272
Unit 20 : Openness and Flexibility in Open University System	286

Yashwantrao Chavan Maharashtra Open University

Vice-Chancellor : Dr. B. P. Sable

Director : Dr. Surya Gunjal

School Council in Agricultural Sciences

Dr. Surya Gunjal Director, School of Agricultural Sciences YCMOU, Nashik	Dr. Prakash Atkare Reader, School of Agricultural Sciences YCMOU, Nashik	Dr. Somnath Suryawanshi Co-ordinator (PG) School of Agricultural Sciences YCMOU, Nashik	Dr. Pandit Palande Director, School of Commerce & Mgmt. YCMOU, Nashik
Dr. Rajendra Wadnere Director, School of Continuing Education YCMOU, Nashik	Dr. Ramesh Warkhede Director, School of Humanities & Social Sci. YCMOU, Nashik	Prof. Namdeorao Shinde I/C Director, Student Services Division YCMOU, Nashik	Prof. Ramchandra Tiwari Director, School of Computer Sciences YCMOU, Nashik
Shri. Jayantrao Mahalle Director, Department of Horticulture Maharashtra State, Pune	Dr. Kisanrao Lawande Director, N. R. C. for Onion and Garlic Rajgurunagar, Pune	Shri. Vijay Patil Director, Agricultural Extension Maharashtra Council for Agril. Education and Research, Pune	Dr. Satish Bhonde Joint Director, National Horticultural Research & Development Foundation, Nashik
Shri. Shivaji Fulsundar Programme Executive Prasar Bharati, Mumbai	Shri. Rambhau Shirode Progressive Farmer A/p : Umbarkhed, Dist :- Jalgaon		

Programme Expert Committee

Dr. Surya Gunjal Director, School of Agricultural Sciences YCMOU, Nashik	Dr. T.S. Khuspe Ex Director, Extension Education Mahatma Phule Krishi Vidyapeeth Rahuri	Dr. S. V. Supe Ex Director, Extension Education Dr. Panjabrao Deshmukh Krishi Vidyapeeth, Akola	Dr. Satish Rastogi Director, Student Evaluation & Examination YCMOU, Nashik
Dr. L. P. Kamble Ex Director, Extension Education Mahatma Phule Krishi Vidyapeeth Rahuri	Prof. G. A. Shaikh Ex Registrar Vasantdada Sugar Institute, Pune	Dr. D. L. Sale Professor of Agril Economics, College of Agriculture, Pune	Prof. P. R. Waghmare Associate Professor of Statistics, Marathwada Agricultural University, Parbhani
Dr. D. B. Yadav Dy. Director Research, (Econ.) Mahatma Phule Krishi Vidyapeeth Rahuri	Dr. A. M. Degaonkar Associate Professor of Statistics, College of Agriculture, Latur	Dr. S. M. Kareppa Associate Professor of Statistics, Mahatma Phule Krishi Vidyapeeth, Rahuri	Dr. S.D. Nimbalkar Ex Prof. of Agril. Extension Mahatma Phule Krishi Vidyapeeth, Rahuri
Dr. S. L. Sananse Associate Professor of Statistics, Zonal Agril Research Station, Karjat	Prof. S. W. Jahagirdar Associate Professor of Statistics, College of Agriculture, Akola	Dr. M. J. Wattamwar Associate Professor of Statistics, College of Agriculture, Pune	Dr. Prakash Atkare Reader, School of Agricultural Sciences, YCMOU, Nashik
Dr. S. D. Suryawanshi Ex Professor & Head Mahatma Phule Krishi Vidyapeeth, Rahuri			

Expert Writer

Dr. Satish Rastogi
Director, Student Evaluation and Examination
YCMOU, Nashik

Editing Team

Dr. Surya Gunjal Director, School of Agricultural Sciences YCMOU, Nashik	Dr. Somnath Suryawanshi Co-ordinator (PG), School of Agricultural Sciences YCMOU, Nashik	Dr. Prakash Atkare Reader, School of Agricultural Sciences YCMOU, Nashik
--	--	--

Production : Shri. Anand Yadav, Production Officer, Print Production Centre, YCMOU, Nashik

© 2003, Yashwantrao Chavan Maharashtra Open University, Nashik

□ First Edition : June 2003

□ Publication No. : 1177

Typesetting : Akosis, Nashik

Cover Design : Nitin Mahamuni, YCMOU, Nashik

Printer : M/s. Vikas Electricals & Ceramics Products Pvt. Ltd., M.I.D.C. Area, Satpur, Nashik - 7

Publisher : Dr. N.R. Kapadnis, Registrar, Yashwantrao Chavan Maharashtra Open University, Nashik

ISBN : 81-8055-040-0

FOREWORD

Dear Students

The School of Agricultural Sciences of our university has always remained at the forefront in planning and implementing need based and innovative programmes in Agricultural Sciences through the distance mode. They have worked out a unique and flexible model of multiple entry and multiple exit that provide for vertical mobility for each and every aspirant in the farming community.

This university has received an International Award of Excellence in Distance Education from the Commonwealth of Learning, Canada, for its innovative approach in operating distance education to suit the common man and woman in every sphere of life. The university has catered to over six hundred thousand learners in Maharashtra including 40000 farmers since its establishment in 1989. The School of Agricultural Sciences has contributed substantially in this endeavour.

The School of Agricultural Sciences would now like to move further ahead and cater to the educational needs of village leaders, extension specialists and policy makers in the field of Agricultural Education and Development. Taking into account the national perspective, these are the nontraditional areas that need to be addressed with the help of the powerful tools of Information and Communication Technology (ICT) in order to reach the unreached.

The Post-Graduate and Research programmes in Agricultural Communication, Agricultural Extension and Agricultural Development would definitely equip and arm the agricultural experts in using tools of Information and Communication Technology and promote Virtual Education in Agriculture and Rural Development. The virtual education would proceed from Class Education to Mass Education and would cover distance learners from un-reached communities including farmers and farm women.

I am quite confident that the learners striving to complete these innovatively developed educational programmes would soon establish themselves as pillars of the distance education movement in India.

I wish you all a happy and rewarding learning experience in this university.

*Professor B. P. Sabale
Vice-Chancellor
Yashwatrao Chavan Maharashtra Open University, Nashik*

WEL COME

Dear Friends

On behalf of the School of Agricultural Sciences, I would like to welcome you to our Post Graduate and Research programmes in Agricultural Communication, Agricultural Extension and Agricultural Development. The programmes would meet the long felt need of extension workers and policy makers in the field of Agriculture and Rural Development.

The term distance education refers to Intentional Processes of Teaching and Learning in which physical space separates teachers and learners. Teachers and learners communicate through various media and an educational organization exists to design, facilitate and evaluate the educational process.

The Food and Agriculture Organization (FAO) is an international catalyst involved in promoting distance learning for diverse and globally distributed learners, organizations and communities, whose capacities and actions ensure the achievement of Food Security and Rural Development

The role of FAO in distance education and learning was spelt out in the Rome declaration on World Food Security, in 1996. The international community leaders had made the core commitment thus “We recognize the need to adopt policies conducive to investment in human resource development, research and infrastructure for achieving food security. Our sustainable development policies will promote full participation and empowerment of people, especially women and equitable distribution of income, access to health care and education and opportunities for youth.” Consistent with their commitment, FAO has recognised the best practices in pedagogy of distance education and distance learning.

With this commitment from FAO, it may safely be assumed that at flexible mode will soon be capable of reaching every home and will empower each individual to achieve a better standard of living. Since you are the ‘early bird’ having an access to distance education, your involvement as a student in our post-graduate programme, will certainly go a long way in benefiting the distance learning system in the country.

I wish you all the best in your learning endeavours.

*Professor Surya Gunjal
Director
School of Agricultural Sciences
Yashwantrao Chavan Maharashtra Open University, Nashik*

Unit 1 : Learning Methods

Index

- 1.1 Introduction
- 1.2 Content
 - 1.2.1 Learning in Ancient Days
 - 1.2.2 Conditions of Learning
 - 1.2.3 Theories of Learning
 - 1.2.4 Learning Methods
 - 1.2.5 Man and Machine Ratio for Learning
- 1.3 Glossary
- 1.4 Summary
- 1.5 Exercises for Practice

1.1 Introduction

In the Vedic days, the aim of preaching by Saints and Sanyasis, was to make the learner (Students) memorise certain *shlokas* and *mantras*. There was no consideration to individual differences, mental abilities and social factors which affect learning. Later on, Psychology came into existence and **Educational Psychology** became a branch of study. The emphasis in the process of learning shifted from teacher to learner. Various learning theories were involved and learning strategies were developed. Due to recent developments in the field of teaching-learning process, a new branch of study known as '**Educational Technology**' has emerged. It has given emphasis to Process and not the Learner in the field of teaching and learning.

The use of multimedia has made mass education possible in different need based areas. This revolution has widened the scope of much application of various technologies in the field of education. Managing a need based mass education is the aim of every Open University in the world.

After the study of this unit, you will be able to know and understand :

- Old beliefs about learning phenomenon
- When and how learning takes place
- How the level of learning can be increased
- The Role of Machine as multimedia for mass education

1.2 Content

1.2.1 Learning in Ancient Days

It is evident from history that in ancient days the number of learners was limited to a few, belonging to the royal family of king. Education was restricted to a very few persons and not for all. Eklavya was denied admission by Guru Dronacharya on this ground. At that time, books and answer scripts were not invented, and so, memorisation of certain *shlokas* or *mantras* beneath a tree was learners business. There was no emphasis on a person's intelligence, study habits, various media for teaching-learning.

Later on, education was opened for public. Madarsa or Schools were opened and different learning stages were framed. The Psychology of learning invented the idea of individual difference and a wide variety of learning strategies were developed. During the last fifty years, the concept of management has entered in the field of education and class room management for an effective communication between the teacher and the learner has come into consideration

1.2.2 Conditions of Learning

Learning is an active process in which the learner interacts in a given situation. Learning can be made effective by observing following conditions.

1. Motivation

Learning can be ensured through increased motivation, which may develop needs or make them focused. Motivation generates in the student a strong and continuous desire to learn from the situation.

2. Psychological Safety

Learning is a process of interaction in which the learner actively participates in the learning situation. The learner would not participate freely unless he feels safe. In an atmosphere of threat, a learner is not able to participate actively and freely. The attitude of a teacher has a significant part to play in creating psychological safety. A despotic teacher, strict with his pupils, does not usually inspire confidence in them. A more liberal teacher, helping students to participate freely, provides the kind of psychological safety necessary for learning. A group, of which the learner is a member, is another source of threat or safety. If the group tolerates frank observation, bold ventures and encourages free discussions, the members feel safe in trying out new ways. This helps in better learning.

3. Experimentation

Since learning is an active process, no learning is effective unless the learner exposes himself to the learning situation. The learner tries out new ways and sees whether these works well or not. It helps in active learning. More passive learning is not effective. When a person does the learning work himself, it is more effective than by mere observing or it is more effective listening.

4. Feedback

After solving a problem, everyone wants to know whether his solution is correct or not. This is called feedback. It helps for the evaluation of information drawn from the act of learning. The principle of feedback has been utilised in the development of “Teaching Machines”. These are mechanical devices to help learning. The student reads in the teaching machine a problem and indicates the solutions of his choice, by pushing a particular button. The machine operates and tells the student, whether his answer is correct or not. He may also be told why his answer is not correct. This is immediate feedback to the learner.

5. Practice

An important condition in learning is practice. This is particularly true of skill based learning. No amount of theoretical reading can make a person a good swimmer, or a good typist or practical agriculturist. Practice, or what is usually called as drill

work, is a necessary condition of learning. Since most of our learning involves skill, this condition is applicable almost to all learning situations. Practice should be covered with conceptual learning. This makes learning more effective and also more meaningful.

1.2.3 Theories of Learning

Learning is relatively a permanent change in behaviour, and it is the result of reinforced practice. This definition of the learning assumes that certain conditions in the environment bring about fundamental changes in our behaviour that persist for a long time. Learning is not directly observable but is inferred from one's performance. We can infer that a person has learnt something, when he does something which he could not do before. **There are three main theories of learning as stated below :**

1. Behaviouristic Theory

The Behaviouristic groups is very comprehensive and it includes a variety of thoughts, but all these thoughts suggest a common approach to learning in terms of the development of connections in the organism between stimuli and responses. Based on laboratory experiments with animals, behaviourists concluded that learning is a process by which Stimulus and Response bonds are established (***S-R bond***), when a successful response immediately and frequently follows a stimulus.

They have established **three laws of learning known as (i) Law of Effect, (ii) Law of Readiness and (iii) Law of Exercise**. The law of effect stresses the importance of the effect of a response. Satisfying results reinforce the response while annoying results weaken it. Reward and Punishment, are therefore, important ingredients in the process of learning. The law of readiness indicates the student's willingness to make S-R bond connection, while the law of exercise relates to strengthening the connection through practice.

Educational Implication of this theory

The behaviouristic approach to learning has tremendously influenced the modern education. Psychologists have suggested the adoption of following three principles in teaching - learning process.

- (i) Knowledge of result and use of positive reinforcement.
- (ii) Minimum delay in reinforcement.
- (iii) Elaboration of complex behaviour by dividing learning into a series of small steps.

2. Cognitive Theory

“Cognitive Psychology” has taken an important place in the psychology of learning over the last three decades. This theory has a consideration of the activities such as perception, concept formation, language use, thinking, understanding, problem solving, attention and memory. Thus, cognitive approach is concerned with the individual’s inner psychological functioning, and it contents strongly the behaviourists emphasis on overt behaviour. Cognitive theorists have shown that people learn by perceiving, comprehending and conceptualising the problem. The comprehension of concepts and rules, etc. is transferable to the solution of new problems. The cognivists argue that people grasp things as a whole. They believe, learning is both a process of ‘insight’ formation and successful problem solving, and not a mechanical sequence of stimuli and responses. Therefore, teaching according to cognivists, should encourage understanding based on “problem solving” and insight formation.

Educational Implications of this Theory

The major emphasis of this approach is on how to design educational activities to promote cognitive learning. Below are the major educational implications of this approach.

1. The most important aspect of cognitive approach to education relates to promoting retention of knowledge acquired through learning. The ability to retain knowledge acquired through learning. It depends on how best it is understood and stored in the mind for long term use.
2. Teaching materials should be planned on the basis of the theory of discovery. Instructional methods, therefore, should emphasis the spontaneous discovery, and competency of the learner. It indicates that active learning methods should be adopted to motivate the learner to rediscover the facts or find solution to the problems.

3. This approach emphasises appropriate decisions regarding the instructional objectives, analysis of prerequisite behaviour and teaching methods.
4. Besides, it stresses problem-oriented learning. It gives a detailed description of how to teach in a reflective way by raising problems and solving them.
5. Lastly, it emphasises the study of learner characteristics which can be used by the teacher to expand the quality of students insights.

3. Gagne’s views on Learning

Robert M. Gagne is a famous educational psychologist whose “**Conditions of Learning**” are generally employed in teaching-learning process. He identifies the factors that account for the complex nature of human learning. He has described **eight types of learning** as given below.

Learning Type	Brief Description
1. Signal learning	The individual acquires a conditioned response to a given signal, the learning is involuntary.
2. Stimulus-Response learning	The individual makes a response to specific stimuli; the desired response is rewarded.
3. Chaining	Two or more previously learned stimulus response connections are linked together.
4. Verbal association	Chains that are verbal e.g. a child identifies an object and calls it by its proper name (e.g. ‘the red ball’), or he finds a Marathi word equivalent for an English word.
5. Multiple discrimination	The learner learns to distinguish between psychomotor and verbal chains he has already acquired.
6. Concept learning	A common response to a class of stimuli; in learning a concept the learner responds to stimuli by identifying its abstract characteristics like shape, colour etc.

7. Rule learning	In learning a rule we relate two or more concepts. For example, under the temperature 100°C, the water will boil. Here temperature and boiling point are concepts
8. Problem solving	Learner uses the rules learned to achieve some goals; problem solving is the combined product of two or more lower-order rules; it thus requires internal events (thinking).

Educational Implications of this theory

There are three broad educational implications of this theory.

- 1. Pre-requisite Behaviour :** Gagne advocated that processes of learning move from the simple to the complex. The learner has to develop Pre-requisite capabilities before he acquires new terminal behaviour. Thus, the use of hierarchy of learning and task analysis is an integral part of instructional activities.
- 2. Learners Characteristics :** Learners' individual differences, readiness and motivation to learn are the important issues to be considered before designing instructional activities.
- 3. Cognitive Process and Instruction :** Transfer of learning, students self-management skills, and teaching students the skills of problem solving are integral parts of internal conditions of learning, applicable to the instruction. The skill of learning "how to learn" should be developed in the learner. The emphasis should be on the individuality of the learner.

1.2.4 Learning Methods

The learning takes place at three domains in the mind and body. These three domains are **Cognitive Domain, Affective Domain and Psychomotor Domain.** The Cognitive domain is related to the knowledge gained by the mind. The affective domain is second stage and is related to changes in Interest, Attitudes, Values and Sentiments. How do we feel is a matter of affective domain. The Psychomotor domain pertains to the action by the body as per the directions of the mind. On the basis of these three domains there are three methods of learning as given below.

- (1) **Learning by listening** (related to Cognitive domain)
- (2) **Learning by viewing** (related to Affective domain)
- (3) **Learning by doing** (related to Psychomotor domain)

The learning by listening is temporary and a person may forget after some days. The learning by viewing has some impression on the mind of the learner and it remains for some days. The learning by doing is permanent and a person develops some required skills for behaving in future also. The first method can be covered by classroom lecture, overall discussion, radio talk, telephonic talk etc. The second method is covered by viewing the charts, films, T.V. programmes, newspaper etc. The third method is covered by working in the field, like farming work, swimming, driving etc. For example, a radio talk about crop diseases will cover learning by listening. The video film about crop diseases and their control will be learning by viewing. But controlling crop diseases by the person himself either independently or under supervision of experts will be learning by doing. Thus, we see that **Learning by doing is a permanent learning** and it develops competency for doing that work.

1.2.5 Man and Machine Ratio for Learning

The use of machine by man during teaching learning process is not a new concept. In earlier days also, use of various teaching aids like black board, maps, charts was with an aim to provide necessary support to man working as a teacher.

Four big revolutions in this world have necessitated increasing application of a wide variety of machines in teaching-learning. These revolutions are - **Population Explosion, Knowledge Explosion, Technological Revolution and Education for All**. In order to manage need based mass education electronic gadgets and other such devices have invaded the classrooms. It is very difficult to use merely classroom strategy for managing all types of education. Using machines under the banner of multi-media has given birth to the system of distance education with a flavour of openness. **The system is known as Open and Distance education system, where the role of machines like T.V, V.C.R, Telephone, Fax, Computer etc. is more**

than the role of man. Thus, by increasing the role of machine, we have now been able to manage need based mass education throughout the world.

1.3 Glossary

Learning Strategies : There are learning devices to be used by the communicator teacher for making the information to reach and retain in the mind of learner.

Communication : This is a new word used in place of teaching learning. It is a two way process and cover learning environment and feedback from both sides.

Communication=Teaching-Learning+Feedback+Learning environment

Attitude : It is a feeling or perception of a person acquired after repeated experience.

Reinforced Practice : This is practice done for strengthening the behaviour or learning a particular activity or task.

Cognitive Domain : It relates to six stages of learning known as 'Knowledge', 'Comprehension', 'Application', 'Analysis', 'Synthesis' and 'Judgement'.

Affective Domain : It relates to certain Psychological variables related to sentiments like Attitude, Interest, Feelings etc.

Psychomotor Domain : It is related to the actions of the body under the direction of mind. This action may be an independent or under direct or indirect control of other factors.

Multimedia : This is a combination of two or more media used for raising effectiveness of learning activity. The role of different media may be supplementary, complementary, alternative.

Need Based Education : Because of technological advancements, a wide variety of educational needs have emerged. For example - Computer has developed, Software Engineers, Hardware Engineers, System Analysts, etc. Similarly, in every field continuing educational needs have emerged and people need continuous learning of new things in their fields.

1.4 Summary

The process of learning in ancient days was deeply concerned with memorization of certain *Mantras* or *Shlokas*. Explosion of psychological research developed the idea of individual differences and various learning theories. Learning is a product of interaction between mind and situation . It takes place when learner is, motivated and provided psychological safety. He is given a chance for experimentation and gets feedback about information drawn from the act of learning. Practice is another important condition for learning.

The behaviouristic theory of learning pays emphasis to stimulus response (S-R bond). Cognitive theory gives emphasis to conditioning of mind as essential for learning. The third important view is of Robert M. Gagne, who has prescribed **eight stages** of learning. His work is an attempt to amalgamate the Cognitive and Behaviouristic theories of learning. There are three methods of learning based on three domains in the mind. The Cognitive domain relates to learning by listening and Affective domain to learning by viewing while the Psychomotor domain is related to learning by doing. Providing need based mass education has necessitated use of technology to remove the barriers of classroom situation. This has given birth to Open and Distance Learning System (ODL) by allotting optimum role to machines.

1.5 Exercises for Practice

Answer the following questions in about 200 words each.

1. Explain the conditions of learning giving appropriate examples to that effect.
2. Explain theories of learning with suitable examples.
3. Explain stages of learning with their description and educational implications.
4. Explain methods of learning and its relevance with open and distance education system.

Unit 2 : Distance Education System

Index

- 2.1 Introduction
- 2.2 Content
 - 2.2.1 Distance Education and its Need
 - 2.2.2 Systems Approach in Distance Education
 - 2.2.3 Growth of Distance Education
 - 2.2.4 Openness in Distance Education
 - 2.2.5 Open Universities : A Revolution
- 2.3 Glossary
- 2.4 Summary
- 2.5 Exercises for Practice

2.1 Introduction

The educational system in India over the past few thousand years has been changed from time to time because of the socio-political changes. Although the contributions to various branches of knowledge and culture by the Indian educational systems cannot be denied or under-rated, the fact remains that education has covered comparatively a limited number of people. Mass education and democratisation of education are of relatively recent origin. But, the education accessible to a few in the past had never been free from changes which are affected by historical necessity.

The twentieth century has witnessed four major challenges in the world. These are as below -

1. Population Explosion
2. Knowledge Explosion
3. Technological Advancements
4. Global Commitment of “Education for all”

Every nation has been facing the problem of population explosion. A larger population needs larger arrangements for physical, social, educational and economical growth of the society. A wide variety of researches have created knowledge at an exponential rate in every field of study. Making the whole society aware of this knowledge, as per the need of every individual, is very difficult. The technological advancements have opened a wide variety of study branches in which persons are urgently needed. There are many areas where skilled manpower is not available while there are many persons though skilled in different fields yet for them the jobs are not available. It has necessitated to frame “**Need Based Educational Programmes**” for the masses. This need based mass education cannot be managed by the conventional system of education due to its limited resources and constraints. This has generated an alternate mode for managing need based mass education through some non-formal approach. This approach was known earlier as correspondence education. Later on, it was named as Distance Education. Finally, it was given a flavour of ‘openness’ and is now renamed as ‘**Open and Distance Education System**’.

After the study of this unit, you will be able to know and understand.

- The need of distance education for managing need based mass education.
- The use of systems approach in distance education.
- The history of growth of distance education.
- Openness as an essence of distance education.
- The growth of open universities in India.

2.2 Content

The world has witnessed three major innovations such as -

1. Various electronic gadgets being gifts of Hardware technology,
2. Various Learning Theories which helped in developing learning methods and learning strategies.
3. Science of Management which has given us ideas like systems approach, cybernetics etc.

These inventions helped the Educationists to develop the designs of learning

materials which can be used as self instructional material. Presentation of this SIM (Self Instructional Material) through print and electronic devices has enriched the system of Distance Education. Use of multi-media has brought an essence of openness in distance education.

2.2.1 Distance Education and its Need

Distance Education is a non-formal approach for imparting education. Normally three types of distances are maintained

1. Between learner and institution
2. Between learner and teacher
3. Between learner and learner.

In this system the learner is supplied the learning material and he/she interacts with this material by remaining at a distance. Human support at the study centre are major strategies for learning. The learner gets a chance to interact with the counsellor on counselling days at the study centre.

This mode of education has been started in different countries as ‘Correspondence education’. Later on, it was renamed as Distance Education.

Varied names such as Home study, Postal tuition, Correspondence study, etc. were given to the earlier forms of distance education programmes throughout the world. Even now terms like ‘Off-campus’ studies, ‘External’ studies, Non-formal education, etc. continue to be in use. Of these the terms ‘Correspondence education’ has widely been accepted. All these terms were essentially associated with non-traditional teaching-learning programmes, which had many similarities. They, very often, embodied the phenomenon of teachers linked with varied learners through the printed word and later on, with the development of Science & Technology, through various kinds of electronic media as well. The names of some institutions symbolised the link media e.g. ‘University of air’, ‘Tele-university’, etc. In due course of time the progressive institutions brought the multimedia approach in their teaching-learning system.

Distance Education has a potential of managing every type of need based programme due to its multimedia approach. It can meet continuing educational needs

of every field. Because of openness, every person can join this system which pays emphasis on learner. The programmes are flexible and can be changed or modified as per the need of the learner. Thus, education for all can be achieved through distance education. It makes the learner truly 'autonomous' by emphasising learning in place of teaching. It is a tool for social transformation by providing modular and need based programmes. Thus, distance education system is very much needed due to its potential of managing need based programmes.

2.2.2 Systems Approach in Distance Education

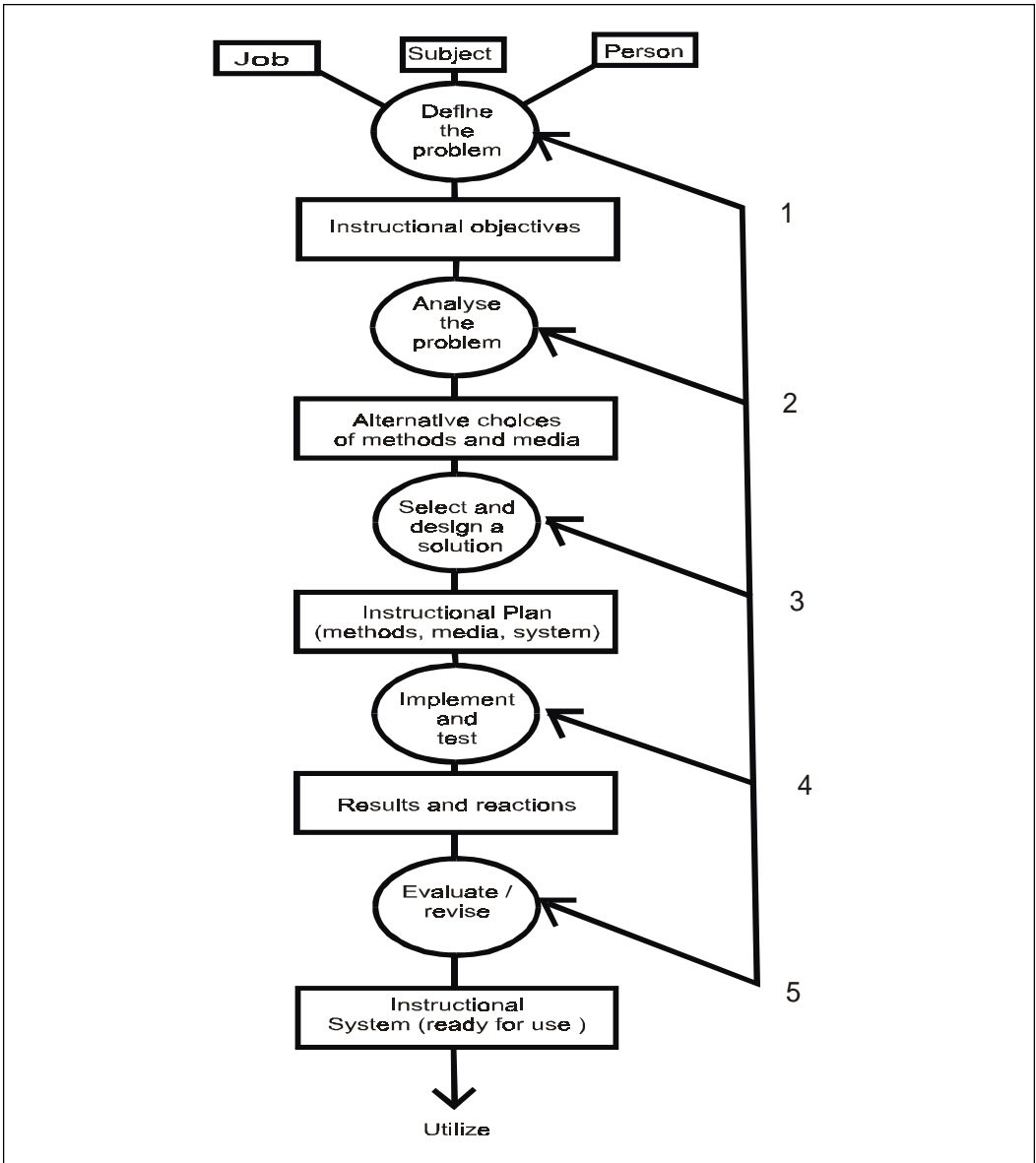
Once seven blind persons were asked to touch an elephant and report about its shape and size. These seven persons had touched different parts of the body and none of them could report about the shape and size. Their assessment was about that part of the body which they examined by touching. This indicates that the elephant as a whole was something more than a mere collection of different body parts. The word 'System' indicates a collection of different components of a body or incident or instrument etc. These components have different independent functions, but have some common and unique functions when assembled in some desired order. The international dictionary of education defines the systems approach in education as follows :

Conscious use of systems analysis and systems design techniques in an endeavour to identify and solve complex problems in learning or instructional systems. The components of the approach include the establishment of a systems boundary, the identification of all actual or possible inputs and outputs to the system and examination of their interaction.

The above definition indicates that the idea of systems approach can be used in the field of education and so, in distance education also. Below is a flow chart of five steps showing problem solving process at micro level in distance education.

Hence, the systems approach, though essentially a way of thinking about problems in system's terms, is also a methodology (scientific method) applied to the design and development of complex systems. It follows the general stages of : (a) problem definition in systems terms; (b) analysis to generate alternatives; (c) selection and

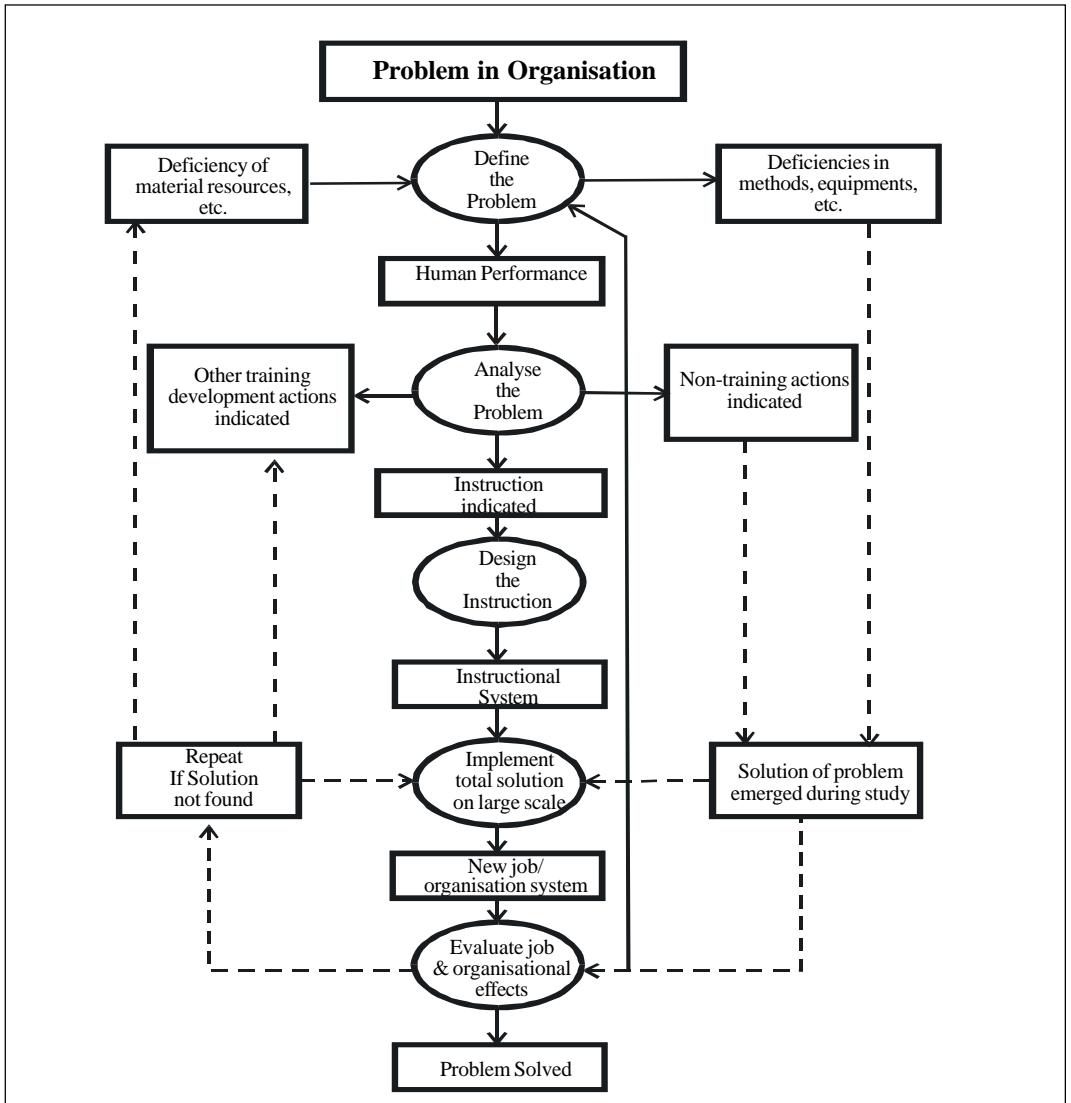
synthesis of an optimal solution; (d) controlled implementation; and (e) evaluation & possible revision.



Distance education is a non-formal approach for imparting a need based mass education. Though there are no day to day regular classes yet, a strong network of support by the Headquarters, Regional Centre and Study Centre is provided for meeting academic and non-academic needs of a learner. In order to manage these

activities at the macro level, in distance education system, the idea of systems approach can be applied to the solution of any problem.

The flow chart given below having five steps explains the use of systems approach at the macro level applied to the solution of any problem in the organization.



Step (1) involves establishing clear and measurable organizational or job performance objectives and identifying the environmental conditions required to make these objectives relevant and viable.

Step (2) involves the analysis of the causes of actual performance problems or discrepancies to identify all possible solutions and, solution components, to evaluate the alternatives, and to select the optimal mix of interventions.

Step (3) involves all the components of the mix. It will now have to be developed in co-ordination (often difficult, since they may be the responsibilities of different departments in the organization). If there is an instructional component to develop, its contribution to the total solution is by now defined. The following sequence would be followed : (a) develop instructional objectives; (b) generate alternatives for instructional methods or media; (c) develop the chosen solution; (d) implement experimentally and (e) evaluation.

Step (4) parallel with this activity, the other components will undergo a similar process of systems development. Large-scale implementation brings together various (already independently evaluated) components of the solution and implements them jointly in the real organizational setting.

Step (5) evaluation now occurs at the organizational and long-term effects level to check that all aspects of the original diagnosis and of the developed solution are correct.

2.2.3 Growth of Distance Education

Distance Education was started in different countries because of different reasons around I and II World War. In India, it came into existence since 1964 when Professor D. S. Kothari recommended establishment of a Directorate of Distance Education at Delhi University, with the whole country as its jurisdiction.

Distance Education has grown so much over the last 30 years that it is now properly looking at its root and theoretical basis. In a recent book, Keegan, has provided a guide to the literature in this field and examined distance education as a new discipline. He summarises six defining elements of distance education :

(1) the separation of teacher and learner which distinguishes it from face to face teaching; (2) the influence of an educational organization which distinguishes it from private study; (3) the use of technical media, mostly in print form, to unite teacher

and learner and carry the educational content; (4) the provision of two-way communication so that the student may benefit from, or even initiate dialogue; (5) the possibility of occasional meetings for both didactic and socialization purposes; and, (6) the participation in an industrialized form of education.

The above characteristics and the potential of distance education necessitated for opening distance education institutions in different countries. In India, because of language diversity and cultural differences, it was essential to open many such institutions throughout the country. At present India has 12 open universities running various programmes and about 60 Correspondence education Institution / Directorates of Distance Education.

In order to provide necessary financial support to the open universities and Correspondence education Institutions the Distance Education Council has been established by the Government of India. Thus at present a considerable growth of distance education has been noticed in India.

2.2.4 Openness in Distance Education

The world has witnessed much technological advancements in the field of electronic gadgets, learning techniques and the science of management. It had helped the educationists for a multimedia approach to education. This multimedia helped the distance education for evolving complementary, supplementary and alternate modes of learning. The learner has been given a freedom to learn at his/her own pace and time. This freedom has been termed as 'openness' in Distance Education. The Open Universities and Open Schools have been established with a flavour of openness at every stage. The above stated explanation of openness has been achieved by every open university and open school because the learners learn at their own pace, with a freedom of pacing between various units of course content and they can take their own time for completion of the programme.

Due to advancements of various technologies, another concept of openness has come. It is freedom to select and combine learning strategies of learner's own choice. This target of openness can be achieved if the open learning institutes develop multimedia enriched with wide variety of learning strategies.

2.2.5 Open Universities : A Revolution

The United Kingdom has the credit of establishing the first ever open university of the world in 1969 at Milton Keynes in England. This university has created a world wide impact by producing effective course materials for all kinds of people irrespective of age, sex, place of residence and formal qualifications. Since then this revolution spreaded in different countries like Germany, France, Italy Netherlands, Norway, Spain, Sweden and Russia in the western part of the world.

Asia did not remain untouched and the countries like Bangladesh, China, India, Indonesia, Japan Korea, Malaysia, Pakistan, The Philippines, Sri Lanka, and Thailand have established open universities in their region. The Australian continent has also participated in this revolution having Australia, New Zealand, Papua New Guinea and the Pacific Islands. The Middle East has also taken an initiative in establishing open universities. The North American continent has now open universities in Canada and Costa Rica as well as in Venezuela.

India is the first country having the largest number of open universities (12). This country has many languages and wide variety of cultures. Therefore regional open universities imparting education through regional languages have emerged in large number. The first open university in India was the Andhra Pradesh Open University (1982) which has been renamed as Dr. B. R. Ambedkar Open Univeristy (BRAOU) at Hyderabad. The Indira Gandhi National Open University (IGNOU) was established in 1985 at New Delhi. There are several regional open universities in India e.g. Yashwantrao Chavan Maharashtra Open University (YCMOU), Nashik, Maharashtra, Kota Open University (KOU), Kota, Rajasthan, Nalanda Open University (NOU), Patna, Bihar, Madhya Pradesh Bhoj Open University (MPBOU), Bhopal, Madhya Pradesh, Dr. Babasaheb Ambedkar Open University (BAOU), Ahemedabad, Gujarat, Karnataka State Open University (KSOU), Mysore, Karnataka, Netaji Subhash Open University (NSOU), Calcutta, West Bengal, Uttar Pradesh Rajarshi Tandon Open University (UPRTOU), Allahabad, Uttar Pradesh, Tamilnadu Open University (TOU), Chennai, Tamilnadu and Chchatisgarh Open Univesity (COU), Raipur. Chchatisgarh. (Distance Education Council, New Delhi - 2002)

Details of Open Universities in India

(Summary Data as on January 2002)

Sr. No.	Details of Information	University												TOTAL								
		IGNOU New Delhi	BRAOU Hyderabad	KOU Kota	NOU Patana	YCMOU Nashik	MPBOU Bhopal	BAOU Ahmedabad	KSOU Mysore	NSOU Kolkata	UPRTOU Allahabad	TNOU Chennai *	COU Raipur *									
01.	Year of establishment	1985	1982	1987	1987	1989	1991	1994	1996	1997	1998	2003	2003									
02.	Educational programmes on offer	60	23	22	08	60	30	11	29	03	41	-	-	288								
03.	Courses on offer	640	307	195	09	236	49	96	244	18	126	-	-	1920								
04.	Students Registered in the year	287366	106748	8980	1221	113500	55360	8575	32658	2798	1089	-	-	618295								
05.	Total Students on Rolls	646651	450000	13000	1644	486651	108549	33892	40690	2798	1089	-	-	1784964								
06.	Regional Centres	44	21	6	-	10	9	2	4	-	-	-	-	96								
07.	Study Centres / Work centres	624	137	40	5	1451	667	61	52	36	38	-	-	3111								
08.	Academic Counsellors	20364	4837	541	28	4521	3200	776	2812	733	214	-	-	38026								
09.	Students awarded Diploma & Degrees	53298	3030	-	404	44554	9343	1403	5065	-	-	-	-	117097								
10.	Audio Programmes (Cumulative)	1100	1759	7	-	298	5	10	285	4	-	-	-	3468								
11.	Video Programmes (Cumulative)	1050	298	1	-	189	18	-	132	-	2	-	-	1690								
12.	Staff Strength (Total)	1389	473	324	25	263	69	85	321	51	2	-	-	3027								
	i. Academic / Professional	295	98	25	1	60	36	39	66	10	1	-	-	631								
	ii. Administrative	856	340	294	23	173	}	}	}	}	}	}	}	}								
	iii. Technical / Production		35	5	1	30									33	46	255	41	26			
	iv. Others	238	-	-	-	-																
																						2396

* TOU & COU data not available

2.3 Glossary

Need based Mass Education : A wide variety of educational fields have emerged due to technological advancements. Managing such education for needy persons is need based mass education.

Democratisation of Education : Every one has a right to opt for education of his/her own choice. This provision by a country is known as Democratisation of education.

Exponential Rate : This is a mathematical term used for explaining a huge change.

Non-formal Approach : The approach covers all modes of imparting education to those who have been deprived of. They are not supported to attend regular classes like others.

Autonomous Learner : The learner who has freedom to decide the curriculum, learning strategies, learning time/duration etc. is known as Autonomous learner. The science of Andragogy gives a chance to the adult learner for an autonomy.

Instructional Objectives : This indicates the purpose of learning and become like backbone during the process of education. From time to time, students can get feedback also about his progress in learning.

Instructional System : This system consists of all those components, which are directly or indirectly involved in the process of instruction. They may be learner, material, media, learning environment, support from agencies etc.

Micro Level : It indicates a small level which is part and parcel of a big level known as macro-level, for example education of illiterates in Sinnar town of Nashik district.

Macro Level : It is a bigger level covering all components, for example education of the illiterates in India.

Industrial form of Education : The education treated as Industry is known as Industrial form of education. It runs only those programmes which give profit or monetary gain to the organisation.

2.4 Summary

Managing need based mass education has been accepted by every country as a major responsibility. The technological advancement has provided a solution to this challenge. Various electronic gadgets, inventions in psychology of learning and science of management have explored the system of open and distance education. Openness is an opportunity to the learner to learn at his own rate, pace, and time and development of multimedia provides an opportunity for selecting and combining learning strategies of learners own choice. The concept of systems approach helps in explaining distance education as a system and explains its various components like - learner, learning method, programme development and its implementation etc. Distance Education has been a part and parcel of traditional university system. It is known as dual mode of education. Apart from this, it is single mode also in the form of open universities and open schools. The system of open universities started at first in 1969 by United Kingdom when the first ever open university was established at Milton Keynes in England. Later on this revolution was widely accepted by different countries of the world. At present there are twelve open universities in India.

2.5 Exercises for Practice

Answer the following questions in about 200 words each.

1. Explain need of distance education in India with respect to population and social diversity.
2. Explain with diagram System Approach in distance education.
3. Write note on growth of open and distance education in India.
4. Write note on correspondence education and its significance in rural India in post-independence year.

Unit 3 : Communication Technologies in Distance Education

Index

- 3.1 Introduction
- 3.2 Content
 - 3.2.1 Types of Communication
 - 3.2.2 Domains of Communication
 - 3.2.3 Potential of Technologies
 - 3.2.4 Networking for Technology Application
 - 3.2.5 Technological Applications by Open Universities
- 3.3 Glossary
- 3.4 Summary
- 3.5 Exercises for Practice

3.1 Introduction

Communication is defined in many different ways. Some explain it as an ‘art’ - a gifted creativity, while others say it is a science, learned behaviour or skill. In a broader sense, Communication is much more than an art. It is partly a science as it involves certain learnable techniques and psychomotor skills. However, communication is more of a science because it is based on certain principles which can be verified and used to make communication effective.

In the process of communication the sender sends the message with the help of some media to the receiver who in turn gives feedback to the sender through verbal or non-verbal mode of communication. Thus communication covers flow of information from both sides and it is a cyclic process.

The functions of communication are - giving information, socialisation of a person, providing motivation, educating the people, and entertainment etc.

After the study of this unit, you will be able to know and understand :

- Different types of communication.
- Various Domains of communication.
- Potential of various technologies for an effective communication.
- Networking for technology application.
- Technological applications by open universities.

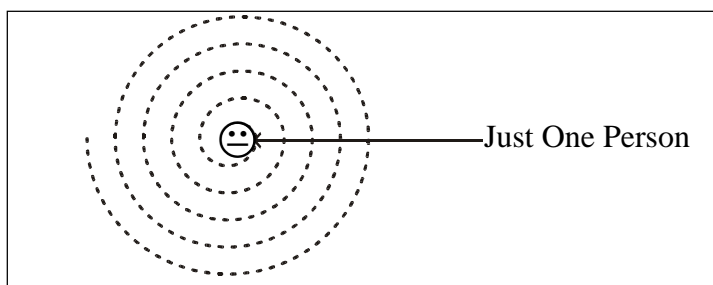
3.2 Content

3.2.1 Types of Communication

There are broadly four types of communication -

1. Intrapersonal communication
2. Interpersonal communication
3. Group communication
4. Mass communication

The **Intrapersonal Communication** is a process within the mind of a person. The person raises the question and answers himself. He takes decision after some interaction within the mind. The figure below indicates intrapersonal communication process.

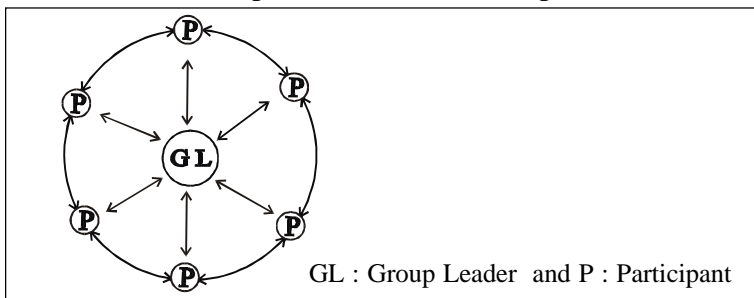


The **Intrapersonal Communication** includes conversation between two persons. This is a common type of communication, in which two persons share their feelings, emotions, thoughts, ideas, etc. Interaction between two friends, between the teacher and the students, the mother and the child are a few examples of interpersonal communication. Talking on the telephone to someone is yet another example of interpersonal communication at a distance.

Person A ☹ ←—————→ ☹ Person B

Intrapersonal Communication

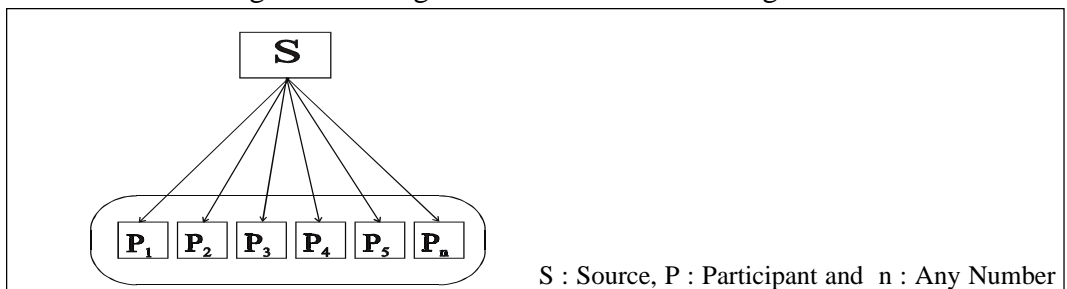
The **Group Communication** involves the members of a group to interact with each other. A group is a collection of people who have common interests. Discussions in a workshop, a seminar, or a family are examples of group communication. Group communication is useful to take a collective decision on a problem, an issue or a matter of common concern. Group communication is explained as below -



Mass Communication involves a large number of persons. As the term ‘mass’ indicates, this type of communication always concerns a large number of people sharing information, ideas, thoughts, etc. In this case we use the mass media to communicate with a large number of participants. In mass communication we include face-to-face, as well as, print and non-print based communication. For example, the radio and television programmes are broadcasted to educate, inform or entertain a large number of people; so is the case when a teacher lectures to a class of 100 students. Mass communication has three characteristics :

- (i) The audience is large and heterogeneous.
- (ii) The source is an institute or a group of people.
- (iii) Some kind of mechanism is used to reproduce information.

Below is a diagram showing mass communication design.



Thus, we see that communication type depends upon situation and purpose. But, it is clear from above discussion that communication is always a two way or many way process which is cyclic in nature.

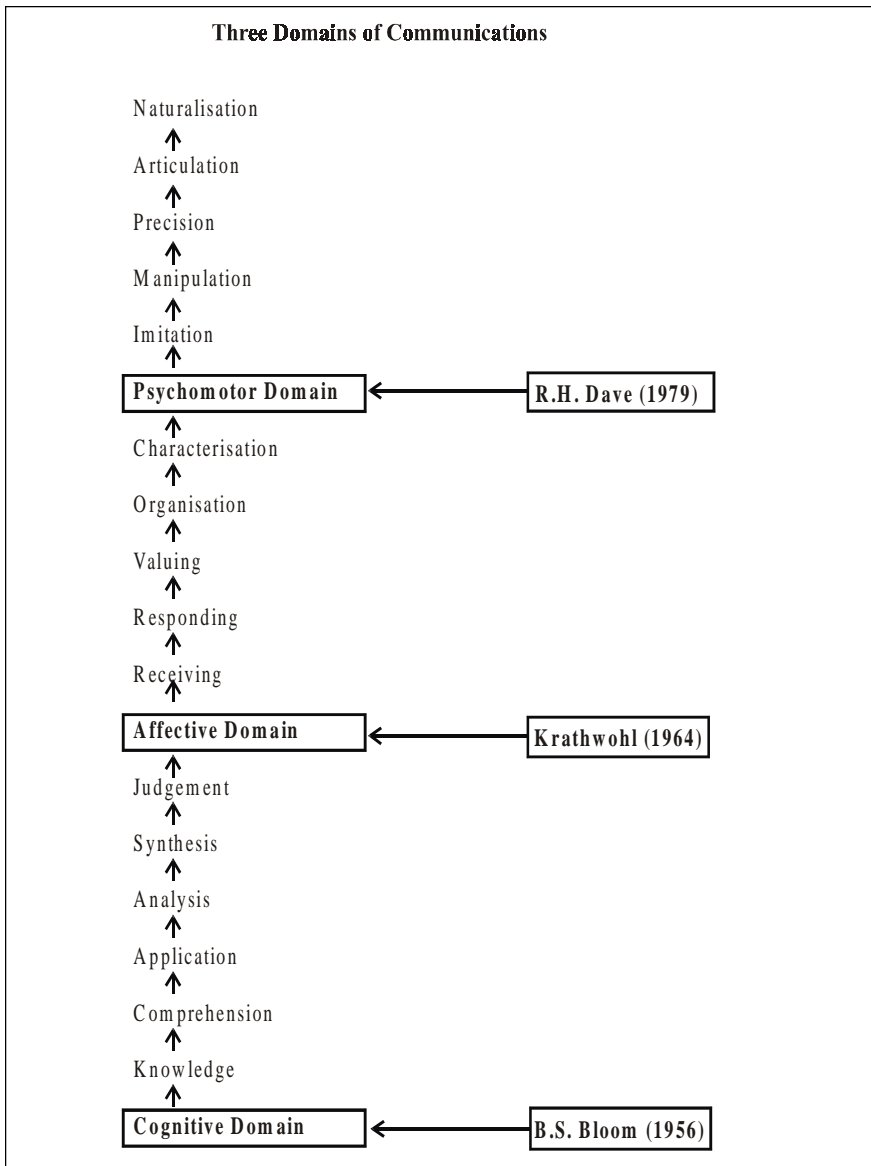
3.2.2 Domains of Communication

The psychological researches have found three domains in human body. These three domains are known as - **(i) Cognitive domain, (ii) Affective domain, and, (iii) Psychomotor domain.** The Cognitive domain is related to mind, the Affective domain is related to the heart and the Psychomotor domain deals with mental instructions to the whole body to act accordingly. It is true in the case of teaching, learning, framing objectives for learning and teaching. The curriculum is also framed by using these three stages of learning.

Now, the advancement of new technologies and psychology of learning have generated the idea of communication which is a cyclic process and now the words 'teaching learning' have been replaced by the word communication. The above stated three domains are also applicable in case of communication. Below is a flow chart stating various stages of these domains

The flow chart shown on next page indicates that these three domains are three stored building. It seems that there is a ladder of six steps in cognitive domain for reaching the next stage that is Affective domain. Again there are five stages for reaching the third domain that is Psychomotor domain which also has five stages.

(i) Cognitive Domain - This stage is related to mind and the communication takes place at the mental stage by listening. The first step is **Knowledge** indicating that the information sent by the sender is well received and retained by the receiver. The second step is **Comprehension**. It indicates that person can express the knowledge gained in his own words. The third step is **Application** which is an ability to apply the knowledge gained in other situations. The fourth step is **Analysis** an ability to divide some incident or object or situation into different components for the purpose of clear understanding. The next step is **Synthesis** which is the opposite of Analysis. It is an ability to link and combine various components into some meaningful order. The last step is **Judgement**. Some



persons name this ability as **Evaluation** also. The person has to study the whole situation and pass on his own view to be known as his **Judgement**. This is the ability of critical thinking and drawing some opinion.

- (ii) **Affective Domain** - This stage is related to heart where communication affects the sentiments, perception and interest etc. It is because of communication by viewing the things like charts, maps, pictures, video films etc. The first stage in

this domain is **Receiving** which indicates that the persons' heart has received the information. The second stage is **Responding** which can be observed through responses by the person. **Valuing** is the third stage and it helps the persons to assess the value of the object or incident or person etc. The fourth stage is **Organisation** which helps the learner in organising his behaviour. **Characterisation** is the last stage of this domain which helps a person to analyse the characteristics of a situation or, incident or a person etc.

(iii) **Psychomotor Domain** - This is the last domain where the mind directs the body to act accordingly and the body follows the instructions of mind. Here the communication affects the mind, heart and the body. In this stage the communication takes place by doing the activities. The first stage in this domain is **Imitation** which indicates a person's capability to copy some activity. The second stage is **Manipulation** which advocates for managing things skillfully. **Precision** is the third stage dealing with one's accuracy or exactness in performing the assigned activity. **Articulation** is the fourth stage related to clarity of work. The last stage of this domain is **Naturalisation** which means a person's competency of doing some activity in natural way with minimum help from others.

3.2.3 Potential of Technologies

There is a need for a conceptual framework for understanding of the interrelations and interfacing of various technologies with the process of teaching and learning. There is a need for evolving a whole new system design instead of an add on mechanism in the name of expanding horizons of Technology of today in the field of teaching and learning.

1. Effective use of Radio & Television

Radio and Television are being made available in the classrooms. However, one hardly asks - What is the learning outcome expected ? It was conceived as a support to the education system in the classroom. It has a rigorous time schedule and one

way communication which might not suit to the classroom time table of every college. Also, English being the medium is also one of the barriers in the way of an effective communication. These problems can be solved if their relays are recorded and dubbed before presentation, in the classrooms in the presence of a teacher. He should be able to answer all the queries raised by the learners. It will make an effective two way communication in the classroom. The cassettes can be erased and redesigned too.

2. Use of Audio & Video Cassettes in Learning

The audio and video cassettes give one way communication only. But, with new technology, an interactive culture may be introduced in a big way. The new technology of compact audio & video cassette not only can extend stored audio and video information through many fold, they also enable the user to interact with the material as it is done with print material. A video disc in the form of a long playing record can obtain the whole of the encyclopaedia Britannica in the visual form with all the pages and illustrations marked. A learner can see within seconds, on the video screen, anything that he planned earlier to see from the cassette. This freedom has been possible because of the interactivity inherent in the computing technology.

3. Effective use of Computers

The computer is not the technology of educational computing forcing a solution. The computer has not come just an aid or a one way system of communication. Infact, it is an interactive technology, where the control on teaching-learning shifts from text books writer to the teacher and also to the learner. Thus, the computer has challenged the existing organised methods of teaching and learning. It has accepted a challenge of spreading the information regarding developments of new ideas in the learners and thus in society. In research areas computer has provided a lot of help in the form of packages (Software) which analyses a large number of data in a fraction of time with very high accuracy. Its information storage capability is very high and can store the entire 'Bhagavat Gita' in one floppy, and reproduce as and when it is needed. Computer can play two significant roles in teaching and learning process. These roles are known as 'CAL' (Computer Assisted Learning) and 'CMI' (Computer

Managed Instruction). In CAL, we feed some programme as software and get solution of similar questions. For example - (i) $3 \times \text{Number} = \text{Number} + \text{Number} + \text{Number}$, (ii) $1 \times \text{Number} = \text{Number}$, (iii) $5 \times \text{Number} = \text{Number} + \text{Number} + \text{Number} + \text{Number} + \text{Number}$. It will give us solution of any problem of multiplication having 1, 3, 5 and other digits, for example : $135 \times 26 = ?$. In Computer Managed Instruction (CMI) we get solution of very typical problems which human being may not solve very accurately. For example, Draw a line whose length is 0.30 cm. or 0.030 cm. Thus, computers give an opportunity to the mind for interaction developing Psychomotor abilities among the learners and develop competencies for self doing.

4. Learning Language in Laboratory

Every language has two components as (i) Dialect and (ii) Script. The mastery in script can be achieved through writing and copying many times from the original work. But, dialect is a matter of drill. It can be done with the help of language laboratory. There is an arrangement of two way communication and tapes in large number. The learners listen to some dialect and then learn pronunciation. It is monitored by the teacher who can make corrections immediately without moving to the learner. In more sophisticated arrangements, there are many learners, learning at a time through interaction among themselves and with the teacher too. In India, there are many institutions where such arrangements are available. Central Institute of English and Foreign Language (CIFL), Hyderabad, has provided a lead in this direction.

5. Use of Video Projection System in Communication

This is another technology which is coming up as a classroom facility for the whole class. In Germany and Japan the projection video goes along with a computer on the desk of every learner. The system provides a big colour screen and large memory which enables every student to record or display their response through the host system controlled by the teacher. The teacher can intervene at any time when he wants to do so. An enlarged system visual with the learners controlling and teacher mediating with small additional inputs here and there, may prove to be a model of a new kind of integration of pedagogy with the new technology in the classroom.

6. Satellite Networking for an Effective Mass Communication

A big country having a large population spread around long rivers and mountains, like India, can't manage mass education through limited resources. Big network of broadcasting or telecasting at a time for masses is not possible without any satellite link. Now a large number of population is under the network of radio and TV, in India. These facilities are used by the UGC/IGNOU, Delhi for broadcasting or telecasting in the country for mass education. Site Project (Satellite Instructional Television Experiment) was successfully implemented by NCERT, New Delhi. This technology also offers interaction between the teachers and the students through teleconferencing, audio conferencing and computer conferencing. Audio conferencing is based on the networking of telephone lines through the existing commercial network. Video conferencing takes advantage of microwave networks and the commercial satellite with its communication networks. In a conferencing mode 5 – 10 computers are interconnected through a base computer to form a club or network. All these are examples of how a new technology is making a place of its own into the traditional modes of communication and learning and extending them to reach masses. This whole development can be summarized to say that **computer is the technology of all the technologies.**

7. Potential of These Technologies

These technologies are selected looking to the stages of objectives to be achieved. Then the curriculum is framed. The objectives become the backbone of the whole teaching–learning process starting from curriculum framing to evaluation. B.S. Bloom has stated three objectives based on type of learning as below :

Learning by Listening	----->	Cognitive objectives
Learning by Viewing	----->	Affective objectives
Learning by Doing	----->	Psychomotor objectives

Our selection of tools (Hardware) and techniques (Software) depends upon the stage of the objectives to be achieved. Below is the table showing the objectives to be achieved by different aids.

Teaching Aids and fulfilment of Various Objectives

A/V aid	Cognitive	Affective	Psychomotor
Radio	Yes	No	No
T.V.	Yes	Yes	No
Tape Recorder	Yes	Yes	No
Audio Discs	Yes	Yes	No
Video Films	Yes	Yes	Yes
V.C.R.	Yes	Yes	Yes
Computer	Yes	Yes	Yes
Video discs	Yes	Yes	Yes
Video Projection System	Yes	Yes	Yes
Teleconferencing	Yes	Yes	Yes
Language Laboratory	Yes	Yes	Yes

3.2.4 Networking for Technology Application

Using many technologies as Complementary, Supplementary, and as alternative strategies for learning, requires development of these technologies. It requires huge expenditure and large manpower too. A networking among various similar organizations may help in meeting this problem. Some learning strategies may be allotted to different organizations for development and then making multiple copies of the same for the purpose of exchange.

The Open Universities and other Distance Education Institutes (DEI) may take a lead in this area. Various open universities may develop a Networking and decide the strategies to be developed by them. They can share this resource persons for developing these strategies and thus a networking of collective wisdom may help in producing quality technology with minimum cost to be shared by all open universities.

In the field of Agriculture, such work will be of much use. Grape production and marketing in Maharashtra and its various steps, and strategies can be communicated to various parts of the country. This Video programme can be used by different Agricultural Universities and other institutions and organizations if they have Agricultural Sciences as one of the discipline for study.

The only problem in India for networking is that of language, culture and different Agro-climatic zones. However, the technology can be dubbed and be used by different organizations. The TV advertisements have been dubbed in different languages and are used by regional transmission centers for regional people.

3.2.5 Technological Applications by Open Universities

Open Universities are operating on innovative approaches. Use of technologies at various stages for managing need based mass education is the backbone of every successful Open University. It is the application of Technology which is the base for naming a University in China and Japan. In China, it is Central Radio and Television University (CRTU) and in Japan it is University on Air. These two Open Universities have been using Television & Radio as their primary media for programme delivering and Print media as secondary. Use of computer for student registration, development of learning material, declaration of results are in practice. In India, every open university has accepted Print media as primary media and material is supplied in Self Instructional Material (SIM) format. This SIM format is itself a technology of presenting the learning material in a very simple language and it is an interactive technology. Multimedia is the secondary and little advance technology which is used by Open Universities in India. Audio Cassettes, Video Cassettes, CD Roms, Computer Assisted Learning Material are primary technologies in use by open universities. On Line Education and On Demand Examination are the technologies which require computer and internet connectivity for its implementation. Computer helps for course maintenance and can add or delete any content at the desired place in course content without disturbing the whole course content. Thus, we see that it is technology which is dominating from Student Registration to Result Declaration in modern education system and approaches.

3.3 Glossary

Cyclic Process : Like a wheel of cycle, this process moves in a circle. All the points or parts are arranged in a fixed order and appear in the same order every time.

Communication : The process of creating and sharing meaning through the transmission and exchange of signs. This process requires interaction with one self , between people, or among people and machines.

Feedback : It is communication in response to a previous message. It includes that the sender adjusts his/her communication style in response to the feedback. Feedback is continuous in conversation. It may be a natural response, deliberate response or intentional response.

Audio Video Discs : Like Audio cassettes and Video cassettes, these discs are also cassettes with a very huge storing capacity. It can be erased away and re-recorded with other information. The disc can be re- used as and when needed.

Computer Managed Instruction : It is the support from computer for learning and viewing those concepts which human being can not demonstrate. For example, square root of some imaginary number.

Computer Assisted Learning : It is the support of computer which presents a loaded lesson with a provision for interaction and immediate feedback to the learner. It is an interactive technology.

Teleconferencing : It is a mode of communication among persons sitting at a distance. This is of either two way Audio or two way Video or one way Video or two way Audio.

Language Laboratory : It is an arrangement of Audio tapes arranged in such a way that a teacher makes pronunciation from one place and it is recorded with all other Audio tapes.

Innovative Approach : Innovations are the researches which produce some new technology or new instrument for solving or meeting a social need. Radio or TV is an innovation made for use by society. It was not in existence before it was invented.

On Line Courses : This technology is based on computer and Telephone. The course is launched on web site. Admissions are made on line, course content is delivered through on line transmission and finally exam is also conducted online. The result is declared also on line.

3.4 Summary

The terminology ‘teaching – learning’ has been now replaced by a single word ‘Communication’. This contains ‘feedback’ from both sides and has a provision for improvement too. It is mainly of four type known as ‘Intrapersonal Communication’, ‘Interpersonal Communication’, ‘Group Communication’ and Mass Communication. These types depend upon situation and purpose of communication. There are three domains of communication known as ‘Cognitive Domain’ related to mind, ‘Affective Domain’ related to heart and ‘Psychomotor Domain’ related to body motions under the directions of mind.

In order to make an effective communication at various three stages, different technologies are used. Radio has its effect into cognitive domain only. TV, Tape recorder and Audio discs have their effect on Cognitive and Affective domains only. It is very difficult for every organization to develop different strategies playing complementary, supplementary or alternate roles in communication process. Therefore, networking is only solution. It will give an opportunity to share each other’s resources, produce a technology to be shared by all other sister organizations. Dubbing may be a solution to language problem.

At present, Open Universities are using Print in Self Instructional Material format, Audio and Video Cassettes are transmitted with the help of Radio & Television channels. Computer plays a role as backbone of open university system. On Line Education and On Demand Examination are big challenges before every open university in India.

3.5 Exercises for Practice

Answer the following questions in about 200 words each.

1. Explain types of communication and their relevance in distance education.
2. Describe domains of communication with flowchart diagram.
3. Enlist various multimedia technologies available for teaching and learning and explain their important features.
4. Write note on open universities and and technology application for imparting technical and vocational education.

Unit 4 : Characteristics of Distance Learners

Index

- 4.1 Introduction
- 4.2 Content
 - 4.2.1 Learner as a Customer of Education
 - 4.2.2 Conventional and Distance Learners
 - 4.2.3 Learner Isolation
 - 4.2.4 Psychological Needs of Distance Learners
 - 4.2.5 Open University approach to Distance Learners
- 4.3 Glossary
- 4.4 Summary
- 4.5 Exercises for Practice

4.1 Introduction

The system of distance education was introduced for persons deprived of the fruits of education. Those, who could not get admissions due to personal problems, cultural barriers, over age, gender difference, geographical situation of educational institute, poverty etc. were taken as target group for distance education system. Thus, the distance learner was an isolated identity being adult, with no opportunity for admission. They could not get admission due to certain constraints imposed by the society or educational organizations.

Later on, the technological advancement reduced the distance between teacher and learner to minimum and finally to zero. The system opened a wide variety of professional, vocational and other need based programmes. It attracted learners from all corners of society and accepted a slogan of '**Need Based Mass Education**'. It has widened the scope of joining open education for all persons.

After a study of this unit, you will be able to know and understand :

- The Role of a learner as a Customer of Education.
- The difference between Conventional and Distance Learners.
- Learner Isolation and its remedies.
- Some psychological factors affecting the Distance Learner.
- The Efforts made by Open Universities for Distance Learners.

4.2 Content

4.2.1 Learner as a Customer of Education

In olden days, the teacher had a dominant role in classroom and the students had to remain as passive listeners. There was no consideration to individual differences and learning abilities. Those who could not study were deprived of and were treated as ‘backward’ students. Later on, the student was given prime importance and his rate of learning, style of learning, etc. were given due consideration. Due to explosion of Managerial Sciences, Business Management came into existence and the education was labeled as education industry. It was assumed that student is a customer who wants to purchase education by paying prescribed fees. It raised an issue of quality education for learners being customers.

The open Education system accepted this idea because need based mass Education has been accepted as a Challenge before open university system. The system has decided to accept those norms and procedures of good quality which suits to the learner.

Customer satisfaction has been on top priority while deciding various inputs, process and outputs. When learner is a customer the output of the open education system is its learning material. The advice of customer has been felt as essential in deciding the process and inputs. The open education system has to identify the customer needs before framing a educational programme. The system should collect feedback from these customers from time to time about the quality of learning material, activities at the Regional and Study Centers, performance analysis at various levels.

Programme Evaluation is accepted by every open university as an essential activity. The learner's voice plays a major role in course maintenance, material revision or modification.

Thus, the activities in an Open University system are flexible, learner oriented and are continuously monitored by the customers. Any programme can be closed, redesigned as per market needs for resource persons whose competency is taken as a matter of primary concern.

4.2.2 Conventional and Distance Learners

The distance learner is an adult person being in job, wants to increase his knowledge and skill level for betterment of his job by remaining in job. On the other hand the conventional learner is a young person receiving teacher guidance regularly in a classroom situation. the following table compares the characteristics of conventional and distance learners.

Conventional Learner and Distance Learner – A Comparison

<i>Conventional Education System</i>	<i>Open Education System</i>
1. Learning is a full time and major activity.	Learning is a part-time and secondary activity.
2. The learner belongs to an institution.	The learner is a member of many institutions.
3. The learner is usually young.	The learner is usually adult.
4. The learner is usually in contact with fellow learners.	The learner does not have many opportunities for contact with fellow learners except during counselling sessions.
5. The learner has direct access to the institutional resources.	The learner has occasional contact with institutional resources.
6. The learner is familiar with academic expectations.	The learner is new to the academic contentions.
7. The learners academic problems are dealt with.	The learner's academic as well as non-academic problems are dealt with.

The above classification states different characteristics of learners in both types and implies the adjustments that the open learning system might need to cater to the needs of learners in open learning system.

4.2.3 Learner Isolation

In the beginning the term distance learner was used because the learner had to maintain three types of distances :

Between Learner and Learner

Between Learner and Teacher

Between Learner and Learning Institutions

Because of these three distances, the learner was labeled as distance learner. Later on, the technological advancements reduced these distances and the learner felt a zero distance with these three. Thus, learner isolation became imaginary and redundant.

In fact, the learning takes place when the learners mind interacts with the content in isolation. This is a fact that for the purpose of learning, the learner must be isolated. He should concentrate his mind for making the information to enter into it and be retained for a longer period. A teacher or some material or a combination of both have a role of tuning the students mind so that a tuned mind may receive well and retain the information. The learner in traditional system of education as well as in distance Education system remains isolated during the process of learning. A good example of this type of learning may be seen from reading a novel or viewing a cinema. In both the cases the viewer or reader remains isolated. But, the distance between learner and information sprayer (book or cinema) becomes almost zero at the time of learning. Thus, we see that use of media has been able to create a learning environment with the so called distance learner.

4.2.4 Psychological Needs of Distance Learners

India has the credit of being the first for having an example of Open Learning situation in the global scenario. During Mahabharata period, Eklavya was deserving but denied of education by the conventional system of education. He enriched his

cognitive as well as psychomotor domain through self learning and became even more skilled than any other student of Lord (Guru) Dronacharya. This example provides an opportunity to compare Eklavya with the present learners in the open learning system. The learners are, like Eklavya, deserving but denied of the right type of education by the conventional system. This system can not manage that need based education which is needed by every individual of our social system. Due to explosion of population at exponential rate, the world has a large number of Eklavyas to be provided the right type of education.

The open learning system is an answer to this problem. The use of print material, audio and video cassettes, radio and T.V. supplemented with contact programmes is normally made for communication process. It has been observed that these hardware and software used in a systematic way may help the learner to come out of darkness. Thus, the process of 'Liberating the Learner' takes place in an open learning system.

Eklavya, and his so called teacher Guru Dronacharya were maintaining the physical, emotional and other type of distances between them. It was because Eklavya was not allowed to enter the premises of the University of Guru Dronacharya. There was a distance between Eklavya and other learners too of that university, and so, no chance for interaction with other learners. There was no time table observed by him as a learner and so he was managing self learning in an open learning situation. At that time, there was no printing press or electronic media for communication, and, in Mahabharata or elsewhere there is no mention of any counselling done to Eklavya by any person.

Thus, the facilities available with the present open learning system were not available with Eklavya at that time. What made Eklavya to reach upto optimum level of achievement, in spite of no assistance by any one? This is a question whose answer shall help every learner in reaching up to optimum level of achievement.

Because of one way communication and a least chance for interaction between the learner and the teacher and among the other learners too, there seems to be a possibility for the learner to decrease his motivation level, emotion, interest and may develop a negative attitude towards the whole system. Rate of learning and the level of mastery in cognitive and psychomotor domains may be of lower degree in

comparison to that in conventional system. Learning takes place when there is (a) need, drive of motive, and (b) an appropriate goal, the attainment of which would satisfy the motive. In fact learning is the pivotal problem in education and the success of all educational programmes depends upon how learning is made more effective, more permanent, widely useful and creative.

Motivation in education means inculcating and stimulating interest in studies and other such activities in learners. It involves the understanding and use of natural urges of the learner and also helps him in acquiring new desirable motives. Anything which moves an individual to action may be described as a motive and the open learning system has to provide for and inculcate such motives as would channelise the activities of learners on desirable lines. It should be throughout the process with the learner by the desire to learn with higher credit and also, with the whole system to see that the learners acquire knowledge with higher credits.

Emotions, are inseparable interwoven in all learning situations and may be observed during learner's interaction with his fellow learner or with the teacher counsellor. A good counsellor has to be conscious of emotions of learners as well as his own so that a smooth learning situation may be maintained throughout the process of learning. It is difficult to conceive one definite single cause for an emotion. An individual's basic needs, desires and aspirations, his values of life and his life conditions, produce his emotions. The need is to evolve the strategies for providing stimulus for getting desired response from the learner.

It is very easy to do so in conventional system because of face to face situation, but, it is a matter of research for an open learning system. The model devised by McDougall for emotions may be an answer to this problem. He discovered some inherited tendencies of springs of actions and called them instincts. He has developed three stages of instinctive behaviour : (i) a situation is perceived or understood, (ii) then an emotion is aroused, and finally (iii) an action occurs. The need is to evolve various strategies for bringing out inherited tendencies looking to various factors affecting our system of tendencies. In open learning system these various factors may be social conditions including family influences and education which exercise control over the instincts. P.E. Vernon has preferred to regard such drives as interests, attitudes, sentiments and complexes differing greatly in different cultures which could easily be

altered by skillful psychological treatment. The learners in open learning system are of variety in nature. They are deprived of, but deserving individuals for need based education. Once they join the open learning system, care must be taken of them. They should not feel still deprived. Skinner's idea of creating a learning environment is very much applicable here. This responsibility goes directly upon the counsellors who need some counseling in this respect. They are content experts, but need some training in psychology of learning particularly in open learning system. Understanding learners of open learning system and managing appropriate stimulus as per their individual needs is a matter of evolving the whole system for orienting the counsellors.

Learning has three stages as Imagination, Perception and Conception and a large part of our learning is accomplished through perception. It furnishes the experiences that promote understanding and help reflective thinking. Understanding and comprehension go beyond perception as they involve the integration and organization of the knowledge obtained through perception. Concepts are abstractions from the perceptions, and so, concept formation is thus one of the most important of our learned activities. It is on the basis of our thinking as well as reasoning.

It may be assumed that as the individual grows older, higher orders of concepts emerge. Concepts are interrelated with each other and one concept helps in the development of further concepts by the application of generally accepted rules. R.H.Dave has tried to explain various stages of Psychomotor development of a learner for developing skills in any skill based work. According to him, Imitation, Manipulation, Precision, Articulation and finally Naturalization are the stages involved in the development of skills. This becomes the duty of the counsellor to see that the learner must be able to imitate, manipulate, precise the act, develop the art of doing the work and finally the work must be done by the learner in a natural way.

Everyone has certain interests due to which he likes activities or prefers to spend his leisure time in a certain manner. Attitudes on the other hand, may be positively or negatively directed. Thus, the individual is either favourably or unfavourably oriented towards certain phenomenon. Like interests, attitudes influence the behaviour of the individual by making him selectively oriented towards certain objects and issues. Depending upon the nature of his attitudes, he reacts favourably or unfavourably. No

one is born with any attitudes. They are learned in a culture in course of individual development. The kind of environment in which he grows has an indelible impact on the attitudes he possesses. G.W.Allport has defined attitude as “a mental or neural state of readiness organized through experience, exerting a directive or dynamic influence upon the individual’s response to all objects and situations with which it is related”. The need is to create an environment for developing an attitude which is favourable to learning in open learning system. The nodes in the content which seem to be difficult to the learners may be diagnosed and suitable feedback managed so that unfavourable attitude may not develop.

When the learners join the programme, they have high ambitions for attaining the goal, but slowly and slowly, they become demoralized and pay very little attention towards the programme which they had offered. Therefore, in open learning system it seems to be very essential to have a close monitoring of learner and his needs, motives and an appropriate goal whose attainment would satisfy the motive. Continuous motivation, level of interest and a favourable attitude towards learning through open learning system, can develop the concepts of higher order, provided they are trained and skilled accordingly. For this, the help of video films, group interaction, field work and other such activities be made easily available to them by the open learning system.

4.2.5 Open University Approach to Distance Learners

Open university has different approach in different countries to distance learners. In 1969 ‘The open university’ of U.K. had adopted print as primary media for approaching distance learner. Later on, some audio-video cassettes were developed and counselling was also added as and when necessary. This three tier approach was followed by other Open Universities like **Allama Iqbal Open University (AIOU), Pakistan, Indira Gandhi National Open University (IGNOU), New Delhi and Dr. B. R. Ambedkar Open University (BRAOU), Hyderabad.**

Some universities being technologically advanced, did not follow this approach. They are ‘University of AIR’ Japan, Central Radio and Television University (CRTVU) China. These open universities have accepted radio and Television as primary media. Print and Human Support are secondary and tertiary media. Most of the activities for

personal guidance are covered by video films through Television It is so strange that the whole of the technological advancement in China is because of Distance Education.

Some Open Universities like Yashwantrao Chavan Maharashtra Open University (YCMOU) Nashik in India have accepted different approaches for different programmes. Most of the programmes are technical, vocational, professional, and so, as per need, a multimedia approach has been accepted by the University.

At present, every Open University is trying to develop a multimedia approach to distance learners. It provides 'Openness' in the true sense for selecting an appropriate media by the learner of his own choice. More and more chance, for drill and practice is needed for developing competency. Every Open University has to take care of this approach for its learners. A strong networking among these at international level, may help each other in strengthening learner's support and make possible for Optimum Utilization of learning strategies and their development.

4.3 Glossary

Zero Distance : When a learner gets all answers to his queries in the material itself at the time of learning, the distance between learner and material becomes zero.

Programme Evaluation : This is a process for analyzing the quality of various activities to make modifications, for quality improvement.

Course Maintenance : It is related to adding or deleting or changing some portion of the content as per need of the course users being learners and counsellors.

Motivation : It is the readiness of the mind to learn anything and is directly related to interest. It helps in the effective management of the process of learning.

Emotions : An emotion is a dynamic internal adjustment that operates for the satisfaction, protection and welfare of the individual.

Interest : It is that mental force which directs the body to do some work of preferences.

Instincts :Instinct is a natural urge or innate tendency in an organism to feel and behave towards a particular stimulus in a specific way.

Motor Skills : These are skills which are acquired by an individual for performing a task independently.

Learning Environment : This is a situation created with the help of man and machine combination for conditioning of the mind to learn.

Perception : It is person's feelings, acquired after similar experience about some incident or activity or person.

4.4 Summary

Distance Education system provides education to all person being adult and deprived of the opportunities of education. These learners have been considered as customers of education. The learner decides the quality of material, activities at Headquarters, Regional and Study Centers. These learners are part – time learners having many other responsibilities. The study center has to deal with his academic as well as non- academic problems.

The use of multimedia has reduced the distance between the learner and the learning system. The isolated learner earlier known as distance learner feels or experiences zero distance between himself and the learning system. The distance learner needs more motivation than his counterpart in conventional system. He needs to sustain his interest so that his emotions may drive him to success. Every distance learner may feel Eklavya as his ideal in the process of learning. The Open Universities have different approaches to distance learners. Some use print media as primary media and electronic media as secondary media while human support as tertiary media. In China and Japan the Radio and Television are primary media and other media are secondary media. Thus the approach depends upon availability of media for use by learners.

4.5 Exercises for Practice

Answer following questions in about 200 words each

1. Justify distance learner is a customer of education and differentiate between conventional learner and distance learner.
2. Write note on psychological needs of distance learners.
3. Explain learners isolation and open university approach to distance learners.
4. How multimedia reduces distance between teacher, learners and learning situation ?

Unit 5 : Multimedia for Optimum Learning

Index

- 5.1 Introduction
- 5.2 Content
 - 5.2.1 Optimum Learning
 - 5.2.2 Roles of A Multimedia
 - 5.2.3 Interactive Multimedia
 - 5.2.4 Open University Approach
 - 5.2.5 Computer as Multimedia
- 5.3 Glossary
- 5.4 Summary
- 5.5 Exercises for Practice

5.1 Introduction

If a person wants to visit Shirdi from Mumbai, he has to decide from among different options as mode of transport like Taxi, Bus, Train etc. These are alternate modes of transport. Similarly, in learning process there are different media playing different roles. These roles are Alternate, Complementary, Supplementary and Distinct. The main aim of selecting, combining and using the media, is to make the learner to learn upto his optimum level of learning. The combination of media is known as multimedia in Education. Distance Education has accepted a wide variety of technologies for managing need based programmes in different fields.

After the study of this unit, you will be able to know and understand :

- The meaning and methods of achieving, optimum learning.
- Various roles of a multimedia.
- The processes of developing an interactive multimedia.
- Efforts of Open Universities for multimedia development.
- The role of Computer as multimedia.

5.2 Content

5.2.1 Optimum Learning

Learning takes place in different quantities with different individuals. Same book, same classroom situation and same deliberation cannot make equal amount of learning with every learner. It is because of individual differences. These differences may be physical and mental. In order to cope with this situation, Educational Technology has gifted many learning strategies, techniques which help every learner to learn optimum level of learning. “Learning may be thought of as the progressive change in behaviour which is associated, on the one hand, with successive presentations of a situation and on the other hand, with repeated efforts of the individual to react to it effectively”.

In order to achieve this target, it is essential that every learner be given an opportunity to use all available resources learning as much as he can. Educational Technology has gifted many learning techniques which are self directed, keeping learner involved in learning, generate a two way communication and sustain the interest of the learner in learning. Programmed learning material, self instructional material, video films, visit to sites, computer assisted learning etc. are some of the learning strategies for optimum learning. The advantage of these strategies is that the learner gets full freedom to interact with these strategies and learn at his own rate, pace and time. Any learning strategy will be effective for optimum learning if it has potential for following six activities-

(a) Motivation within the learner, (b) A definite goal, (c) An anxiety to achieve. (d) Seeking an appropriate line of action, (e) Ability to fix an appropriate line of action, (f) Willingness to drop inappropriate behaviours.

In the process of optimum learning a few factors play a vital role. These are

- | | |
|-----------------------|--------------------------|
| (a) Readiness | (b) Exercise or practice |
| (c) Effort | (d) Maturity |
| (e) Purpose | (f) Selection |
| (g) Association | (h) Recency |
| (i) Multiple learning | (j) Transitoriness |

5.2.2 Roles of Multimedia

The word multimedia is gaining popularity in educational technology, but it is not new. In the 1960's the term was used to mean a "Combined media emanating from disparate presentation devices", such as learning packages consisting of print materials, slides, audiotapes and so on.

The technological ancestors of multimedia are film, video, computer graphics, electronic databases, computer based instruction, video and interactive video disc. A major distinction between computer based instruction which has been available since the 1970 and the multimedia is the later incorporation of audio and video. In this way multimedia systems are similar to video disc and computer system of 1980's. The difference is that in most multi-media systems all the audio and video files are stored and displayed digitally, whereas video disc is an analog medium. Moreover, these audio and video files are generally stored on the computer's hard disk or an internal CD-ROM as opposite to an internal video disc player.

Multimedia systems are flexible tools for educators, since they can be used for a variety of tasks, including :

- (a) Computer : generated lecture by projected displays of computer text and graphics with random access and immediate editing capability including, student polling and response capabilities.
- (b) On : Line Communication through computers and communication systems such as modems and phone lines or local area networks (LAN) to support messaging and conferencing, including the display of graphics and live motion video.
- (c) Databases Research by on-line access to remote databases and / or internal CD: ROM databases to conduct research, including the extraction of text, graphics, audio and video.
- (d) Hypertext and Hypermedia is nonlinear and helps in randomly accessible reference materials including text and graphics and, in the case of hypermedia, video and audio.
- (e) Computer Based Instruction (CBI) is also called computer based training or computer assisted instruction which are interactive tutorials with text and graphics, and, in the case of interactive video, motion video and audio sequences.

- (f) Simulators are models which simulate other systems and which are operated by a student to gain practice ; and
- (g) Electronic performance support systems are computer based job aids, which provide advice, memory aids or models to assist users in everyday tasks.

5.2.3 Interactive Multimedia

The term interactive multimedia indicates a two way communication or immediate feedback from both ways between a learner and media. This arrangement is possible through programmed learning material of '**Branching format**' presented through print, audio-video, computer. The computer assisted learning is an interactive device which provides immediate feedback to learners and answers to the students questions.

The following factors have been major barriers to the wider implementation of interactive instructional technologies.

- (a) **Poor Design** : Even when interactive multimedia is applied, it is often under utilized. There are still not many developers who are experienced with the complex and multifaceted features of this technology.
- (b) **Lack of Hardware Standards** : One of the biggest drawbacks to the use of multimedia has been a lack of standards in hardware that has plagued the interactive video market since its inception in the early 1980's.
- (c) **Educational Traditions** : Multimedia systems challenge the tradition of teaching by moving away from teacher centered and time centered education and certification. Teachers are not multimedia producers and the situation is aggravated by the fact that most teachers do not possess skills in interactive media design and production, do not have access to the large blocks of time and equipment necessary to produce good courseware, and are not typically rewarded as well for producing interactive lessons.
- (d) **Costs** : Multimedia systems are expensive to create and distribute. In an era of economic pressures for schools and corporate training centres, it is difficult to find the budget to provide enough multimedia systems to make a significant impact on instructional practices in education.

- (e) **Time Needed to Produce Materials :** Although numerous multimedia demonstration programmes are quite impressive, the resources needed to complete them are extensive and time consuming.
- (f) **Displacement of Human Interaction :** An important educational goal is fostering of communication and collaboration skills, which are not exercised in most existing interactive multimedia lessons. Part of the problem in this regard is the stereotyping of interactive media as tools for individualized instruction, rather than conceptualizing them as support tools for more traditional classroom teacher led instruction as well as for group work.

From in early 1980's, there have been efforts worldwide aimed at introducing interactive media into schools and corporate training. There are now computers available in most schools in developed nations, but most are not powerful enough to support current multimedia courseware, nor are there enough computers to make it possible for significant portions of a curriculum to be taught via multimedia. In future, there are likely to be fewer, more standardized hardware systems, mass production of courseware by publishers, and a greater emphasis on fostering collaboration and higher order thinking and analytical skills. It is doubtful that classrooms will be transformed into collections of individual workstations. However, more industrial training and performance support will be provided via computer systems, and classroom lecture support tools will tend to be centered around computer based products and display.

5.2.4 Open University Approach

A number of multimedia distance education institutions have been established in Asia and the Pacific. In fact open universities have accepted multimedia and openness as its basic features. In fact, openness is a freedom to learner for learning at his own rate, pace and time. Also, openness provides freedom to select a learning strategy or a combination of these by the learner. This freedom can be enjoyed only when open universities develop different learning strategies for same course content. Here lies the multimedia approach by open universities to its learners.

The Central Radio and Television University (CRTVU) has developed multimedia for the training of adult workers to raise their professional qualifications. The Indira Gandhi National Open University (IGNOU) New Delhi has developed multimedia for advancement and discrimination of learning by a diversity of means. The Yashwantrao Chavan Maharashtra Open University (YCMOU) Nasik in India has started many Vocational and Professional courses by adopting multimedia strategy. The B.R.Ambedkar Open University (BRAOU), Hyderabad has a long list of its Audio/Video cassettes developed for different programmes and telecast by Doordarshan and All India Radio for distance learners. In Indonesia, the “Universitas Terbuka” has developed and used multimedia in order to increase the absorptive capacity of higher education and to meet the need for University graduates for the sake of national development. The Allama Iqbal Open University of Pakistan and Sukhothai Thammathirat Open University, Bangkok, Thailand also invariably adopted a multimedia approach. These universities have listed printed materials, television and radio broadcasting programmes, video and audio cassettes, correspondence instruction and telephone guidance among the educational media for students learning at a distance. Although, the degree of emphasis varies, practically all of them include educational radio and television programmes in their instructional system.

The multimedia packages used by open universities are products that use more than one medium for communication purposes, for example, text, still images, motion sequences, audio, graphics and animation in various combinations. They are integrated for the user by a computer that manages them transparently communication between the user and the computer by means of **Graphical User Interface (GUI)** which facilitates interaction.

Packages for education and training sometimes include accompanying paper material, such as manuals, guides or student workbooks. The various components of the package are integrated, so that the educational objectives can be fulfilled. The creation of a multimedia title conceived in this way is thus part of a systematic approach, which will include many phases that can be cyclic and repeated until the desired product is produced; training needs analysis, subject analysis, aims and objectives, design, implementation, media selection and long - term evaluation and distribution.

5.2.5 Computer as a Multimedia

The computer has a potential of producing same information in a wide variety of ways like print, figures, graphs, voice, charts etc. Because of this potential, the computer is labelled as Multimedia Technology or sometimes Information Technology (IT). Computers in education refers to the use of computers as mediators in the flow of information, communication and instructional materials that occurs in, or relates to, educational situations.

One approach to categorising of the function of computers in education is to identify type of use in terms of the software used. The following description of learner - oriented and teacher - oriented uses is not exhaustive, and some types of use can be classified in more than one way. Learner oriented uses include structured, predetermined learning tasks such as the following.

- (a) Drill and practice testing;
- (b) Tutorials;
- (c) Educational games;
- (d) Simulations (particularly those for training);
- (e) “Problem solving” software; and
- (f) Learning about the computer and its functions as goals in themselves.

Other learner - oriented uses include those in the educational environment, tailored to a particular learning task or content, but allowing flexibility of use :

- (a) Simulations;
- (b) Problem solving software;
- (c) MBLM’s (Microcomputer Based Laboratory Materials);
- (d) Electronically organized data sets in databases, hypertext linked stacks, or “electronic books”, any of these data sets may be only text or multimedia;
- (e) Expert systems

Learner oriented uses also include tools or contentfree environments used for *educational purposes* :

- (a) Writing environments, including word processing or desktop publishing;
- (b) Database environments

- (c) Calculation, projection and statistical software (including spread sheets);
- (d) Programming environments (particularly LOGO);
- (e) Telecommunications mediated communication environments (including sending message, bulletin boards and computer conferencing);
- (f) Electronic environments for visual and audio production and manipulation (including environments for graphing mathematical functions as well as environments for supporting creative visualizations and compositions); and,
- (g) “Cognitive tools” (such as cognitive mapping, idea organizers and some other types of software, including expert systems provided their function is to extend cognitive functioning during learning in a constructive way).

Teacher oriented uses involve the use of teacher productivity tools, and tools for resource acquisition and handling, and for communication including

- (a) All of the tools noted above for learner use;
- (b) Student management and record keeping software (for various types of data including individual student performance records and data for accumulation in system - wide administrative information systems) and
- (c) Software for production of specialized types of learning material (ranging from print materials, such as puzzles or tests from test banks, to the production of demonstration materials, such as transparencies for overhead projectors or multimedia materials for presentations).

Computer learning influences the learner in many ways -

- (a) Attitudes of communities (social,cultural,political) to the value of a particular function of computers in education; and their ethical and philosophical positions relative to priorities for education.
- (b) The range of possibilities for computers in education related to economic constraints and economic motives and pressures related to decisions about various aspects of computer use;
- (c) The direction, degree, range and level of support related to funding, leadership, co-ordination, dissemination and stimulation of possibilities;
- (d) The system for development, dissemination and follow up support related to the resources and support needed for computer use in educational

- software, lesson and curriculum materials, appropriate teacher education, and hardware and related equipment; and,
- (e) The extent to which successful completion of a curriculum area related to system wise norms for that area, related to computer use.

5.3 Glossary

Optimum Level of Learning : It indicates learning by an individual upto that level which is possible by his mental abilities like Intelligence, Attention, Interest and Attitude etc.

Recency : It indicates a desire to learn modern concepts in the field of an individual's study.

Simulation : It is a technique for skill development by learning from each others performance.

Branching Format of Learning Material : In this format the content is presented in steps and every step has many exercises. When a person completes 90% of exercises correctly, he is asked to proceed to next step otherwise repeat the same step.

Online Transmission : The term on line is used for Internet transmission from both ways. A student receives a lesson on Internet and replies the assignments or places his queries through Internet. This type of transmission is very cheap but requires computer, modem and telephone on both sides.

Cognitive Mapping : It is related to the content which are to be received and retained in mind.

Teacher Productivity Tools : These are computer programmes for managing schools effectively, understanding learner problems and updating the teachers level of knowledge in the field.

Logo : is a operating software used to understand the computer easily by the students learning in schools.

System Wide Norms : These are the guidelines framed for using the computer for the purpose of communication.

5.4 Summary

The technological advancements and researches in educational Psychology have jointly searched solutions for individual differences and different pace of learning. Every individual has different mental capabilities like Intelligence, Interest, Attitude, pace of learning, etc. The multimedia being the gift of technological advancements is an answer to optimum learning by an individual. This multimedia has different roles like Complementary, Supplementary, Distinctive and Alternative.

Earlier a combination of different media like print, Audio and Video cassettes etc. was termed as Multimedia. but, now computer known as multimedia had come up with its high potential of producing same information in a wide variety of ways. This is an interactive device which provides immediate feedback to the learner for his queries. It can provide on line two way communication and requires one modem and phone for communication. There are many barriers to the wider implementation of this technology. These are Poor design, Low configuration hardware, Educational traditions, Costs, Time needed to produce materials.

Open Universities are based on Multimedia approach and have reduced distance between learners and the learning systems. In India and abroad, many Open Universities have developed multimedia strategy for meeting learning needs of its learners.

5.5 Exercises for Practice

Answer the following questions in about 200 words each.

1. Define optimum learning of an individual and explain strategies and activities of optimum learning.
2. Define multimedia and explain its use in teaching and learning process in distance education.
3. Write note on computer as a multimedia learning system.
4. What is interactive multimedia and explain factors affecting interactive multimedia learning.

Unit 6 : Philosophical Perspectives of Distance Education

Index

- 6.1 Introduction
- 6.2 Content
 - 6.2.1 Philosophies of Distance Education
 - 6.2.2 Philosophical Contribution to Distance Education
 - 6.2.3 Openness and Learner Autonomy
 - 6.2.4 Cumulative Effects on Open Universities
 - 6.2.5 SQ3R Technique for Studying Text.
- 6.3 Glossary
- 6.4 Summary
- 6.5 Exercises for Practice

6.1 Introduction

The philosophy is a branch of knowledge dealing with the subject of quest for truth. Distance Education is a methodology for imparting need based mass education. It is essential to examine the truth behind this methodology. The philosophy behind Distance Education has provided guidance to its manpower for behaving in accordance with the ideals. Education is the dynamic side of the philosophy. Many academics have put forth their views and these views has become philosophies.

In this attempt we shall discuss the significant ideas and our perception pertaining to this discipline. We shall, therefore identify various distinct lines of thought that attempt to provide philosophical foundations to the discipline under consideration.

After the study of this unit, you will be able to know and understand :

- Various philosophies and their role in Distance Education.
- Concept of Openness and Learners Autonomy.
- Significance of these philosophies on Open Universities.
- The meaning and use of SQ3R technique for studying the text units.

6.2 Content

6.2.1 Philosophies of Distance Education.

There are six important theories related to philosophy of distance education. The proponents of the chosen theories are listed below.

Distance Education : Thinkers and Theories

Sr.No.	Name of thinker	Major theoretical contribution
1.	Charles Wedemeyer	● Independent study
2.	Michael Moore	● Independent study (Revised) ● Learner autonomy
3.	Otto Peters	● Distance Education : an industrialised form of teaching and learning
4.	Borje Homberg	● Guided didactic conversation
5.	John Baath	● Significance of two-way postal communication
6.	David Sewart	● Human element in an industrialised form of teaching and learning

1. Independent Study

Charles Wedemeyer's Contribution to the theoretical foundations of Distance Education comprises of his analysis of the difference between distance education and the conventional (face-to-face) education. He analyses three key components;

- (i) Autonomy of the learner,
- (ii) Distance between the teacher and the learner, and
- (iii) Structural system.

These are the bases of an overall concept of distance education. He has outlined his ideas about 'independent study' and its purposes as below :

- (i) It consists of teaching and learning arrangements, and these arrangements have various forms. The special feature of these arrangements, is that, the

teachers and learners stay away from each other, and didactic communication takes place in various ways.

- (ii) Its purposes are to facilitate learning activities of both the on-campus and the off-campus students.

The situation, which is basically characterised by **Distance** between the teacher and the learner, has a few significant implications for the overall teaching and learning process. The more significant of these are :

- (i) The learner has the freedom to start, pace and stop his learning activities. It is he who is responsible for his progress or failure ;
- (ii) The learner is not necessarily away from his socio cultural, physical or geographical environments;
- (iii) Media other than the spoken word such as the printed word, visuals etc. are exploited with verbal one for the benefit of both the teacher and learner;
- (iv) Learning can be made more relevant to individual needs and it is the learning activity which becomes more significant than the teaching effort.

Thus, distance education necessitates a change in both the learner-culture and the teacher-culture.

Structural System

Non contiguous educational system may be visualised in the following features

- (i) The learner has to take much greater responsibility for learning in distance education;
- (ii) Wider choice of both the content and the methods is to be provided by the distance education system;
- (iii) Individual differences among the learners have not only to be recognised, but also catered towards optimum learning;
- (iv) Learners have to be allowed their own pace to complete the courses, they may start, stop and / or complete the courses according to their own convenience and abilities;
- (v) Evaluation of student performance should be independent of the consequence, methods, place and rate of studies;

- (vi) Teachers should concentrate on educational tasks and they should function more as managers of educational materials than as the traditional sources of information and knowledge;
- (vii) Teachers should accept the role of media as complementary to their own. The implication is that the course materials have to be reconceived and redesigned according to situation of learning;
- (viii) The educational operation should effect a judicious media-mix-using all the media and methods. It should be one of the major principles of course design and production; and
- (ix) The system should operate wherever the learner(s) may be - it should be independent of the domicile and grouping characteristics of the learners.

According to Charles Wedemeyer a system of education that is structured to incorporate the above characteristics is an independent study system.

2. Independent Study (Revised)

Michael Moore suggested the Physical Distance alone is not significant in conceptualising distance education. What matters, are the variables of individualisation and dialogue, as a very high degree of both these variables makes a course and programme pedagogically less distant and, conversely a very low degree of both the variables make a course and programme more distant.

- (a) Moore, suggested that **Dialogue** is a broad term which may be interpreted by the expression 'academic interaction' aimed at affecting teaching and learning as far as the learner is concerned. This dialogue may take place in a face to face situation, by individual or in a group, telephone, correspondence or may be mainly one sided, as in the case of computer assisted instruction, programmed instruction, television, radio and text materials.
- (b) Individualisation - An educational programme is said to be highly 'individualised' if its curriculum components namely objectives, methods, materials and evaluation have a very high correlation with the curricular components of the learners learning programme.

Structure of Educational Programmess

Our conventional school and university academic programmes are highly 'structured', i.e. their curricular components namely, objectives, methods, materials and evaluation are usually predetermined irrespective of the needs of a particular learner. On the contrary, an academic programme which is flexible enough to cater to diverse learner - characteristics, cannot have a rigid structure; and a programme without rigid structure makes individualisation of learning possible, as its objectives, methods, materials and evaluation can be adapted to which the learner is looking for.

Thus dialogue is a measure of the degree to which the communication medium in a distance education programme permits learner - teacher interactions, and **Individualisation** is a measure of the extent of the 'responsiveness' to the objectives of an individual learners. Thus, an educational programme, in which the learning programme occurs separately in terms of time and place from the **Teaching** allowing the learners control over the objectives of learning tools, methods and evaluation, is an 'independent study' programme.

3. Industrial form of Education

Otto Peters advocated that distance education is industrialised form of education as it involves following components.

- (i) **Division of Labour** : The production of teaching materials for the purposes of distance education is an industrialised process. A whole range of experts from subject specialists, course writers and content editors to instructional designers, printers etc. work in industrial lines to produce materials which are to be used in different ways from those that are used to learn from conventional books. The basic industrial principle seen here is division of labour.
- (ii) **Mass Production of Learning Materials** : The learning material produced by distance education system in the form of print, audio and video is for a large number of students like that in industry.
- (iii) **Systematisation of Work Procedure** : Like in industry, the success of distance education depends on :
 - (a) Planning and co-ordination

- (b) Formalisation of procedures,
- (c) Standardisation of products,
- (d) Systematisation of the overall process,
- (e) Mechanisation system,
- (f) Heavy dependence on centralisation.

(iv) **Layout** : The campus of an Open University is markedly different from that of a typical conventional university. In the former, the structures are more or less similar to those of an industry as it has separate sections for development, production, design and the role of teachers are more similar to the managers.

4. Guided Didactic Conversation

Borje Holmberg believes that the core of education is learning by individual learners. The distance learner is free to choose from various supporting facilities made available to him like Radio & T.V. programmes, audio and video cassettes, telephone and computer, even classroom teaching in contact programmes, etc but the responsibility of learning or achieving the academic objectives is on his own shoulders. He is engaged in what is being called 'Self Study' or 'Independent Study'. The significant point to be kept in mind is that a learner engaged in 'Self Study' is not a loner. He does not go about his studies all alone. He has a whole team of administrators, writers, media producers, teachers, evaluators, tutors, educationists, counsellors within the system and working with him. But, all of them have supportive roles, with individual learning.

5. Two Way Communication

John Baath's work essentially lies in his emphasis on the pedagogic significance of tutor comments which form the crucial link in the chain of two-way communication in correspondence and distance education. Secondly, we are interested in his realisation that, in spite of the pedagogic significance of assignments, there is a tendency to reduce the amount of postal two-way communication. We are inclined to believe that this is a dangerous tendency. It might be that alternatives will be found, as Baath did by way of building in **some kind of two-way communication within the material** by way of self-check exercises, detailed model or specimen answers, but the significant

point that emerges from this discussion is that two-way communication is needed for improving learner performance.

6. Human Elements in an ‘Industrialised’ form of Teaching and Learning

David Sewart argued that distance education institutions and universities are essentially institutions of mass education, and a particular package of learning materials is served to thousands of students, and in many cases millions of them. Can such a single learning package perform all the functions of a teacher? He characterises distance teaching and learning packages essentially by their constancy. He raised three issues as below :

- (i) The variety of learner problems,
- (ii) Immediate feedback, and
- (iii) Peer group interaction.

To resolve all the three issues effectively, Sewart emphasis the introduction of the human element in distance education, whereby a continuity of concern for students learning at a distance can be maintained.

6.2.2 Philosophical Contribution to Distance Education

The six theories of distance education as discussed can broadly be put into two classes :

Class 1 : In this group the focus of the distance education thinker is on the production of teaching-learning materials. Otto Peters appears to be the major thinker whose work belongs to this class.

Class 2 : In this group the focus of the distance education thinkers is on learner concerns. On the basis of differing orientations, theories based on learner concerns may be further subdivided into two classes. **The first sub-class** focuses on learners motivation and the objectives of learning as decided on by the learner. **The second sub-class** deals with the pedagogic aspects of a teaching learning programme, i.e. how a particular educational programme be made successful in terms of learner achievements. To the first sub-class belongs to the views of Charles Wedmeyer and Michael Moore who

emphasise learners autonomy and independent study and to the second, Holmberg, Baath and Sewart. Before we see how these theories get operationalised in the practice of distance education, we would like to say few more words about the learner who is at the focus of all the activities and processes that make Distance Education a new educational phenomenon. He may be called a **New Learner**.

6.2.3 Openness and Learner Autonomy

First we will discuss the concept of openness, very briefly, as a system of education that does not operate through the conventional system of education which are essentially restrictive in nature-admission restrictions, attendance restrictions, restrictions on the candidature for examinations given and taken in a year, restrictions on subject combinations for a particular degree etc. The large number of restrictions usually restrict the **degree of the openness** in the Distance Education system. Another aspect is a freedom to learner for selecting a learning strategy of his own choice and blend it with others for optimum learning. It will help the learner to learn at his own rate, pace and time.

Learner Autonomy

The conventional education is thrust upon learners. The curricular components are chosen and decided upon by the institute and the teacher, who prescribes the line to be followed by the learner. The curricular components are: Objectives of an academic programme, the methods that may be used to achieve those objectives, the materials which may suit those methods, and the evaluation system which may help achieving those objectives through the agencies of the suggested methods and the prescribed materials. An academic programme for which the objectives, methods, materials and evaluation are decided by the institute and teacher. But, in Learner Autonomy system the programme is **Learner Determined** because its objectives, methods, materials and evaluation (all the four curricular components) are determined by the learner himself.

6.2.4 Cumulative effects on Open Universities

The Open Universities have given autonomy to the learners and tried to fulfill all the essential components for generating a learning environment. This whole environment has been in a structured form similar to an industry. The acceptance of multimedia is for generating a dialogue with isolated learner in a structured manner. The idea of an industrialised form of teaching learning by Otto Peters is very well reflected in an Open University education system having division of labour, manual production of teaching materials and an industrial layout working systematically. Two way traffic has been made possible upto much extent as per the idea of Holmberg.

Tutor comments have been introduced to generate two way communication between the learner and the system. Contact programmes have been introduced for providing Human Support in an Industrialised form of learning.

6.2.5 SQ3R Technique for Studying Text

It is customary to give the students a lengthy reading at the beginning of every term. Clearly, they cannot afford to spend time to read everything. Moreover, different texts require different approaches, depending on what the students are expected to get from them. The students may need to read some books in parts. The implication here is that the strategy should be flexible in tackling text materials. The strategy that gained wide acceptance is SQ3R technique. It stands for the initial letters of the five steps in studying text : The five steps are:

- (i) Survey (S)
- (ii) Question (Q)
- (iii) Read (R)
- (iv) Recall (R)
- (v) Review (R)

Survey : It refers to the quick glance through the title pages, preface, chapter headings of a text. Surveying a text helps the students grasp the main ideas. A glance at the title pages gives :

- (a) The general subject area,

- (b) The level of approach,
- (c) The authors name, and
- (d) The date & place of publication.

Preface gives more details. A quick survey of the 'Contents' reveals what topics the author is dealing with and how he has organised the content.

Question : The survey of the text raised some general questions in our mind. Of course, when you turn from surveying the book as a whole to a specific chapter and topic, your questions will also become specific. The questions will be posed either in the beginning or at the end of a chapter. Since questions are generally more helpful, if given at the beginning of a chapter, it is always better to take note of it at the end of the chapter questions during the survey.

Read : Reading a text material demands a critical mind, when we read a text we apply our mind with all its critical skills, Unless we read 'actively' the questions which have been formulated, can never be answered satisfactorily.

Recall : Reading a text is not the final step in learning. Instead, it is the first step in learning. What is the need to recall for retention? Regular attempts to recall will help improve our learning in three ways - better concentration, chance to remedy mis-interpretations and reactive reading. How often to recall depends on 'how good' a reader you are.

Review : The purpose of reviewing is to check the validity of our recall. The best way to do this is to do a quick repeat of the other four steps - survey, question, read and recall.

6.3 Glossary

Dialogue : This is a conversation between two or among many either in a face to face situation or through machine. It may be verbal or non verbal through pictures, posters etc.

Learner Autonomy : It is a type of freedom to the learner for taking decisions about various activities from planning to result declaration.

Structural System: The frame work supporting various activities kept in some order.

Here the order is important without which the frame will not achieve the goal.

Didactic Communication : This is two way information flow between, one to one, one to many and many to many supported by media or in a face to face situation.

Non - Contiguous System : This is an arrangement in which a distance can be observed but learning takes place.

Detailed Model : It is the description of the procedure or product kept in some order. This order is known as Model.

Specimen Answers : These are sample answers written for some questions so that students may understand the format of answers to be written.

Constancy : It is an indication of firmness or unchangingness in taking decision.

6.4 Summary

Distance education system has been dominated by technological application for an optimum learning. This has been done for bringing an essence of openness at each and every stage by using a Multimedia in its true sense. There are some philosophies behind Distance Education system for meeting the objectives of openness and optimum learning. Charles Wedmeyer's idea of Independent Study advocated for autonomy of the learner by keeping a distance between teacher and the learner in a structured way. Micheal Moore added one factor known as dialogue to this philosophy. Otto Peters called the system as an Industrial form of education having a division of labour, mass production, systematisation of work procedure and an industrial layout.

Borje Holmberg has given his idea as Guided Didactic conversation and advocated for use of any media for this purpose. John Baath has given an idea of two way communication and explained the utility of Tutor comments in generating a two way communication. David Sewart emphasised the role of Human elements in an Industrialised form of learning. He advocated for immediate feedback, peer group interaction for meeting variety of learner problems.

These philosophies have a cumulative effect on open university system in India

and we have accepted a blend of all these philosophies in finalising the system.

SQ3R Technique helps a student in learning from Self Instructional Material in print form. He has to make a ‘Survey’ of the content under study, then he will question certain issues, after that he will Read, Recall & Review the content.

6.5 Exercises for Practice

Answer the following questions in about 200 words each.

1. Enlist philosophies of distance education and explain that the distance education is an industrialised form of education.
2. Differentiate between Micheal Moore’s and Otto Peeters theories and philosophy of distance education.
3. Write note on openness and learner autonomy in distance education.
4. Write note on SQ3R technique and it’s significance for distance learners.

Unit 7 : Andragogical Aspects of Distance Education

Index

- 7.1 Introduction
- 7.2 Content
 - 7.2.1 Pedagogical Principles of Learning
 - 7.2.2 Democratic Approach of Andragogy
 - 7.2.3 Pedagogy and Andragogy
 - 7.2.4 Andragogical Essence in Distance Education
 - 7.2.5 Programme Evaluation for Quality Education
- 7.3 Glossary
- 7.4 Summary
- 7.5 Exercises for Practice

7.1 Introduction

The process of teaching in olden days was a mere process of preaching by Saints and Acharyas. The learner was a mere listener with no freedom to interact or plead for his views about content or whole process of teaching and learning. Later on, certain changes were made and the process of teaching and learning shifted from Ashram to classrooms in the schools and the idea of individual differences were accepted. Later on, the Educational Psychology came into existence and **a science of teaching and learning known as Pedagogy** was evolved. Later on, another concept known as Andragogy was developed for adult learning. It advocates for involvement of Learners in the process of Learning from curriculum development to result declaration. The process of teaching became the process of communication moving around the learner who plays principal role during whole process. Pedagogy deals with adult learners and Open University learners are normally adults learners, learning with a flavour of openness.

After the study of this unit, you will be able to know and understand :

- A difference between Pedagogy and Andragogy
- Democratic essence in Andragogy
- Application of Andragogy for Distance Education
- Programme Evaluation for Quality Education.

7.2 Content

7.2.1 Pedagogical Principles of Learning

All formal education institutions in modern society were initially established exclusively for the education of children and youth. At the time they were established there was only one model of assumptions about learners and learning the **Pedagogical Model derived from the greek words ped meaning child and agogus meaning leader, so pedagogy literally means an ‘art and science of teaching children.** The students were dependent personalities who are ready to learn when guided by the teachers. The methodology of pedagogy is transmission of knowledge and skill. In this approach there are three main assumptions :

- (i) The mind of the learner is not matured enough for taking decisions about curriculum, the teaching methods and mode of examination.
- (ii) The teacher plays a decisive role in the whole process of learning.
- (iii) The learner accepts everything as a passive partner in the process of learning.

The pedagogy has certain demerits :

- (i) The teacher fails to know learner problems for which a solution is required.
- (ii) The learners become inactive and slowly resist the process of learning.
- (iii) There is no chance for improvement since the students have no voice.
- (iv) The teacher plays a leading role in the drama and the students behave like viewers.

7.2.2 Democratic Approach of Andragogy

It was in 1950, Linderman thought that adults were not just grown up children. There are differences between youth and adults as learners in the process of learning.

It was also felt that adults do indeed engage in more intentional learning outside the formal instruction than in organized programmes and that they are in fact highly self directed learners. In the 1960, European Adult Education Association were feeling a need for a label for the growing body of knowledge about adult learners that would enable them to talk about it, in parallel with the pedagogical model and they coined the term andragogy. It is derived from the greek word **Ander**, meaning **adult**. It was used to mean **the art and science of helping adults to learn**. Now, this term is widely accepted and used around the world as an alternative to pedagogy.

The andragogical model is based on following assumptions :

- (i) Adults have a need to know why they should learn something.
- (ii) Adults have a deep need to be self directing.
- (iii) Adults have greater volume and different quality of experiences than youth.
- (iv) Adults become ready to learn when they experience in their life situation, a need to perform more effectively.
- (v) Adults enter into a learning process with a task centered or problem centered or life centered orientation to learning.
- (vi) Adults are motivated to learn by both extrinsic and intrinsic motivation.

Elements of An Andragogical Design :

For developing an andragogical process design following elements are essential:

1. Climate Setting : A prerequisite for effective learning to take place is the establishment of a climate that is essential for learning. Two broad aspect of climate must be considered as (i) institutional climate, and (ii) climate of training situation. In order to have a climate setting some conditions are essential. These may be :

- (i) A climate of Mutual Respect.
- (ii) A climate of Collaborativeness.
- (iii) A climate of Supportiveness.
- (iv) A climate of Mutual Trust.
- (v) A climate of Mutual respect.
- (vi) A climate of good human relationship.

2. **Creating a Mechanism for Mutual Planning** : The learners should feel committed to a decision or activity to the extent that they have participated in making the decision or planning the activity. Their participation may be on equal level with the planner of the training programme.
3. **Diagnosing the Participant's learning needs** : The participants in a training programme are the customers who need to modify or develop some training skills. It is essential to diagnose their training or learning needs. It would help in preparing an appropriate type of training programme for them. Some procedures be adopted for helping the participants to diagnose their own learning needs.
4. **Translating learning needs into objectives** : The training needs, assessed by making an active involvement of participants, are to be stated into learning objectives being positive statements of directions of growth. These objectives are the terminal behaviours that can be observed and measured. Here the trainers have to help the participants for translating their learning needs into learning objectives.
5. **Designing and Managing a pattern of learning experience** : After learning objectives are stated, the trainer and the participants have to design a plan for achieving them. It will include the identification of resources most relevant to each objective and the most effective strategies for utilizing these resources. It may require the experiences of trainers, trainees and an interaction among them.
6. **Evaluating the extent to which the objectives have been achieved** : It is essential for finding out the extent to which desired changes have taken place among participants. It needs to observe how differently they are performing in life. The andragogy advocates the participation of the trainees for their active involvement in the process of evaluating their learning outcomes.

The above said six steps are essential for an Andragogical model of a training programme.

7.2.3 Pedagogy and Andragogy

People may think three or four things in their mind for Pedagogy and Andragogy as below :

- (i) Both are identical
- (ii) Both are alternative to each other
- (iii) Both complementary to each other
- (iv) Both opposite to each other.

The Modern Practices of Adult Education advocated for an Andragogical model to be adopted by school teachers for children and youth in many situations when they are involved in sharing responsibility. Also, there are situations in which pedagogical model was in practice by the teachers of adults. Therefore, above stated options should not be in our imagination. For the last 13 centuries we had only one model of assumptions regarding education known as the pedagogical model. Now we have two models. It is essential to examine both models and to check out which set of assumptions is realistic in which situation and using the strategies of whichever model is appropriate for that situation. In general the pedagogical assumptions are likely to be realistic in those situations in which the content is totally strange to learners and in which precise psychomotor skills are involved as in machine operations. But, even in these situations, elements of the andragogical model such as climate setting, might enhance the learning. So, it is not a wise step to think either or , but both as appropriate to the situation.

We can have a blend of both by using strategies best available and suitable to the situation. Below is a chart showing how various resources and strategies be utilized for enhancing learning and training.

Managing a System of Learning Resources

Resources	Strategies for Enhancing their Utilization
Scheduled training activities (course, workshops, seminars)	<ul style="list-style-type: none"> ● Revise time schedule to make more accessible to employees ● Revise programs to make them more congruent with adult learning principles. ● Train presenters in adult education methods.

Line supervisor and managers	<ul style="list-style-type: none"> ● Building responsibility for people development into their job descriptions. ● Build into supervisory and management training programs, sessions on principles of adult learning and skills in facilitating learning. ● Give credit in personnel appraisals for performance as people developes.
Libraries, Media centres (printed materials, audio-visual and multimedia programs)	<ul style="list-style-type: none"> ● Arrange open hours accessible to all employees. ● Make information about resources available to all employees. Provide help in using them.
Individual employees, specialists and technicians	<ul style="list-style-type: none"> ● Store this information in a data bank and make it available to employees through an educational brokering center.
Community resources (courses workshops, specialists, etc.)	<ul style="list-style-type: none"> ● Include in the above data bank.

7.2.4 Andragogical Essence in Distance Education

The distance education is meant for adults learners to meet a wide variety of educational needs, and the Andragogy is the science of facilitating the adults to learn by involving them at all stages from curriculum development to result declaration. Therefore, andragogy is best chosen by Open Universities for managing different types of educational programmes for adults learners. Another problem with a distance learner is, to learn at his own rate, pace and time. Need based mass education and its provision requires an essential dialogue with the target groups for their educational needs and selection of some appropriate strategies for meeting these training needs.

The learners may not have time to attend the face to face counselling sessions at study centres. They may prefer other ways like E-mail, telephonic counselling or Audio-Video Cassettes. It is essential to develop some Multimedia approach which

may help the learner to learn upto optimum level of learning. Also, it is essential to study the type of assessment procedures to be followed for making it a comprehensive assessment by combining various formative assessments for giving a meaningful summative assessment to the distance learners.

Thus, we see that the distance education is learner centered process of imparting a need based mass education. It is essential to follow various steps stated in this unit for managing various activities by consulting the target group of distance learners. Thus, it is found that andragogy is the answer for meeting various problems with the distance learners while managing a meaningful mass education.

7.2.5 Programme Evaluation for Quality Education

It is a process for answering the effectiveness of various activities of a course or programme. It plays either **a formative purpose** of helping to improve the programme or **a summative purpose** of deciding whether a programme should be continued. The purposes of Programme Evaluation are as below:

- (a) to contribute to decisions about programme installation;
- (b) to contribute to decisions about programme continuation and expansion;
- (c) to contribute to decisions about programme modifications;
- (d) to obtain evidence to rally support for a programme;
- (e) to obtain evidence to rally opposition to a programme;
- (f) to contribute to the understanding of basic psychological, social and other processes.

The andragogical model of teaching learning favours following steps:

- (a) establishing a climate conducive to learning;
- (b) creating a mechanism for mutual planning;
- (c) diagnosing the needs for learning;
- (d) formulating programme objectives;
- (e) designing a pattern of learning experiences;
- (f) conducting these experiences with suitable techniques and materials;
- (g) evaluating the learning outcomes and rediagnosing learning needs.

The last step deals with the process of Programme Evaluation. It is essential for Quality Control and Total Quality Management for every programme. There are alternative approaches to Programme Evaluation. These may be grouped into five categories as below :

- (a) Performance - Objectives Congruence Approaches;
- (b) Decision management Approaches;
- (c) Judgement Oriented Approaches;
- (d) Adversial Approaches;
- (e) Pluralist - Intuitionist approaches.

These are not alternative to each other, but are sometimes complementary or supplementary to each other as per the objectives of programme evaluation.

The main aim of this activity is to make necessary changes as per the needs of customers or students. In Open and Distance Education, this programme evaluation is an Integral part of every Open University offering need based mass education.

7.3 Glossary

Individual Differences : The nature has made no two persons similar to each other.

They differ in physical and mental abilities. Teaching Learning process should take care of these differences.

Transmission Techniques : These are devices clubbed for communication of information from one end to other and vice-versa to make the learning process more effective.

Climate Setting : This is an environment created by the teacher for making information to reach the mind of the learner and be retained.

Andragogical Model : This is a set up which is democratic in nature and makes the learner more active in taking decisions.

Training Needs : These are the learning needs in order to, bridge the gap or to enhance the knowledge of a learner. Correction in behaviour is known as Training.

Formative Purpose : It is for making certain changes in the format as per the suggestions by the course users.

Summative Purpose : It helps in taking a decision about the fate of the course or Programme for other batches of students.

Complementary : It indicates an important role without which the activity or Machine can't work. e.g. Engine, Brake, Gear etc. play a complementary role.

Supplementary : This is a role which gives additional help in completing the work.

Total Quality Management : It is a continuous process without any end. The person always thinks that his product is of second quality and the first quality is something else which is to be achieved.

7.4 Summary

The term “andragogy” is used in a variety of ways. To some it is another word for the education of adult learners, just as “pedagogy” which stands for the education of children. To others the word “andragogy” denotes a specific approach to the teaching of adult learners that is considered to be essentially different from the teaching of children. To still others the concept of andragogy includes not only adult education but also social work, personnel management, and community organization. Following are the symptoms of a adult learners :

- (a) his self-concept moves from a dependent human being towards a self-directing personality;
- (b) his growing reservoir of experience becomes an increasing resource for learning;
- (c) his readiness to learn becomes more oriented to the developmental tasks of his social roles;
- (d) his orientation towards learning shifts from subject-centeredness to problem-centeredness.

Several schemes have been developed for the art of teaching adult learners. The so-called “andragogical cycle,” which was developed during the 1950s and 1960s in many European countries, consists of five different phases:

- (a) the assessment of educational needs;
- (b) the definition of goals;

- (c) the planning of content and of didactic methods;
- (d) the implementation of the programme;
- (d) the evaluation of the process and the outcomes

It was observed that andragogy and pedagogy were not antithetical models, one for adults and the other one for children. In many cases the andragogical model could be applied to children and vice versa. Nevertheless, he still described pedagogy as a content model, which is associated with traditional learning, based on the teacher's direction, transmission techniques, and prescribed subject matter, whereas he considers andragogy to be a new approach, in which the teacher is primarily a facilitator of the learning process. Confusingly enough, the pedagogical model remains an ideological method which excludes the andragogical assumptions, while the andragogical model is not considered to be an ideology, but "a system of assumptions which includes the pedagogical assumption". Most programme evaluators agree that programme evaluation can play either a formative purpose (helping to improve the programme) or a summative purpose (deciding whether a program should be continued). The Andragogy and Programme Evaluation are the essential concepts in Distance Education. It is because Andragogy favours openness at all the stages while Programme Evaluation refers to Quality Control and finally to Total Quality Management.

7.5 Exercises for Practice

Answer the following questions in about 200 words each.

1. Define Pedagogy and Andragogy and explain their relevance in adult education and distance learning.
2. State and explain elements of andragogical process and design.
3. Write note on pedagogy and andragogy of distance education.
4. Explain in detail purpose and process of programme evaluation for quality education.

Unit 8 : Economics of Distance Education

Index

- 8.1 Introduction
- 8.2 Content
 - 8.2.1 Economy in Distance Education
 - 8.2.2 Economy and Quality of Education
 - 8.2.3 Research Priorities for Managing Economy
 - 8.2.4 Open University Approach in India
 - 8.2.5 Barriers to Economy - A Challenge
- 8.3 Glossary
- 8.4 Summary
- 8.5 Exercises for Practice

8.1 Introduction

The expansion of higher education in India in the post-independence period has been quite spectacular in quantitative terms. The student enrolment rose from merely 2 lakh in 1961 to an impressive 65 lakhs in 1998. The number of universities and colleges of various types has also registered significant increase during this period. The expenditure on higher education too escalated considerably from Rs.18 Crores in 1961, to about Rs.1500 crores in 1998.

The above facts and figures indicate the importance of financing higher education. Several principles of financing in the context of education in general are applicable in the context of distance education as well. There may be a difference in the specific heads of expenditure and in the proportion of funds allotted to these heads- but the basic principles governing, budgeting and financial management may do equally well in both the contexts.

After the study of this unit, you will be able to know and understand :

- Need for bringing Economy in Distance Education.
- How to maintain quality by observing Economy measures ?
- Need to conduct research for managing Economy in Distance Education.
- Open University incentives for Economy in Distance Education.
- Barriers to Economy in Distance Education and its control.

8.2 Content

8.2.1 Economy in Distance Education

An educational cost expresses the relationship between the inputs and the outputs of education. An assessment of such relationship lends perspective with regard to the quantity, the quality and the forms of input needed for producing one unit of output. These, in effect, determine the relationship between the average cost and the marginal cost, and also the economies and diseconomies of scale. Such analyses help us gain an idea of the cost of the education and the major factors that account for it, which are obviously of crucial importance from the point of view of planning and management of the educational system.

The planners need to know where the money is coming from and where it is going, since about three percent of the total national budget is devoted to educational development. Such a large proportion of expenditure which is next to the level of expenditure on national defence necessitates for the planners to make a thorough analysis of educational costs, especially for the following purposes;

- (i) to discover the possible imbalance and their extent, in the allocation of educational resources to different sub-sectors of the educational system or to different regions of the country;
- (ii) to identify the factors that are responsible for rapid increase in expenditure or to examine the pattern of uses of funds for education; and
- (iii) to identify the potential sources of funds not yet tapped for financing education.

The above purposes cannot be met without analysing such aspects of expenditure as the sources of the funds for education e.g. capital 'costs, recurring costs and the

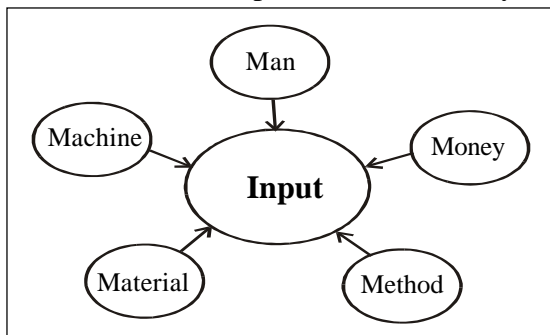
unit costs by level and type of education. The extent to which different types of costs are involved in realizing various educational objectives can be explained through the simple cost models which are generally referred to as cost functions. The specification of cost functions helps identify the degree of influence exercised by different factors which have a significant bearing on the development of educational programmes. The cost function provide desirable perspectives with respect to both the pattern of distribution of financial resources for various educational purposes and the areas which require a close scrutiny for ensuring efficiency in the use of resources.

8.2.2 Economy and Quality of Education

Quality is a matter of consideration of every open & Distance learning Institution at present. The concept of management has entered in every field, and so in education and now in open and distance education system too. We have considered a learner as our customer and the learning material and other services as our product. It is the customer who will decide the quality of the product. It is a known fact that the product quality depends upon the quality of process which again depends upon the quality of input.

Input —————> **Process** —————> **Output**

Every output has 5 essential components indicated by 5M as shown below.



These 5M jointly decide the quality of Input and are dependent upon each other. In the case of Open and Distance Learning System, Man means Manpower which helps to develop multimedia learning material, work at Headquarters, Regional Centres and at Study Centres for providing Human Support to the distance learners. The Money is in the form fees, salary of persons, expenditures on various activities. The

Machine is the learning material presented in Print, Audio-Video and other formats as well as teaching learning aids used for making the communication more effective. The Method deals with style of content presentation and covers softwares, teaching techniques, etc. The Material is course content which is presented in Self Instructional Material style of presentation. It may be in print form or Audio or Video forms. All these 5 M are to be of good quality. Here the operational definition of quality in the opinion of learner may be - “The good quality input creates a learning environment in learner’s mind, helps the mind in receiving and retaining the information for a longer period. All activities are geared to achieve this target”.

It requires the training of people deployed at various stages. A trained and skilled person can perform his duties upto optimum satisfaction of the customer being the distance learner. In the beginning a huge amount is invested on training which seems to be a wastage as it affects the economy. But, in the long run, it helps in maintaining the quality of work at a lower cost and thus brings economy in the system. Thus, we see that Economy and Quality are complementary to each other and helps the system to achieve one another. ISO 9000 and its other various forms provide guidelines for bringing quality in the system. The Distance Education Council, (DEC), New Delhi in collaboration with National Assessment and Accreditation Council (NAAC), Bangalore is trying to bring quality in ODL System by observing Economy at various stages.

Input and Output Considerations

Comparisons of inputs and outputs of education facilitate the decision -making process, especially in respect of allocation of resources. Like firms, educational institutions transform inputs into outputs. A set of inputs like the teachers, stationery, instructional materials, furniture, building, etc. are combined in such a way as to produce the output i.e., the students with new knowledge and higher cognitive ability. The use of inputs entails definite costs in terms of both monetary expenditure and alternative investment opportunities that must be sacrificed to enable this transformation to occur. While on the one hand the costs of some of the inputs like expenditure on teacher-salaries are measured by monetary outlays, on the other, the

costs of some other inputs like capital costs of durable assets and the forgone earnings of the students are imputed. The value of inputs in alternative uses is, thus, estimated.

Resource allocation considerations and measurement of educational benefits

As educational services are, to a large extent, treated as a social activity rather than an economic one, the allocation of resources is not determined by the market forces of supply and demand for education. The planners, however, need to know the cost (and the benefits as well) in producing different levels of combinations of educational outputs. In effect, the perceived knowledge of costs and benefits which is gained from relevant comparisons of inputs and outputs, determines the ultimate size of the educational benefit.

The costs and benefits of education are, however, not easily susceptible to measurement owing largely to conceptual and statistical problems, as a result of which the agreement on the benefits of education is hard to arrive at. This, therefore, distorts the educational decisions.

Cost-effectiveness and cost-benefit analysis

The relationship between inputs and outputs can be analysed by using techniques of productivity-measurements like cost-effectiveness analysis which, in essence, compares the cost of the inputs and the achievement of objectives, measured in terms of examination results or some other measures of output and quality. There are two ways of effecting cost-effectiveness analysis. One way is to compare the cost of two different institutions or educational methods: for instance, distance teaching with conventional face-to-face teaching. If the two types of education produce the same level of output, then the most cost-effective is the one that achieves this output at the least cost. Alternatively, if the output varies, then cost-effectiveness analysis can show which of the two alternatives achieves the higher level of output for a given cost. In both the cases, it is necessary to measure both costs and effectiveness in quantitative as well as qualitative terms.

Cost-benefit analysis is yet another way of analysing the relationship between inputs and outputs. In order to use the techniques of cost-benefit analysis, it is necessary to measure both the costs and the benefits in economic or financial terms. On the

other hand, in cost-effectiveness analysis the outputs of education can be measured in terms of scores in cognitive achievement tests, examination results, or some other measures of educational quality.

Different categories of cost factors in distance education

In essence, the study of relationship between the inputs and outputs of education is analogous to the concept of production function in economic theory. The processes and forms of production in distance education are comparable to those of the manufacturing industry. Accordingly, the method of imparting knowledge, skills and attitude at a distance is regarded as an industrial form of teaching and learning. In this system of education, a teacher teaches at a distance through the use of a variety of media, with the production of high quality teaching materials which make it possible to instruct a large number of students spread over a wide geographical area. Obviously, this, as in an industrial enterprise, involves adherence to certain basic principles of planning and management of mass production, mechanisation, rationalisation of the decision-making process, standardisation of the products etc. Therefore, in distance education the inputs and the processes of utilization of those inputs differ considerably from the conventional education system, though the ultimate output remains the same in both the systems. The differences in inputs bring in new categories of factors that influence costs of distance education.

8.2.3 Research Priorities for Managing Economy

The distance education system needs a huge expenditure in the beginning, but this expenditure being fixed cost is not changed for a longer period. It is essential to reduce the unit costs at various stages like

- (i) cost per student
- (ii) cost per graduate
- (iii) cost of education per capita
- (iv) cost per class
- (v) cost per hour
- (vi) average recurrent cost per teacher

(vii) capital cost per place

This is a matter of research to be taken up by Distance Education System. Various factors affect cost of Distance education. These are more specific to the operation of any distance teaching institute given as below :

(a) Number of courses offered

Since most of the Distance Teaching Institutes (DTIs) use print as the primary medium, the cost of a programme has a direct relationship with the number of courses offered under the programme. The greater the variety in the courses, the higher would be the cost - both for course production and implementation, as well as for course evaluation and revision including maintenance. If the DTI considers the student enrolment as the outcome of the institution, the cost of course development becomes a fixed cost; on the other hand, if course development is perceived as a product in itself, it gets treated as a variable cost.

(b) Process of course development

The decisions that you take regarding your approach to course development are crucial to the cost. Whether you prefer to have a course team of individual specialists to develop your courses; whether you decide to develop fresh courses or to adopt courses already developed by another DTI; what ratio of part-time and full-time staff you intend to employ - all these and the like affect the programme cost. While adoption of a course team approach may become cost intensive, while the writer-editor approach may become cost effective.

Similarly, while provision for full-time staff increase cost, part-time specialists might reduce it. But, in any case, it is the personnel cost that accounts for the major portion of the course development cost; and the larger the number of the full-time staff, the higher is the fixed cost.

(c) Use of part-time faculty

We have touched upon this factor earlier, but only with reference to the course development team. The United Kingdom Open University employed a large number

of part-time staff those who were full-time employees of other educational institutions, it did not have to pay full salaries and the other benefits given to a full-time staff, and this approach to hiring of personnel services drastically checked the overall cost of the university. In the Australian universities and other dual mode institutions, the full-time face-to-face teachers also have the additional responsibilities of teaching at a distance. In the American universities, “a few distance education programmes have teaching faculty assigned to the permanent staff, though even in these cases there are far more part-time faculty employed”. These part-time provisions match favourably with the overall programme cost; the permanent staff increase the fixed cost of the DTI as their salary is fixed irrespective of the quantum of their workload or actual output.

(d) Choice of instructional media

Though most of the DTIs use sophisticated media as either supplementary or complementary components or integrated them with the print media, there are institutes that use the sophisticated media like the TV as the master medium. It must be noted here that inspite of the facilities available in a country, the use of sophisticated media like the interactive video, computer, teleconferencing, etc. increases the fixed costs. If the courses themselves are considered as products, large scale use of sophisticated media would drastically increase the cost of course development. On the other hand, with every increase in the student enrolment for that particular course the cost per student would tend to decrease, thereby resulting in the multimedia distance education, at some stage, to be cheaper than the traditional system of education.

(e) Enrolment at the institution

You have seen that if the student enrolment is considered as the outcome, inspite of the increase in the variable cost, the fixed cost gets distributed over an increasing number of students, and thereby, reduces the cost per student. If the programme operation cost has to be reduced, either the student enrolment, or the fees per student has to be increased. With low student enrolment, concentration on the variable cost

is profitable; and with increase in the number of the students, it is always beneficial to shift some of the expenditure heads under variable costs to the fixed costs, so that economies of scale are achieved.

The five factors affecting programme costs as mentioned above represent the major cost factors. Besides, there are other cost factors that directly or indirectly influence the overall costs of a DTI. The three institutional case studies that we are going to discuss in the following three sections, in one way or the other, involve these factors affecting the programme costs. However, in our discussion on costs across these institutional case studies, we may not take all the five factors into consideration, because institutional decisions about the nature of courses, course production procedures, provision for student support, and institutional structures differ from institution to institution. And these decisions affect the distance education costs considerably. But, at least, the underlying cost structures would be similar in all of them, with differences existing only in their implementation.

8.2.4 Open University Approach in India

The Indira Gandhi National Open University (IGNOU), New Delhi has done some wonderful work in estimating the cost of course by focusing the development and production of materials. Also, there has been some research work related to semi variable and variable costs, indirect costs, and the annual recurrent cost per student.

The costs involved in the development of course units can broadly be categorised into two: the faculty cost and the non-faculty cost. The faculty cost amounts to be the salary paid to the academics during the development of the course. In case an academic was involved in the development of more than one course, the salary paid during the period was divided equally among the courses. In the case of the non-faculty costs, we put together two costs, namely the expenditure on meetings of the expert committee and course writers, and the honorarium paid to the course writers and editors for the course. The calculation of course costs was based on the data collected from a sample of 10 courses from various Schools of Studies. The costs under different heads are given in Table 1.

Table 1 : Cost for the development of course materials of a 8-credit course

Cost heads	Expenditure (Rs.)	%
1. Organising expert committee meetings	25,752	12.74
2. Fees paid to course writers	28,000	13.86
3. Fees paid to editors	7,384	03.65
4. Faculty salaries	1,40,978	69.75
Total	2,02,114	100.00

(a) Production of print materials

The expenditure incurred at this stage includes payments made for data entry operation, art work and illustrations, designing and composing of the text (all fixed costs), plate making, paper, printing and binding (variable cost). Though the number of pages in each booklet varies from course to course, for standardisation, the average was taken into consideration: i.e., an 8-credit course, consisting of 8 blocks, and each Block containing 64 A4 size pages. The calculation is also based on the 10 sampled courses of the University. The salary paid to the non-academic staff working for the production activities has been divided in the same way as was done for the teaching staff. The cost for the production of an 8-credit course is given in Table 2 below.

Table 2 : Cost of Production for a 8-Credit Course

Heads	Cost (Rs.)	%
1. Typing charges paid to agencies	3,849	03.27
2. Internal staff salary	30,975	26.28
3. Charges for illustrations, drawings etc	5,504	04.58
4. Charges for designing of texts	18,750	15.91
5. Charges for composing of texts	58,880	49.96
Total	1,17,859	100.00

(b) Development and production of audio and video materials

As you have seen in the case of print materials, in media production also the entire process is a joint endeavour, i.e., many specialists are involved in developing and producing the programme. Unlike in the case of print materials, here we shall

combine the various cost heads for the development and production of audio and video programmes.

In the case of the development of both audio and video materials, the academics from various Schools of Studies develop the academic brief and also the academic note. On the basis of this brief and note, the academic concerned and a producer develop the script to be used for production. Sometimes, outside script writers are also invited to undertake this task. However, since data on this account were not readily available, these have not been included in our calculations of the cost for such programmes. Further, it was difficult to divide the staff, studio and location time devoted to each programme or each producer. Therefore, a simple procedure was followed, the total cost of the Audio-Visual Centre was divided by the number of audio and video programmes produced to get at the average costs of audio and video programmes.

The following two points pertaining to the calculation of total cost may be noted before looking into the actual data.

- The cost heads for the entire Audio-Video were divided into five types, viz., staff salary, materials (like cables, connectors, components etc.), consumables (like tapes, bulbs, etc.) software (used for producing the programmes), and programme production.
- The cost of ten audio programmes was considered equivalent to that of one video programme.

The total cost of the audio and video programmes is given in Table 3.

**Table 3 : Total cost of audio and video programme
development and production (1990)**

Heads	Total Cost (Rs.)	%
1. Staff Salary	22,47,196	55.84
2. Materials	39,210	00.97
3. Consumables	14,87,902	36.97
4. Programme production	2,21,383	05.50
5. Software	29,038	00.72
Total	40,24,729	100.00

We find from Table 3 that more than half of the expenditure was on staff salary, and a little above one-third was spend on consumable items like tapes and bulbs, and the expenditure on software was quite negligible i.e., less than one per cent. From the above cost structure, the expenditure per video programme (or say a video equivalent programme) was Rs. 55,899 though the cost of an audio programme was Rs. 5,410 i.e., ten audio programmes were made equivalent to one video programme in terms of cost. In the calculation of the cost of audio-video programmes, 63 videos and 93 audio programmes produced in the year 1990 have been considered. The 93 audio programmes have been made equivalent to 9 video programmes; therefore the cost calculation is based on 72 video programmes i.e., 63 video and 9 audio- equivalent video. The University had fixed a standardised provision of 4 video and 5 audio programmes per 8-credit course. Therefore, the cost of audio-video programmes per 8-credit course comes to Rs. 2,50,644/-.

Till now, we have discussed the cost per course for print materials and for audio-video components separately. Now let us see the cost pattern of an 8-credit course (consisting of 8 Blocks of 512 A4 size pages, 4 audio programmes and 5 video programmes) under various heads. We shall also find out the annual fixed cost under all the heads of expenditure and for the 8-credit course as a whole is given in Table 4.

Table 4 : Total fixed cost & Annual fixed cost of a 8-credit course

Heads	Total fixed cost (Rs.)	%	Annual fixed cost (Rs.)
1. Development of print material	2,02,114	35.42	49,922
2. Setting the text for printing	1,17,859	20.65	29,111
3. Five audio programmes (production)	27,048	04.74	06,681
4. Four video programmes (production)	2,23,596	39.19	55,228
Total	5,70,617	100.00	1,40,942

In the above calculation for the annual fixed cost, the life of a course (print, audio and video) has been assumed to be 5 years. The total cost is for five years, and the annual fixed cost has been calculated from the total fixed cost by taking into account the interest rate of 7.5 per cent per annum. If these courses can run for more

than 5 years without any major revision, the annual fixed cost would automatically get reduced. For instance, if the course can be offered for 10 years without any major revision, the annual fixed cost under different heads noted in Table 4 would get reduced by 50 per cent under each head.

(c) Cost per student

Now let's look into the cost per student. The unit cost, in the present case, is based on the annual recurrent cost, viz, semi-variable cost, directly variable cost, and indirect cost or the institutional overheads for the year 1990, in relation to the number of students enrolled to various programmes for that year. In the year 1990, the total student enrollment to various programmes was 56,020. The programmes were of varying credit values, viz., 12-16 credit for certificate programmes, 24-32 credits for diploma programmes and 32 credits per year for the undergraduate programme. This suggests that students of varying credit requirements utilised the services of the University in the given year. Since 32 credits worth course load is considered to be the standard student work load per academic year, all the calculations have to be done according to this standard.

Accordingly, it was necessary to cover all the student numbers working for 32 credits per year. For this conversion, the student numbers working for 32 credits per year are given a weightage of 1, while those working for 24 credits per year were assigned a weightage of 0.75 and a weightage of 0.50 was given to those working for 12-16 credits per year. For instance, the weighted full-time student number for the BPP (Bachelor's Preparatory Programme) of 16 points came to be 6,574 on the basis of the actual enrolled number of 13,149, while the number for the DAE programme with 24/30 credits became 922, instead of the actual enrollment of 1,229. For all the programmes for the year 1990 taken together, the actual total student number of 56,020 got converted to 45,859 full-time student equivalent on the basis of which the unit cost was calculated. The final calculation of the annual recurrent unit cost has been given in this sub-section that is based on the semi-variable and variable costs given above and indirect costs given in sub-section below. Let's start with the semi-variable costs.

(d) Semi-variable and variable costs

It will be helpful to recall what you have read about various cost types in the above section so that you may relate them to the calculation of various types of costs in this and the subsequent sub-sections. As noted in that section, the semi variable costs include the salaries paid to the staff of various Divisions like Admission, Evaluation, Computer, Material Distribution, and Regional Service and academic-counselling provided to the students.

In Table 5 : total student costs for various items is given below :

Table 5 : Semi-variable costs per student (Total number of students = 45,859)

Cost Heads (Divisional activities)	Total cost (Rs.)	% to total	Unit cost (Rs.)
1. Admission Division	4,73,000	03.78	10.31
2. Evaluation Division	6,77,000	05.41	14.76
3. Computer Division	12,24,000	09.79	26.69
4. Material Distribution Division	3,67,000	02.93	08.00
5. Regional & Study Centre Services Division	97,67,000	78.09	212.98
Total	1,25,08,000	100.00	272.75

You will notice from Table 5 that the highest proportion of the semi-variable cost (i.e., 78.09% was spent on conducting orientation programmes for coordinators of study centres and academic-counsellors, followed by student record maintenance service (9.79%), examination processing service (5.41%), admission service (3.78%) and material distribution service (2.93%). The semi-variable unit cost for the year 1990, with a total weighted full-time student number of 45,859, was Rs. 272.75, out of which the unit cost for academic-counselling was the highest and that for material distribution was the lowest.

The variable costs, as noted earlier, vary directly with the number of students enrolled to various academic programmes. The different cost heads noted in Table 5 also involve costs that are variable, except the student admission activities. Instead, an addition to this can be made of material printing and publication, the activities of which are directly related to student numbers. The various Divisions included in this

cost calculation are: Computer Division (i.e., student record and maintenance), Printing and Publication Centre (PPC) (i.e., printing and publication of materials), Material Distribution Division (MDD) (i.e., distribution of materials to students), Regional Services Division (RSD) (i.e., academic-counselling of students), and Evaluation Division (i.e., examination processing). The sum-total of the variable costs and the unit variable cost for the year 1990 are given in Table 6.

Table 6 : Variable costs per student (total number of students = 45,859)

Cost Heads (Divisional activities)	Total cost (Rs.)	% to total	Unit cost (Rs.)
1. Student record division	6,84,000	02.50	14.92
2. Printing and publication	1,91,75,000	70.03	418.13
3. Distribution of materials	19,98,000	07.30	43.57
4. Academic-counselling	21,00,000	07.67	45.79
5. Evaluation Division	34,24,000	12.50	74.66
Total	2,73,81,000	100.00	597.07

The details about the cost items for the five cost heads noted above are as follows:

- *Student record and maintenance*: Computer stationery, computer maintenance, and other contingency charges.
- *Printing and publication of material* : Cost of paper other than for course materials, printing, contingency expenditure, printing of student application forms and brochures.
- *Distribution of materials* : The actual postage paid for the despatch of materials to students including cost of transport.
- *Academic counselling* : Academic counselling, honorarium, tours and travel and other charges only.
- *Examination processing* : Printing of question papers and confidential stationery, answer books and response sheets, payment of evaluators and expenditure incurred on the examination centres for conducting examinations.

You may note that while the costs included under various divisional activities recorded in Table 5 are for staff salary and expenditure incurred on orientation

programmes, the same heads noted in Table 6 above include the operational activities that directly vary in volume with the number of students. You may notice from Table 6 that the major cost head was printing and publication of materials i.e., a little above 70 per cent of the variable cost. Another important cost head, i.e, examination processing that was only a little more than six per cent with regard to the semi-variable cost, accounted for twelve per cent of the variable cost. You will also observe greater variance of costs (semi-variable and variable) in the case of other cost heads. The unit variable cost for all the students taken together was Rs. 597.07 out of which printing and publication head accounted for the highest amount i.e. Rs. 43.57 per student. As a whole, the variable costs were higher than the semi-variable costs.

The total variable costs for the year 1990 the semi-variable costs given in Table 5 and the variable costs given in Table 6 put together given in Table 7.

Table 7: Total variable costs for the year 1990
(total number of students = 45,859)

Cost Heads (Divisional activities)	Total Variable cost (Rs.)	% to total	Unit cost (Rs.)
1. Admission	4,73,000	01.19	10.31
2. Maintenance of student records	19,08,000	04.78	41.61
3. Printing and publication of materials	191,75,000	08.07	418.13
4. Distribution of materials	23,65,000	05.93	51.57
5. Academic-counselling	1,18,67,000	29.75	258.77
6. Examination processing	41,01,000	10.28	89.42
Total	2,73,81,000	100.00	597.07

Table 8 : Indirect costs per student for 1990
(total number of students = 45,859)

Cost Heads	Total indirect cost (Rs.)	% to total	Unit cost (Rs.)
1. Library and documentation	8,69,000	02.98	18.95
2. General administration	51,56,000	17.66	112.43
3. Estate management	18,96,000	06.49	41.34
4. Common services and general charges	1,63,44,000	55.98	356.40
5. Miscellaneous expenditure	49,32,000	16.89	107.55
Total	2,73,81,000	100.00	597.07

The highest expenditure was incurred on the common services and general charges; therefore, the unit indirect cost was the highest i.e., Rs. 356.40 under this cost head. On the other hand, the expenditure was the lowest in the case of Library and Documentation; so this head had the lowest unit cost i.e., Rs. 18.95 per student. If you compare Table 7 and Table 8, you will notice that while the total variable cost was Rs. 398,89,000 the cost of the institutional overheads was Rs. 291,97,000. Similarly, the per unit indirect cost, i.e. Rs. 636.67, was lower than the per unit total variable cost, i.e., Rs. 869.82.

(e) Annual recurrent unit cost

We have noted in section 8.2.4 that costs on account of the development of print materials and the audio-video components and those under institutional overheads i.e., indirect cost were taken as the fixed costs. Further, we presented the costs involved in the development of print materials in Tables 1 and 2, and the costs involved in the production of audio-video components in Table 3. There was no discussion about the total expenditure on various Schools and Divisions except the total expenditure on the Audio-Visual Centre (Table 4).

We need to have the fixed costs, semi-variable costs, variable costs, and indirect costs to arrive at the annual recurrent cost. We have already calculated these costs except the fixed cost, which we shall take up now. The fixed costs include the total revenue expenditure on the salaries of the staff in all Schools of Studies, the Student Services Division, the Audio-Visual Centre and the Print Production Centre. In Table 9 below are given the total fixed costs and the unit fixed cost under the four heads.

Table 9: Fixed costs per student in 1990 (total number of students = 45,859)

Cost Heads	Total cost (Rs.)	% of total	Unit cost (Rs.)
1. Schools of Studies	96,33,000	64.95	210.06
2. Student Services Division	4,13,000	02.78	9.00
3. Audio-Visual Centre	40,25,000	27.14	87.77
4. Print Production Centre	7,61,000	05.13	16.59
Total	1,48,32,000	100.00	323.42

From Table 9 you will find that the unit fixed cost was the highest for the Schools of Studies, and the lowest unit cost was for the Student Services Division. In order of ranking, the Schools of Studies, staff salary accounted for the highest unit cost; followed by the Audio-Visual Centre, materials, consumables, programme production, software, and staff salary.

The total and per student recurrent costs i.e., fixed costs, semi-variable costs, variable costs and indirect costs are recorded in Table 10 below to have a comprehensive view of them all.

**Table 10 : Total and per student annual recurrent costs
(total number of students = 45,859)**

Cost	Total cost (Rs.)	% of total	Unit cost (Rs.)
1. Fixed costs (direct)	1,48,32,000	17.67	323.42
2. Semi-variable costs	1,25,08,000	14.91	272.75
3. Variable costs	2,73,81,000	32.63	597.07
4. Indirect costs	2,91,97,000	34.79	636.67
Total	8,39,18,000	100.00	1829.91

You will notice from Table 10 that the total recurrent expenditure for the year 1990 on 45,859 full-time equivalent student was Rs. 8,40 crores, out of which the fixed costs direct and indirect costs accounted for 52 per cent, and the total variable costs semi-variable and variable costs accounted for 48 per cent. This cost pattern reveals that both the total recurrent cost and the per student recurrent cost were highest in the case of indirects costs, followed by, in rank order, variable costs, fixed direct costs, and semi-variable costs. The per student annual recurrent cost for 1990 was Rs.1830.00. It may be noted here that the salary component accounted for 36 per cent and the non-salary component 64 per cent of the total recurrent cost.

8.2.5 Barriers to Economy - A Challenge

Economical measures are essential for reducing various costs without any compromise with the quality of our material, services, etc. However, several factors are like barriers to economy. These may be as follows :

1. Less Enrollment of Learners

It happens sometimes that we get less number of students than expected in our plan. As a result, the fees received from them is less and the expenditure remains same. In such a case, the distance education organisation offering the programme, gets a loss and finally its economy is disturbed. It has happened in the case of Post Graduate Diploma in Distance Education (PGDDE) and Master of Arts in Distance Education (MADE) programmes offered by IGNOU, New Delhi. Even, many times the counselling sessions are not organised because the number of students becomes less than minimum expected.

2. Larger Dropout Rates

It happens sometimes that the students take admission and pay fees in instalment for one term or one semester or year and later on they leave the programme either in the beginning or middle or at the end of the semester or year. They do not appear for examination. Thus, the exam fees and total programme fees, expected from them, is not recovered. It finally affects the economy of the organisation.

3. Increased Cost of Electronic Goods and their Maintenance

It happens sometimes that the Audio-Video aids to be installed for use are supplied late by the outside agencies. As a result, they charge more, due to increase in cost which affects our economy. Also, its use by unskilled persons creates sometimes a problem of either replacing or repairing frequently. This unexpected cost of repair or replacement creates undue burden on the economy of distance education.

4. Study Centre Staff Desiring more Money

Sometimes, it happens that the study centre staff demand more money in the form of conveyance allowance, refuse to help the students, if they disturb them after counselling hours. They need more money if they work for extra hours. Within same centre, they want to create many exam centres for different programmes at the time of examination. It disturbs the economy of the organisation.

5. Expecting more Money than the Prescribed Rates for the Work

Sometimes, the counsellors do not want to work for counselling at the rates

prescribed by the organisation. They demand more money and sometimes they take extra money from the students. If they refuse to give, the counsellor do not cooperate to them. It happens some times and the organisation gives some more incentives for this so called extra work. It affects the economy of the organisation.

6. Untimely Deposit of Fees for Various Terms

There may be sometime some students who do not deposit the fees for various terms in time. As a result, it creates a confusion at the organisational level about treating them as a drop out or otherwise. The expenditure made on Study Centre and Regional Centres, learning material and other services remains same but income is less. Less income and same expenditure affects the economy of the organisation.

7. Subsidy on Fees

The Government has made a provision for subsidy to Backward classes, female and handicapped students. Since Open Universities are not given this subsidy by Government and so, the organisation has to bear this loss of fees. This loss of fees is also a factor affecting the economy of distance education.

8.3 Glossary

Constant Price : Price expressed relative to the price of a fixed year.

Cost Curves : It is the cost of production in rupees varies with units of output produced. If a graph is plotted with units of output on the X-axis and cost of production on the Y-axis, such a graph is termed as a cost curve.

Cross-section Data : These are data on a variable measured from all the segments of the population.

Current Prices : The amount of investment expressed in terms of prevailing prices.

Direct Cost : Also termed as variable cost, this refers to that part of cost which varies directly with the level of output.

Economies of Scale : When the average cost of production decreases with larger scale of production, the firm derives economies of scale. Similarly, the firm derives diseconomies of scale if the average cost goes up as the increase in output.

Gestation Period : The time period between the beginning of a project and reaping the output.

Imputed Cost : The value of assets which are not hired from the market but owned by the institution is added to the cost of the market rate. Such a value of the facility which is not marketed actually is called the imputed value of the facility.

Indirect Cost : Also termed as fixed cost, it refers to that part of cost that does not vary with the level of output.

Per Capita : Cost calculated on per person basis.

Real Cost : The incurred cost when expressed in terms of real inputs is termed real cost; for example, two units of labour, three units of land, etc.

Social Benefit : The benefit accruing to the society as a whole out of any economic activity. This equals to the sum of private benefits and externalities (Indirect benefit to others).

8.4 Summary

A large expansion of Distance Education system in different countries has been welcomed by all sections of the society. But, managing economy without compromising with the quality, is a major challenge before the system. No organisation can be run for a longer period if it is facing a loss and scarcity of funds to meet the challenges ahead. Developing its own economy is very essential for every organisation.

It is essential to calculate unit cost at various levels like cost per student, per study centre, per course, per programme, etc. It is felt that economy and quality are in opposite direction with each other. But, that is wrong, because economy indicates to control unnecessary expenditure. The quality indicates the maintenance of norms and standards but not by making an unwanted reduction of expenditure. A balance between the two is needed.

In India, and abroad, many researches have been conducted to calculate unit cost and have been published. But, this is a little effort. It is essential to develop research proposals on a large scale for calculating Unit costs and their comparison among various open universities. This mega exercise would help in understanding

the ways and means for reducing the costs at various stages. There are many barriers to economy of distance education. There may be small number of students seeking admissions and a large percentage of dropouts, heavy expenditure on electronic goods and their maintenance, desiring more money by Study Centre staff for same work, non co-operation by students for timely deposit of fees, subsidy on fees for a large number of students.

However, these problems may be met, if suitable researches are conducted in the field of unit cost and the recommendations are implemented.

8.5 Exercises for Practice

Answer the following questions in about 200 words each.

1. Write note on economy of distance education with reference to quality in education.
2. Compare the fixed and variable costs for programme development and operation in distance education.
3. How distance education institutes can reduce cost of education without loss of quality ?
4. List out and explain the barriers to achieve economy in open and distance education.

Unit 9 : Management of Distance Education

Index

- 9.1 Introduction
- 9.2 Content
 - 9.2.1 Managerial Approach in Distance Education
 - 9.2.2 Managerial Components and their Interdependence
 - 9.2.3 Systems Approach in Distance Education
 - 9.2.4 Open Universities and their Management
 - 9.2.5 Management of Conventional and Open Universities
- 9.3 Glossary
- 9.4 Summary
- 9.5 Exercises for Practice

9.1 Introduction

The main function of management is to make an institution more effective as well as efficient. Effectiveness of an institution depends upon five main aspects: Achievement of goals, Development of people, Expansion and Growth, Self renewal, and Impact on the larger community. The primary focus of management in an institution is to create an orientation of pride, enjoyment and growth (PEG) among its workers. This requires the conversion of an institution into an organisation. The things are organised properly by using the managerial functions like Planning, Organisation, Leading, Controlling and Evaluation. The idea of Systems Approach helps us to break into components and then understand the institution as a union of various independent components assembled in an order for achieving some desired objectives. Open Universities are following dependent model, and so, managing part time human resources for various activities is a big challenge before them. The conventional universities have full fledged departments and well equipped affiliated colleges, which

hardly depend upon other institutions. But, open universities depend upon the human resources available in society and mainly with the conventional system of education. This requires an insight in planning, organising, controlling and evaluation activities.

After the study of this unit, you will be able to know and understand :

- The concept of managerial approach and its role in an organisation.
- Inter dependence of managerial components.
- Role of Systems Approach in Distance Education.
- Management of Open Universities in India.
- A differences between conventional and open university system.

9.2 Content

9.2.1 Managerial Approach in Distance Education

The Process of Management consists of Planning, Controlling, Organising and Leading. These are described below.

1. Planning

Planning is the most basic and pervasive process involved in managing distance education. It means deciding in advance what actions to take and when and how to take them. Planning is needed, firstly for committing and allocating the organisation's limited resources towards achieving its objectives in the best possible manner and, secondly for anticipating the future opportunities and problems. Planning is putting down in black and white the actions which a manager intends to take. Each manager is involved in planning though the scope and character may vary with the level of the manager. At the top, the managing director is involved in planning for the company's diversification over the next five years. The middle level marketing manager undertakes planning to increase the sale of his products. The field sales supervisor plans the day's activities of his team of sales officers.

Irrespective of the activity or level at which plans may be drawn, the critical factor is that they focus on objectives and are directed towards their achievement. They serve to channelise the energies of the company in the desired direction. The

future is always uncertain and therefore risky. Stepping out of home on a cloudy day with an umbrella in hand is the way I cover my risk of getting wet against the anticipated but uncertain future rain. It may or may not rain but I am prepared. The umbrella is representative of the plan which a company draws up in anticipation and preparation of the future opportunities and problems. Planning implies not simply reacting to events but anticipating and preparing for them.

Planning ensures the most efficient use of scarce resource. Planning implies coordinated, inter-related effort towards achievement of the common objective rather than uncoordinated haphazard, arbitrary, overlapping action towards individual objectives. Joint, coordinated effort implies pooling of resources and their optimum allocation without any wastage. Planning is the only way by which an organisation can exercise control to check that it is on the desired course of action. Only when there are objectives to work for, and plans to achieve these objectives, can the manager exercise his control to measure the performance of his organisation, department or subordinates. An organisation without plans and controls is like a raft marooned on high seas with no maps.

To ensure that a plan is effective and succeeds in achieving its objectives, it must have following components.

- (i) Planning must start from the top.
- (ii) Planning must be flexible.
- (iii) Balance between rigidity and flexibility.
- (iv) Integration between short and long term planning.
- (v) Proper implementation of plan.

2. Controlling

Planning and controlling go hand in hand. there can be no control without a plan and plans cannot be successfully implemented in the absence of controls. Controls provide a means of checking the progress of the plans and correcting any deviations that may occur along the way.

The type of control required will vary according to the factors that are to be controlled, and the critical importance of the factors to the organisation's success.

The more critical the factor the more complex is the control mechanisms needed to check its progress. Finance is a very critical area of management and most companies devise elaborate and sophisticated financial controls.

A control is meaningful only when there is clear cut responsibility for activities and results. It is meaningless to have a control process which simply points out deviations but cannot pinpoint the area in which they occurred and who is responsible for taking the corrective measures.

Following basic steps are involved in designing a control process.

- (1) Establishment of standards.
- (2) Measurement of performance.
- (3) Correcting deviations.

All control processes should reflect the plans that they are supposed to follow. However, to be truly effective the controls must highlight the critical variables in an objective manner, and be worth their cost in installation and operation.

Budget is a traditional and widely used control process. Apart from this a company may use historical statistical data, or break-even analysis to control its operations. By the use of mathematics, many sophisticated control techniques are also possible. These pertain to implementing control for inventory management, distribution logistics and project or programme management.

3. Organising

Organising refers to the formal grouping of people and activities to facilitate achievement of the firm's objectives. Issues for discussion here are the types of organisation structure, degree of centralisation, levels of management, span of control, delegation of authority, unity of command, line and staff relationship and staffing. Closely related to the concept of centralisation are the concepts of levels of management and span of control. Levels of management refer to the number of hierarchical levels under the control of a particular manager. Machine operator, foreman, floor manager and production manager represent the levels of management in a typical production department under the general manager. The machine operators report to the foreman, the foreman reports to the floor manager who in turn reports

to the production manager who is accountable to the general manager. The number of machine operators who directly report to the foreman represents his span of control. There is a great deal of controversy regarding the ideal number of people that a manager can effectively control or the ideal span of control. Many management thinkers are of the view that three to seven is the ideal range. In practice, this may actually vary from one manager to another.

At each level of management, there is a reporting relationship between the manager and the workers. The fewer the number of people that a worker has to report to, the less will be the problem of conflict in instructions, and greater the feeling of responsibility for results. Similarly, the clearer the line of authority from the manager to the workers, the better the decision-making and communication.

4. Leading

The manager's concern is to find a set of common factors which can motivate all his people coming from diverse and different backgrounds and working at different levels of management. The manager's task will be greatly simplified when he understands that motivational factors are present in, and can be used in designing work rewards, work environment, work relationships and work content. All monetary benefits and non-monetary advantages such as free medical cover, company car and driver, club membership, etc. are part of the work reward and are important motivators.

The manager has not only to motivate his people but also provide them with leadership. To that extent every manager is a leader. A manager has to inspire and influence his people to willingly work towards achieving the organisational objectives.

5. Decision Making

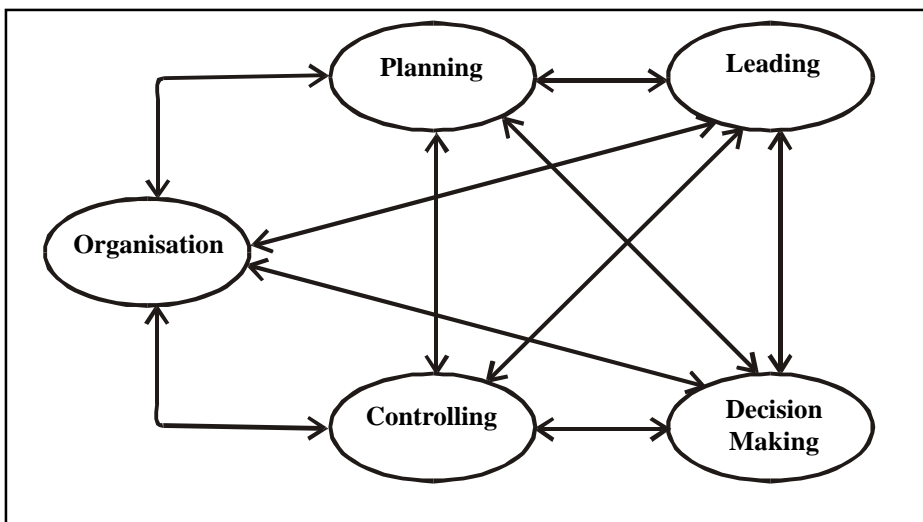
Decision-making implies making a choice between alternatives. The choice is made rationally after due consideration of all the pros and cons. The rational approach implies that it is a carefully thought out, deliberate and well-weighed choice, guided only by the consideration of the organisational objectives to be achieved.

Decision-making is so important because it implies commitment of resources, the desired outcome of which is never certain. Decisions are made under conditions of uncertainty and risk. Decisions made today have implications reaching into the

future. The risk arises out of the fact that the manager never has complete facts and knowledge about the implications of his decision and there is always the chance that the wrong decision may be taken.

9.2.2 Managerial Components and their Interdependence

The five steps shown in the process of management are the fundamentals of management. These steps are interrelated with each other and also inter dependent on each other.



Planning defines the future state of your organisation. It is the ability to forecast future environmental trends affecting the organisation. If planning is good and relevant to future needs it will give directions for achieving the objectives for the future. For this purpose, organising activity comes in the picture. It deals with an ability to analyse and describe various organisational jobs, ability to select, train and induct people in jobs draw working links and change as per the need. A good organiser can control the process and finally provide leadership to the people. A good leader can take decision about smooth running of the organisation for achieving the goals lead down at planning stage. Thus, we see that different components are interlinked with each other and affect each other. A good manager must be a foresighted person with skills of all these five stages of management.

9.2.3 Systems Approach in Distance Education

The actions and decisions in any particular area of activity, have results beyond that specific activity. A system is defined as a sum total of individuals but inter-related parts sub-systems which have been put together according to a specific scheme or plan, to achieve the pre-stated objectives.

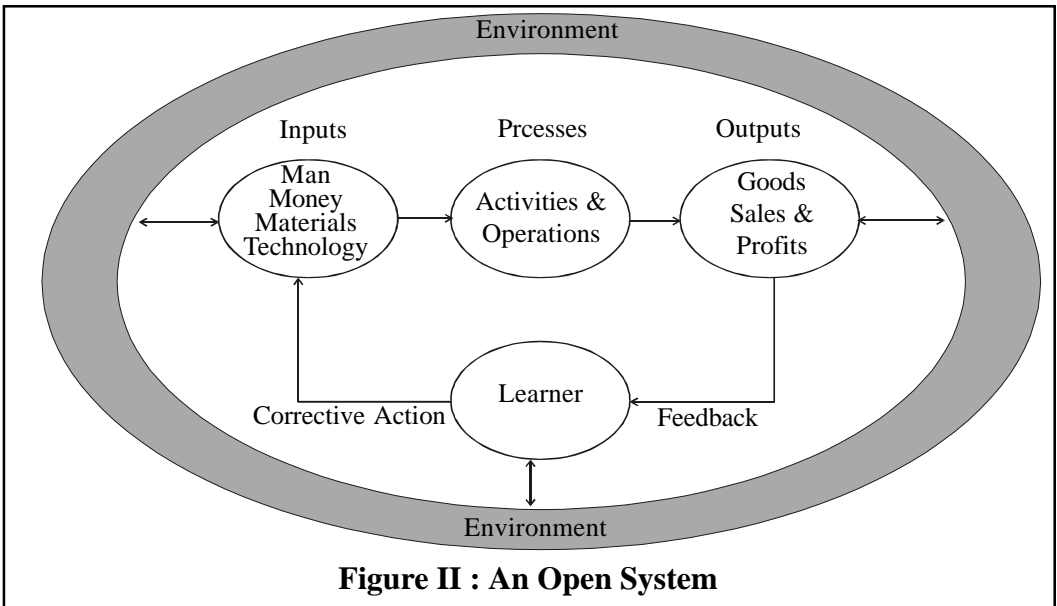
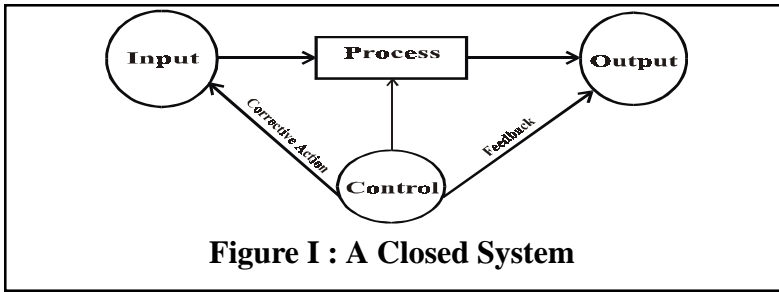
A system has the following components.

1. A number of parts of sub-systems which when put together in a specific manner form a whole system.
2. Boundaries within which it exists.
3. A specific goal or goals. This goal is expressed in terms of an output which is achieved by receiving input and processing it to form the output.
4. Close inter-relationship and inter-dependency amongst the various sub-systems.

The inter-relationship of the sub-systems can be defined in terms of:

- The flows which exist among them, such as flow of information, money, materials etc. The most important of these is the information flow which we shall discuss in the next section.
- The structure within which they relate to each other. This structure may be physical, geographic or organisational and shall be dealt within the section entitled 'organising'.
- The procedures by which the sub-systems relate to one another. By procedures we mean those planned activities which affect the performance of the entire system. In the context of an organisation, this refers to planning and we shall discuss these under the heading 'planning'.
- The feedback and the control process and mechanisms which exist to ensure that the system is moving towards its desired objectives. In this unit, we have dealt with this in the section on controlling.

A system can be closed or open. A closed system is self sufficient and self regulatory and has no interaction with the environment in which it exists. An open system is one which interacts with the environment in which it exists. Figure I illustrates a closed system and Figure II shows an open system.



9.2.4 Open Universities and their management

Every open university has four major areas for management as below.

1. Management of materials development
2. Management of students support services
3. Management of interface between academic and operational areas
4. Institutional leadership

The management of materials development covers following activities.

- (a) Course design and course creation
- (b) Library facilities
- (c) Course production distribution
- (d) Production of Audio and Video programmes

Management of Student Support Services is related to management of Regional Centres and Study Centres through Regional Centres. Apart from this, it also covers management of admissions, evaluation and examinations.

1. Organisational Structure of Open and Distance Education Universities

Open University system is a more complex system. Its structure and management is totally different from that of the conventional universities and dual mode of distance education. The open universities are having following bodies for managerial system.

The organisational structure of distance teaching universities is sometimes more hierarchical than that of conventional universities. With varying nomenclature the following bodies are found in almost all the distance teaching universities:

(a) Planning Board

A group of planners for the university is constituted at the very beginning to provide the necessary guidance to various divisions of the university. This Board plays a key role both in academic, developmental and monitoring activities. The Board consists of outstanding academics and educational administrators of the country. The chief function of this Board is to take a holistic view of the University as a system and plan for effective functioning and proper development of the institution. Such Boards exist in the open universities of UK, Pakistan, Japan and India.

(b) Executive Council

The Executive Council is the principal governing body of the university. It consists of people of eminence from different disciplines, such as education, industry, science, technology and other sectors. Sometimes government representatives are also the members of the executive council. In UK Open University persons from BBC are included, which brings in better coordination in various developmental stages.

(c) Academic Council

It is the principal academic body exercising general supervision over academic policies. It consists of outstanding academics both from inside and outside the university. It monitors and regulates the academic standards and the quality of course development mechanisms.

(d) Finance Committee

This committee looks after various financial matters such as resource utilization, subsidies from the Government, expenditure control, fee structure, loans, grants etc.

As mentioned earlier, decision making bodies may have different names. In Thailand, the governing bodies of the university are called the 'University Council' and the 'Academic Senate'. The chairman of the council is appointed by the King. The Vice Chairman is elected by its members. The Academic Senate is responsible for the academic affairs of the University.

The organisation of the University of the Air, Japan comprises the University Management Committee and the Faculty Council, as decision making bodies.

2. Organisational Network: Division of Work

The Head of the Institution

The head of an open university is generally an eminent person exercising certain formal powers. He can be (i) ex-officio as in the case of Indira Gandhi National Open University (IGNOU), India and Allama Iqbal Open University (AIOU), Pakistan, or (ii) elected as in UK Open University, or (iii) appointed by the head of the state as in Thailand. In India the President of India is the head, called "Visitor", of IGNOU. The President of Pakistan is the Chancellor and the Minister of Education is the Pro-chancellor, of AIOU. Although the head of the institution cannot be directly involved in the operations of the institutions, his interest in the institution and advice to the executive head of the institution can be of great value.

Executive Head : Vice-Chancellor

The nomenclature of the executive head or of the Chief Executive of the distance teaching universities conforms to the existing pattern in the conventional universities. The academic and administrative head of the university is called the Vice-Chancellor, the Rector or the President. The Chief Executive's role in a distance teaching university demands more than the traditional administrative functions of his counterparts. Due to its complex nature, broad area of jurisdiction, scattered administrative units, multiple systems, it becomes necessary for the chief Executives of the institution to play an effective role in coordination and a vital role in decision making.

Pro-Vice Chancellors

The Vice-Chancellor of an open distance teaching university is assisted by more than one deputies. Each ProVice-Chancellor looks after a major subsystem of the university or a set of activities i.e., Administration, Academic, Implementation, Planning and Co-ordination, etc.

Directors

Then, there are divisions to provide services or schools to take up academic activities. The heads of these divisions and schools are called directors in the open universities of India. These Directors have considerable room to exercise their powers: however, their powers are different from those of the academic heads of conventional universities.

9.2.5 Management of Conventional and Open Universities

The Conventional Universities are either an affiliating university or a unitary university. These have enough Human resources as well as other infrastructural facilities and are an independent model. On the other hand, the open university is a dependent model totally dependent on the resources from society. These human resources work as part time course writers, paper setters, examiners, counsellors and they normally work for open universities while working with their regular work. The organisational structure of the conventional and open universities is similar in many respect.

Statutory Bodies of the Universities

Each Indian university is governed by its statutory bodies such as the Court or Senate, the Executive Council or Syndicate or Board of Management, the Academic Council, Board of Studies of Faculty or School, etc. Nominees of the Central Government in the case of Central Universities and those from the State Government in the case of State Universities are represented in the governing bodies of these universities. The following are the important decision-making bodies which govern the Indian Universities:

These bodies are usually works for three years. We will now compare the conventional university with open university management on the basis of above decision making bodies.

(i) Court or Senate

The Conventional Universities have a huge body whose members are elected from various classes of people like, the faculty members, students, some are ex-officio members like, Principals of all colleges, Heads of Departments in the University etc. But, in open university system, this type body does not exist, because the students and most of the faculty members are not regular staff members of the university. They meet occasionally at the Study Centres during counselling period only. The Vice chancellor presides over this body.

(ii) Executive Council or Syndicate or Board of Management

This is supreme decision taking body in both type of universities. But, the constitution of these bodies are different. In conventional universities, the members are elected by different groups of people, while in open university system, the members are nominated by the Chancellor or the Visitor of the University. There is no election but selection in case of open university system. The eminent persons from various fields are nominated by the Chancellor or the Visitor of the open university. The Vice Chancellor is ex-officio Chairman of this body.

(iii) Academic Council

This body is also common to both type of universities. The persons from different fields are nominated in this body. The procedure of election is followed in conventional universities, while nomination from various fields is followed in open universities. The Vice Chancellor is the ex-officio Chairman of this Academic Council.

(iv) Board of Studies of Faculty or School Council

The schools or departments have advisory councils. The members are nominated by the Vice Chancellor in consultation with the Dean of the faculty or Director of the School. In both type of universities, the process is similar as nomination by the Vice Chancellor. There are about 15 members in each School Council. The Dean or Director

of School is ex-officio Chairman of such Board of Studies or School Council

(v) Finance Committee

This committee has about 10 persons from various sectors related to financial management. These persons monitor the income and expenditures of the university and suggest various measures for controlling the expenditures. The persons are nominated by the Vice Chancellor of the University. The Vice Chancellor is ex-officio Chairman of the finance committee.

(vi) Boards or Committees

Many committees are framed in the university as per the requirement of the university. The persons are nominated by the Vice Chancellor in both type of Universities. The Chairman for these committees are nominated by the Vice-Chancellor of the university.

9.3 Glossary

Line Functions : Those functions in an organisation which are perceived to be directly contributing to the organisation's objectives.

Staff Functions : Functions which are advisory or auxiliary in nature but do not directly contribute towards the organisational objectives.

Network Structure : A structure in which one organisation acts as the 'lead' organisation and creates a network of many other external organisations.

Environment : The business environment of a firm comprises economic, social, political, cultural, legal and geographic factors which critically affect the working of an organisation.

Centralisation : The concentration of power and authority at one place. This may be concentrated in a person or a group of persons in the organisation.

Delegation : The sharing or handing over of authority and responsibility to a subordinate.

Accountability : Obligation to account for, and report upon the discharge of responsibility.

Authority : Powers and rights entrusted to enable performance of tasks assigned.

Break-even Analysis : Comparison between sales and expenses to determine that volume of production where there is no profit and no loss.

Budget : Statement of plans expressed in quantitative and financial terms for the allocation and use of resources.

Budgetary Control : Measuring performance against plans and expected results expressed in numerical terms.

Controlling : The managerial function of measuring and correcting performance of activities of subordinates in order to assure that enterprise objectives and plans are being accomplished.

Operational Planning : Planning activities related to day to day functioning of an organisation.

Perception : The process by which individuals organise and interpret their impressions about the environment around them.

Value : Lasting convictions that are held by a person, accompanying the mode of his conduct and the importance of the convictions to the person.

9.4 Summary

The basic processes common to every management situation are those of planning, controlling, organising, motivating, leading, and decision-making. Planning helps the manager allocate his scarce resources in the most efficient manner to achieve the organisation objectives. Controlling is the process by which the manager checks the implementation of his plans against certain pre-determined measures of performance. Organising refers to the formal grouping of people and activities for doing work. Leading and motivating are the behavioural aspects of the manager's role. The manager is expected to provide leadership by way of personal example and inspire confidence, and bring into play all those factors by which he can persuade, convince and motivate his subordinates to turn in their best performance. Pervading all these management process of decision making. Every manager has to make decisions. Decision-making implies making a choice, and because there is never

complete information and certainty, there is always a risk that the choice made may be wrong. It is the task of the manager to minimise the risk.

The role to be played by university leadership, therefore, is to essentially manage the organisational climate in such a manner that this element of creativity is fostered and reflected in the academic functioning of the university. Leadership provided by College Principals, Heads of Departments, etc. should not confine itself to merely enforcing regular attendance of faculty. Teachers ought to be given little ‘elbow space’ within the organisational arrangement to enable creative choices. This, needless to say, does not imply anarchy. It only emphasises individual professional space within a milieu of collective functioning. Academic institutions will do well to foster collective functioning through seminars, and debate and discussions on academic policies of the institutions. This, in fact, is yet another dimension of collegiality. Managing creativity is of course a problematic proposition. Creativity brings with it certain idiosyncracies. University management may have to cope with this as well.

The major difference between conventional and open university management is that Senate is not framed or formed in open universities in India. Also, all other common bodies like Board of Management, School Councils, Academic Council, Finance Committee, Planning Board are framed by nominating people from different fields in open universities. In conventional universities, people are elected from different groups of people associated with university directly or indirectly.

9.5 Exercises for Practice

Answer the following questions in about 200 words each.

1. Enlist and explain the steps in the process of management of distance education.
2. Explain diagrammatic presentation of process of management and their interrelations with each other.
3. Enlist statutory bodies of open university and state their functions in university management.
4. Enlist and explain authorities in conventional universities versus open universities in India.

Unit 10 : Managing a Need Based Mass Education

Index

10.1 Introduction

10.2 Content

10.2.1 Open University : A Mass Varsity

10.2.2 Need Assessment

10.2.3 Types of Educational Needs

10.2.4 Flexibility in Programmes

10.2.5 Managing Mass Education : YCMOU Scenario

10.3 Glossary

10.4 Summary

10.5 Exercises for Practice

10.1 Introduction

The British policy for imparting education was to produce white-collar persons for executing the policies and orders of the British Government during their regime. They were educated to join Government jobs and work as British agents among Indian people. After independence, the Government of India followed the same pattern of education and there was very little emphasis on vocational and technical education. As a result, the universities of India produced a large number of graduates and postgraduates for whom the jobs were not available. On the other hand, there were jobs at technical side for which suitable persons were not available. The Dr. Radhakrishnan Commission report on Higher Education gave remarkable recommendations, but there was no mention of diversion towards various need based education of that time.

The technological revolution has created many fields where we need skilled persons. For example, evolution of radio emphasized radio mechanic course in the

country. After some times, Television of different types made us to feel the need of TV mechanic in the country. Similarly, typing machines repair was a good job earlier. But now, computer has replaced typing machines and people need to replace typing machines by computers. Now, we need computer mechanics being skilled in Software and Hardware technology. Therefore, it seems essential to have a close watch over social, cultural, technological changes and assess new emerging areas where skilled persons are needed. Also, an information of the same be given to society so that the people may opt for such training and education. The open universities are doing well in this respect. Open universities have launched a wide variety of programmes at certificate, Diploma and Degree levels in various vocational and professional with an openness to opt more than one programme at a time by students.

After the study of this unit, you will be able to know and understand :

- Role of Open University as Mass Varsity.
- Types of Educational Needs in the society.
- Flexibility in programmes.
- Efforts made by YCMOU for need based mass education.

10.2 Content

10.2.1 Open Univeristy : A Mass Varsity

The establishment of Open Universities in different countries has the primary aim to provide need-based education to their people. First of all England had established an Open University and offered a wide variety of educational programmes in different fields. Looking to the success of this University, other countries also took initiative for establishing Open University. Apart from this, there are state Open Universities in different states of countries. In India, at present there are 12 Open Universities and their programmes are different in nature in comparison with conventional Universities of the country. The major aim is to provide mass education in different need based areas. The programmes offered by various open universities and enrollment with them reveals that Open Universities are Mass Varsities catering to need of masses in India.

Details of Open Universities in India

(Summary Data as on January 2002)

Sr. No.	Details of Information	University												TOTAL								
		IGNOU New Delhi	BRAOU Hyderabad	KOU Kota	NOU Patana	YCMOU Nashik	MPBOU Bhopal	BAOU Ahmednagar	KSOU Mysore	NSOU Kolkata	UPRTOU Allahabad	TNOU Chennai *	COU Raipur *									
01.	Year of establishment	1985	1982	1987	1987	1989	1991	1994	1996	1997	1998	2003	2003									
02.	Educational programmes on offer	60	23	22	08	60	30	11	29	03	41	-	-	288								
03.	Courses on offer	640	307	195	09	236	49	96	244	18	126	-	-	1920								
04.	Students Registered in the year	287366	106748	8980	1221	113500	55360	8575	32658	2798	1089	-	-	618295								
05.	Total Students on Rolls	646651	450000	13000	1644	486651	108549	33892	40690	2798	1089	-	-	1784964								
06.	Regional Centres	44	21	6	-	10	9	2	4	-	-	-	-	96								
07.	Study Centres / Work centres	624	137	40	5	1451	667	61	52	36	38	-	-	3111								
08.	Academic Counsellors	20364	4837	541	28	4521	3200	776	2812	733	214	-	-	38026								
09.	Students awarded Diploma & Degrees	53298	3030	-	404	44554	9343	1403	5065	-	-	-	-	117097								
10.	Audio Programmes (Cumulative)	1100	1759	7	-	298	5	10	285	4	-	-	-	3468								
11.	Video Programmes (Cumulative)	1050	298	1	-	189	18	-	132	-	2	-	-	1690								
12.	Staff Strength (Total)	1389	473	324	25	263	69	85	321	51	2	-	-	3027								
	i. Academic / Professional	295	98	25	1	60	36	39	66	10	1	-	-	631								
	ii. Administrative	856	340	294	23	173	}	}	}	}	}	}	}	}								
	iii. Technical / Production		35	5	1	30									33	46	255	41	26			
	iv. Others	238	-	-	-	-																
																						2396

* TOU & COU data not available

The earlier summary sheet indicate that all open universities are committed to become a Mass Varsity offering need-based programmes to the mass. The Tamilnadu Open University, Chennai and The Chhattisgarh Open University, Raipur are established recently in 2003. Therefore their particulars are not available.

10.2.2 Need Assessment

It is the process which helps to generate an idea about people's desire to learn or to be skilled in an area of their own choice. The assessment of their choice related to course content for learning or for training is known as need assessment. Individuals need to consciously and continuously examine what they themselves ought to be doing for their own career development than merely wait for something to happen to them. Every organization has to orient its employees to acculturate and acclimatize the individual to the organization. The organization should have mentors for assessing training needs of employees.

Reasons for Need Assessment for New Programme Development

1. Employment and Unemployment Situation

Though in general the number of educated employed is on the rise, there is acute shortage for variety of skills. This emphasizes the need for more effective recruitment and retraining people for new skills for new jobs.

2. Technological Changes

The myriad changes in production technologies, marketing methods and management techniques have been extensive and rapid. Their effect has been profound on job contents and job contexts. These changes cause problems relating to redundancies, retraining and redeployment. All these put a premium on the need to plan human resource intensively and systematically.

3. Organizational Change

In the turbulent environment marked by cyclical fluctuations and discontinuities, the nature and pace of changes in organizational environment, activities and

structures affect human resource requirements and require strategic consideration.

4. Demographic Changes

The changing profiles of the work force in terms of age, sex, literacy, technical inputs and social background have implications for Human Resource Planning (HRP).

5. Skill Shortage

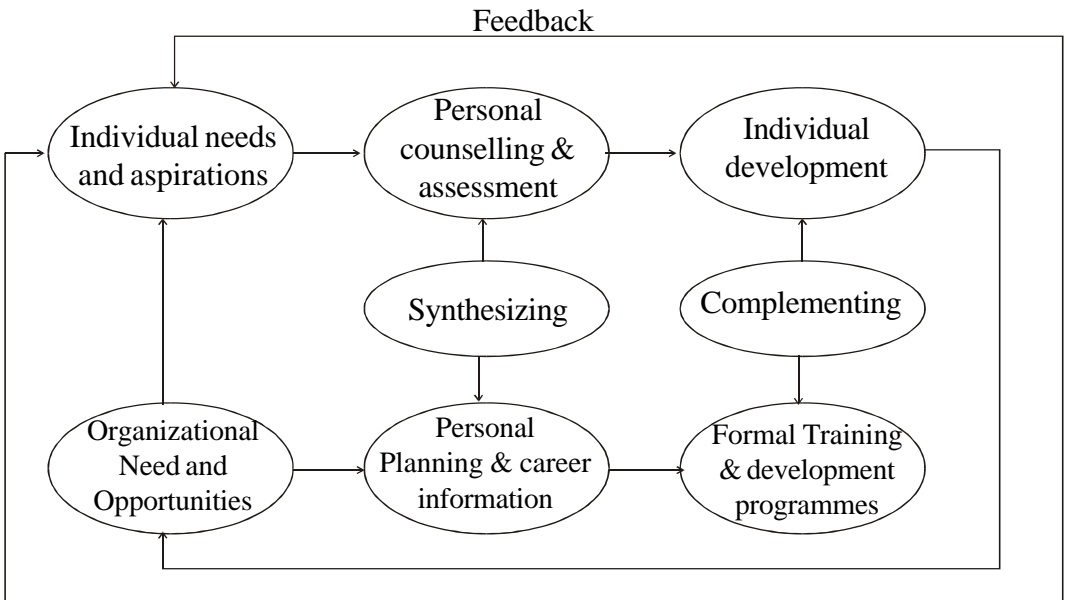
Government control and changes in legislation with regard to affirmative action for disadvantaged groups, working conditions and hours of work, restrictions on women and child employment, casual and contract labour, etc. have stimulated the organizations to become involved in systematic Human Resource Planning.

6. Legislative Control

The days of executive fiat and hire and fire policies are gone. Now legislation makes it difficult to reduce the size of an organization quickly and cheaply. It is easy to increase but difficult to shed the fat in terms of the numbers of person employed because of recent changes in labour law relating to lay-offs and closures. Those responsible for managing human resources must look far ahead and thus attempt to foresee human resource problems.

7. Impact of Pressure Groups

Pressure groups such as unions, politicians and persons displaced from land by location of giant enterprises have been raising contradictory pressures on enterprise management such as internal recruitment and promotions, preference to employees, children, displaced persons, sons of soil, etc. This situation needs mentors to handle with smooth touch. These mentors are like a teacher, advisor, guide, friend, philosopher and confidante. Organizations should actively promote mentor and the new entrants to meet, interact, understand and develop a sense of trust and confidence in each other. The mentor will then be able to guide the new entrant and act as a sounding board for dealing with work related problems. Proper mentor relationships help reduce stresses and strains of new entrants, increase the chances of their survival and success in the organization.



A framework of career planning process aimed at integrating individual and organizational needs is presented in the figure. The above figure indicates how individual needs are synthesized with the organizational needs and opportunities. Below are some methods for assessing educational and training needs :

- (1) Aptitude Test :- A different aptitude test may reveal a persons desire to join different type of courses for their future career.
- (2) Opinionnaire be given to individuals for stating their opinion about open university programmes and some specific type of programmes needed by them.
- (3) Survey of Organization :- It would reveal human resource needs of different organizations and accordingly new programmes by open universities. It will cover human resource development needs of an organization.
- (4) Awareness of Open University and Open Schools programmes in society. A wide publicity of present programmes be made at grass root level like Gram Panchayat by holding meetings and interaction with people.

10.2.3 Types of Educational Needs

In order to classify the educational needs, we may explain the Indian scenario. The educational needs of a developed country like USA, UK, Australia, France etc.

are different from the developing country like India, Pakistan, Sri Lanka, and Bangladesh etc. Following may be educational needs of different types of persons.

- 1. Illiterates :** India has at present 64% literacy rate and 36% are still illiterates. This rate of illiterates is decreasing day to day but the total number of illiterates is increasing. It is because of the population explosion. The educational needs of this large group is to make them literate and capable to read, write and make simple calculations
- 2. Neo Literates or School Dropouts :** This group may like to continue school education and some vocational training for their future well being National Institute of Open Schooling (NIOS) at New Delhi or State Open Schools at state levels may provide need based education to this group in regional language.
- 3. Continuing Education Needs :** Due to explosion of technology and its use at all levels like computer in offices, Internet, CD, VCD, TV etc. People want to learn the use and repairing of these technologies and thus earn for their livelihood. Also, Educational Technology is a new area in the field of Teacher Education. Every teacher must understand the meaning and application of Educational Technology in the field of education. Open Universities may develop some courses in this field and offer through distance mode to the target group. The teacher counsellors of open universities and tutors of open schools are delivering lectures on a topic of their own choice in the name of counselling. These counsellors and Tutors need some programme for understanding their role as counsellor and Tutor. The open universities and open schools may develop some programme through distance mode to train teacher counsellor working in distance education.
- 4. Farmers :** The modern methods of farming plays a vital role in increasing the food, fibre and fuel production with less cost and minimum efforts. This idea is essential for all farmers. The open universities may start such programmes for farmers on the line of YCMOU Nashik, which is providing training to farmers in different fields. The Agricultural universities are also offering similar extension programmes to the farmers. The need is to identify such farmers being in need of training and manage such programmes through distance mode of education.

5. **Higher Education :** There are many persons in need of Higher Education either being compulsory for their advancement in job or for their status in the society. Such persons may join Degree, Post Graduate or even Doctorate programmes through distance mode. The Open University degree programme has been found much popular among people in India. The graduate after degree programme may like to join post graduate and research programmes for their future.
- 6 **Tribal Development Needs :** In India about 9% of the population and almost one crore in number have been labeled as Scheduled Tribes. They require basic literacy, general awareness for their essential needs like health, education, and socio-economical development. Apart from this, they have to be brought in mainstream of the country. It is essential to develop small courses for them and start study centers in their areas for developing different vocational skills as per their aptitude. The open schools and open universities may take initiatives in this respect.

Thus, we see that a wide variety of educational needs may be identified and accordingly the open Universities and Open Schools may start programmes for meeting them.

10.2.4 Flexibility in Programmes

The open education provides openness in many directions. The old concept of openness reveals a freedom to learn at learners own rate, pace and time. Another explanation of the term openness means a flexibility of selecting courses of his/her own choice. Also, if some one wants to do some specialization by taking one or two courses, he/she should have a freedom to do so. Also, admission in one programme of open or conventional university should not debar the student from taking another course of his/her own choice. Also, there is a provision of completing the programme by taking his/her own time. The student may appear in as many courses as he wants at a time. There is a provision for re-registration after expiry of registration period.

There is a provision for credit transfer from one programme to another of same or other University, if the course content is same or similar. These things have been accepted and implemented by all open universities and open schools and are termed

as flexibility in programmes. This flexibility has been prescribed in order to facilitate the learners to learn with minimum barriers. The Indian scenario of open and distance learning has witnessed a considerable growth of knowledge among its learners who have enjoyed flexibility and openness.

It can be said about distance education with confidence that where large numbers are to be given access to education, it is the best medium. There are 30 million persons learning through distance education including 4 million persons in China. In Pakistan, Allama Iqbal Open University reports that eight lakh persons taught through broadcast and study group programmes in seven years. The quality of teaching can also be improved because of the services of the best teachers being used for teaching purposes. Moreover, there is the economy of scale in distance teaching. It can show tremendous flexibility in respect of not only the introduction of courses but also the choice of courses offered to the students. Much, however, depends on the quality of the writing material and the broadcast programmes. In the formal system, the learner has to go to the teacher. Now thanks to the mass media, the teacher and that too a good teacher, can be taken to the learner. This is how several countries are using Information Communication Technology (ICT) to educate their societies.

If the demands of the society for education are to be met in the coming decades there is no alternative to the adoption of different approaches conventional as well as unconventional. Non-formal education has to be built up as an alternate system of education, which would not be difficult in view of education and use both formal and non-formal channels to achieve the goals of education. At the moment, the formal system is getting a lion's share of the resources because of its numbers and the pressure it exerts. It is also true that most of the planners and administrations do not know that alternate systems are available which can be pressed into service. The planner, therefore, feels that his position vis-s-vis formal education is similar to that of the person riding a tiger. He cannot get off the tiger for fear of being attacked by it, but also cannot continue to ride on it. If he finds that something else is available which will relieve him of his mount he would probably take the risk of jumping off from it. As the UNESCO Commission pointed out the concept of education limited in time to school age and confined in space to school buildings must be superseded. A

proportion of education activity should be deformed and replaced by flexible diversified models. Closed education systems should be made open. Unless we give up some of the present day rigidities marking the formal system and integrate it with Information Communication Technology we would not be able to make much headway. It should be obvious that our system of education as it has developed over the years has reached to its target.

10.2.5 Managing Mass Education : YCMOU Scenario

The Yashwantrao Chavan Maharashtra Open University (YCMOU) has taken up an initiative of providing professional and vocational courses apart from regular degree and Post Graduate programmes for the people of Maharashtra. At present there are as many as 70 educational programmes available at Degree, Diploma and Certificate levels. The university has 70 programs and 360 courses. These programmes are launched through 1451 study centers working under 8 Regional centers. The programmes offered are listed below:

1. Doctor of Philosophy in Agricultural Communication (Ph.D.)
2. Doctor of Philosophy in Agricultural Extension (Ph.D.)
3. Doctor of Philosophy in Agricultural Development (Ph.D.)
4. Doctor of Philosophy in Communication and Distance Education (Ph.D.)
5. Master of Philosophy (M. Phil.)
6. Master of Science in Agricultural Communication (M.Sc.)
7. Master of Science in Agricultural Extension (M.Sc.)
8. Master of Science in Agricultural Development (M.Sc.)
9. Master of Arts (M.A.)
10. Master of Commerce (M.Com.)
11. Master of Science (M.Sc.)
12. Master of Business Administration (M.B.A.)
13. Master of Education (M.A.)
14. Master of Library and Information Sciences (M.lib & I.sc.)
15. Bachelor of Science in Agriculture (B.Sc. Agri.)
16. Bachelor of Science in Horticulture (B.Sc. Horti)

17. Bachelor of Education.(B.Ed.)
18. Bachelor in Library Science. (B.Lib & I.Sc.)
19. Bachelor in Commerce (B.Com.)
20. Bachelor in Arts (B.A.)
21. Diploma in Fruit Production.
22. Diploma in Vegetable Production.
23. Diploma in Floriculture & Landscape Gardening.
24. Diploma in Agri-business Management.
25. Diploma in Computerized Business Computing.
26. Diploma in Office Automation.
27. Diploma in Computerized Financial Accounting.
28. Diploma in Business Computing.
28. Diploma in Advance Software technology.
30. Diploma in Computer Operations.
31. Diploma in Computers in Office Services.
32. Diploma in Software Technology for Exports.
33. Diploma in School Management.
34. Diploma in Computer Technology.
35. Diploma in Computer Hardware Maintenance & Network Technology.
36. Post Graduate Diploma in Management.(P.G.D.I.M.)
37. Diploma in Management (D.I.M.)
38. Diploma in Journalism.
39. Diploma in Communication Engineering.
40. Diploma in Instrumentation Engineering.
41. Diploma in Industrial Electronics.
42. Certificate in Gardening
43. Certificate in Programming in C Language.
44. Certificate in Programming in FoxPro.
45. Certificate in Word Processing (Word).
46. Certificate in PC Data bases (Access).
47. Certificate in Spreadsheet (Excel).

48. Certificate in PC Data bases Programming.
49. Certificate in DTP.
50. Certificate in CAD.
51. Certificate in Computerized Financial Accounting.
52. Certificate in Computer Basics.
53. Certificate in Word star.
54. Certificate in Spreadsheets 1 Spread Sheets.
55. Certificate in PC Data Bases 1 PC Data Bases.
56. Certificate in Office Computing.
57. Certificate Programme in Journalism.
58. Certificate Programme in Gardener's Training.
59. Certificate Prog. In Engineering Vocation: Mason.
60. Certificate Prog. In Engineering Vocation: Plumber.
61. Certificate Prog. In Engineering Vocation: Fitter (General)
62. Certificate Prog. In Engineering Vocation: Two Wheeler Mechanics.
63. Certificate Prog. In Engineering Vocation: Domestic Wireman.
64. Certificate Prog. In Engineering Vocation: Lathe Operator.
65. In Service Teacher's Training Programme.
66. Certificate Prog. In Engineering Vocation: Radio & Tape-recorder.
67. Certificate Prog. In Industrial Painting Technician.
68. Certificate Prog. In Preparatory for entry to degree.
69. Certificate Prog. In Web Development.
70. Certificate Prog. In Four Wheeler Mechanic.

9.3 Glossary

Distance Education System : The system of imparting education through any means of communication such as broadcasting, telecasting, correspondence courses, seminars, contract programmes or the combination of any two or more of such means. In this document the terms distance education, distance learning and open learning are used inter-changeably.

Self-Learning Materials/Self Instructional Materials : Materials which are specially prepared to help self-study by including features that provide continuous feedback on performances and devices for self learning.

Programme : By a programme, we mean the whole learning experience or combination of courses in a particular field of study. e.g. B.A, B.Com, B.Sc. Programmes.

Module : It is a configuration of courses and blocks having an independent thematic unity leading to a coherent set of competencies.

Course : The programme is divided into courses. In conventional education, when we talk of a course, we usually refer to a subject and level such as Chemistry, Maths, Biology, and so on.

Block : A course is divided into 'blocks'. The block appears in the form of around 60-80 printed pages. Generally each block presents one unified theme. Again the points to remember is that each course consists of a few blocks.

Unit : The term 'unit' of a course is used to denote a division of a block. At one level it is the theme or topic and at another level it is the material used to teach the topic.

Career : A sequence of work related positions occupied by a person during the course of his lifetime.

Career Planning: It is a systematic approach to the identification and development of individual careers in an organization to the benefit of both.

10.4 Summary

The Distance Education system has evolved as one of the effective modes of education and training for development. The application of technologies in providing flexible and cost-effective programmes of education and training are now widely recognized and appreciated. The unique feature of distance education is its use of a multi-media mix and student support services in the teaching and learning process. This system is undergoing changes due to rapid adoption of communication technologies in its various functions. There are various kinds of institutions, which

use distance mode for education and training.

We have studied in this unit about the role of an open university as a Mass Varsity and accordingly is an expansion in India and China at Central and State level. Need assessment is a process of synthesizing individual training needs and social demand for trained individuals. A person has to learn those skills, which are urgently needed by the society or social institution. There are many ways for need assessment like Aptitude test, Opinionnaire, Survey of organization, Awareness of open university and open schools programmes in society, etc. There may be many groups whose education needs must be assessed. These groups may be Illiterates, Neo-Literates or school dropouts, Continuing educational needs, Farmers, Higher Education, Tribal Developmental needs, etc. Apart from this, a wide variety of needs may be assessed for different type of groups and individuals.

The major characteristics of educational programmes are flexibility in reading. It provides openness in selecting a programme and courses of his own choice and accordingly a media to learn the course. The learner can learn at his own rate, pace and time with a facility for re-registration and credit transfer from one programme to another of the same or other university. We have seen that how YCMOU is offering a wide variety of need-based programmes at Degree, Diploma and Certificate levels.

10.5 Exercises for Practice

Answer the following questions in about 200 words each.

1. Justify the statement that open universities are the mass education universities with respect to variety of programme and their outreach.
2. Enlist and explain reasons for need analysis of new educational programme for masses.
3. Explain need analysis for training for illiterate, neoliterate, backward, tribal population, farmers and farm women in India.
4. Explain that YCMOU is mass varsity in terms of diversity, levels and outreach of its educational innovations.

Unit 11 : Growth of Distance Education

Index

- 11.1 Introduction
- 11.2 Content
 - 11.2.1 Variety of Educational Needs
 - 11.2.2 Social Changes and Gender Equality
 - 11.2.3 Limitations of Conventional System
 - 11.2.4 Potential of Distance Education System
 - 11.2.5 Distance Education as an Educational System
- 11.3 Glossary
- 11.4 Summary
- 11.5 Exercises

11.1 Introduction

Distance Education has a long history in India. An episode in Mahabharata is an evidence of that : Eklavya was a distance learner. He was denied of admission by Guru Dronacharya on the grounds of socio-cultural norms prevailing at that time. Also, there is a mention that Dronacharya found the competency of his disciple Arjuna as lower than Eklavya who had a strong desire to learn and become most competent warrior of his time. He was assessed as a superior and more competent than any other disciple of Lord Dronacharya. Thus, the history indicates that India is first among other countries to have Distance Education in practice. In every country, the problem of population explosion has disturbed the educational system. No country can provide education to all persons because of limited resources and a very large number of aspirants for Education. Also, the knowledge explosion at an exponential rate has made every educated person to equip himself with recent advances in their field. Under these circumstances, it is very difficult to manage a need based education for all in every country.

‘Distance Education’ and ‘Open Learning’ are terms which are widely discussed in the academic circles all over the world today. Till 1998, there were 1117 distance and open learning institutions of different types and sizes located in 103 countries. Student enrolment in all these institutions put together is estimated to be 30 million covering 8 regions of the globe. In spite of this, the present figure is not satisfactory and it needs to be multiplied many a times in order to achieve a target of need based mass education for all.

After the study of this unit, you will be able to know and understand :

- Different types of Educational needs.
- Need to educate both male and female simultaneously.
- Limitations of conventional system of education.
- Potential of Distance Education System for managing need based mass education.
- Distance Education as contemporary Educational System.

11.2 Content

11.2.1 Variety of Educational Needs

The knowledge explosion at exponential rate in various fields has generated multi disciplinary fields of studies. The subjects like Bio-technology, Bio-chemistry, Mathematical Statistics, etc. are in practice. The western universities have departments like Mathematics Education, Physics Education apart from Mathematics or Physics Departments. It is because of a revolution in the fields of Electronics, teaching learning and Science of Management, we have a wide variety of techniques available for learning a subject. Also, the birth of technology and its application in every corner of the country has given birth to new type of courses. For example, if computer technology is to be spread in villages, we may require a large number of computer technicians for Hardware & Software, Data Entry and Internet Operators. The TV in rural areas needs mechanics for its repair and maintenance. Every person is witnessing a big knowledge explosion in his field of work. Advocates have to understand new judgments, Teachers have to learn new techniques of communication and farmers

have to bring in practice modern methods of farming. These are few examples and, we may experience other areas also, where continuing education needs are to be met by the educational system of the country.

The issue of teacher training in India and abroad is very serious. There is a large number of teachers who are untrained since long at primary, secondary and higher secondary levels of education. Even, the trained teachers require to be enriched with recent developments in their fields as well as new technologies of teaching including computer, video and audio aids. Similarly in every field, the persons are in need of updating their mind with new information.

There are many ways for assessing educational needs of a person. We may send questionnaires, opinionnaires and checklists for seeking opinion of target groups. These may be analysed to reveal common and specific training needs of a person. Another way is 'Interview Schedule' which will help in seeking opinion by a person in a face to face situation of one individual or of a group of persons. Sometimes, a person hesitates in revealing his opinion, with others in a face to face situation. In this respect, a group discussion with other needy learners and friends recorded on audio cassette may help in revealing the learning needs of a person.

Sometimes, a person does not know the benefits of any training and so, can't express his opinion about the same. Under such circumstances, the person be given a seminar or exposure to the scenario or situation for making him to understand the benefits of the proposed training and his suitability for the same. It will help him to understand the utility of training and learning programme and his suitability for the same. Similarly, continuing education needs may be assessed, if a person is asked to do some work by using new technologies useful in performing the work. It will motivate the persons to join the programme, with very little dropout rate. Infact, 'Need assessment' is not a theory, but it is essential before a programme is developed by an Open University. A very poor response from the public would raise the cost per student and finally closure of the programme. But, need assessment in the beginning will give some idea about the reaction of society towards programme and, number of persons ready to join the same.

The Open education favours an openness in selecting the courses of their own choice by the learner. A person must have freedom to study a course/programme of his own choice being suitable to his needs. After all, he/she is an adult and deserves to render his/her opinion about the choice of programme/courses of study. Every adult person has to take care of three traits as Full development, Perspective and Autonomy. These traits must be taken care of while assessing the training needs of learners being adults. In developing countries like India, people want to join a programme if it meets their needs as – knowledge, jobs and money. If a programme provides some knowledge being helpful in getting some job which would give some earnings, the person would join and a very little rate of dropout will be there.

A variety of needs exists at different levels as below –

- (i) need of part-time education with a more flexible arrangement in order to meet the requirements of young persons who learn and earn simultaneously,
- (ii) need for specialized courses for those who are in-service,
- (iii) need for intercultural stimulation on the part of the adult, and
- (iv) need for certification without much the formalities of the conventional university system.

11.2.2 Social Changes and Gender Equality

The United Nations Organisation (UNO) had long back passed a resolution as – ‘Education for All’. Every country had given in writing to provide education to every citizen irrespective of caste, class and gender. This could not be brought in practice by most of the countries because of cultural barriers and gender inequality. In a muslim society, a woman has no freedom to take part in various social activities at par with men. They have to come out of their houses in *Pardah* or *Burkha* (a big cloth which covers their body from top to bottom). In Saudi Arabia, it is compulsory for all women to wear *Burkha* when they come out of their houses. A woman cannot enter in any office for some work in Gulf countries.

The social life of nations differs from one nation to other. It depends upon the educational level of people having awareness of their rights, duties and responsibilities. Also, the economic condition of the persons and that of nation compels for a social

change. If, both male and female work and earn, their family conditions will be good. Therefore, the ladies are also coming out of their families to work and earn for their betterment. So, economical conditions also compel, for a social change. The old barriers are washed out automatically by the society. But, it has been observed that social change filters from top to bottom, from rich to poor, from cities to villages, from developed countries to undeveloped countries, from educated to uneducated class of people.

India had a disease of castism and the whole society was divided among four larger classes based on four major castes like Brahmins (Intellectuals), Kshatriya (Warriors), Vaishya (Business Class) and Shudras (Untouchables). These groups were further divided into different sub groups. People were known not on the basis of their names but on the basis of their castes. People had to marry a person of their caste. The boy and girl had no right to select a spouse of their own choice from other caste and religion. The choice of parents was final without consulting the boy or girl. This tradition is still exists in most of the families of India. But, the educated class of people have changed their minds and they prefer class but not caste in selecting their spouse. As a result, now inter caste and inter religious marriages are taking place in India. But, it is more in urban area than in rural area and filtering downward slowly and gradually.

The women going out of house for work were not treated as good. Now, the situation is changed. They have come out of their fences and are doing jobs of their choices. There were jobs, and are still, for which only men were selected. The women were not allowed to apply for these posts. Now, the situation is changed and the women have accepted very crucial roles like Pilots, Administrative & Police Officers, Military, Doctors etc. It shows that the persons should not be discriminated on the basis of gender, caste and region or religion. Equal opportunity to all would help the society to grow capabilities of every person. Social change and gender equality has been found among the educated class of persons. It shows that education is that weapon which has brought this social change and gender equality in every country. It has struck the poverty status and made living standard high. Therefore, it is essential to educate people for social change and gender equality.

The Indira Gandhi National Open University (IGNOU) in India, has launched a programme known as 'Women Empowerment'. A wide variety of programmes can be launched in the fields of Home Science, Literacy, Computer Science, Rural Development for both men and women by ODL system in both rural and urban areas. Handicrafts, Nursing, General awareness among Scheduled Caste and Tribes of rural areas are some of the priorities before ODL system.

Thus, we see that ODL system can play a vital role in bringing a desired social change and gender equality from top to bottom in every social group. It may develop such need based programmes which are essential for scheduled castes and scheduled tribes of remote areas. For this purpose, we require videos or CDs having stories of some similar persons who got education of their choice and are now living a happy and better life. These pictures be shown to the target groups followed by a group discussion with eminent persons of these communities. They will try to washout confusion, queries and questions from the minds of target groups. It will motivate the target groups for joining some programmes and courses of their choice. The ODL system has a big responsibility here for launching a wide variety of programmes for them. These target groups after training/learning will work as agent between ODL system and other target groups. Thus, after a span of time, these rural area people will be skilled enough to take up some social responsibilities in their rural society. Reaching the unreached with a quality education for a social change and gender equality at the door steps of people will be met by the ODL system.

This requires an effort to be made jointly by Governments at Central, State and Local levels in collaboration with NGOs and ODL system. If it is brought into practice, ODL system would have a golden feather in its cap of achieving the target of social change and gender equality.

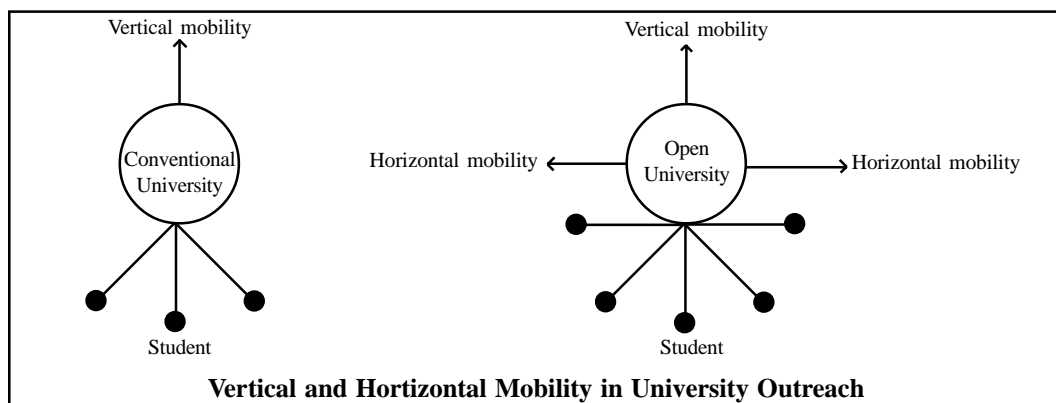
11.2.3 Limitations of Conventional System

There is a new dynamic trend which is changing the place of institutions of higher education within the economic, cultural and social system and more particularly changing the role of those institutions in the development of their region or their

environment. How best to employ their resources for the public good is a key question for universities today, and one which is commanding increasing attention. Apart from teaching, research and extension activities are the fundamental disciplines, the universities have to initiate for contacts with local and regional communities. There must be a balance between the amount of university resources committed to traditional activities and that committed to other more direct forms of community services.

Another role of reaching the community can not be met successfully by the conventional universities due to their limitations. The academics are supposed to devote their time for their academic growth by updating their mind with latest information in their fields, producing new generation for future challenges of research and organizing extension activities for being benefited from each other's experience. Also, the system has in colleges and universities, a limited number of classrooms, staff both Academic and Non-academic being skilled and busy with the activities allotted to them. These universities are unable to manage new programmes needed due to explosion of knowledge in various fields. It is the university and only the university to which organizations can turn for professional assistance, for research, and upon which the region relies for services and progress. In some cases, the surrounding organizations are themselves not aware of possibilities that the university may have to take the initiatives.

In fact, the role of conventional universities is to manage for vertical development of knowledge by organizing good quality teaching, research and extension. The other



role, which is almost neglected by these universities, is the horizontal development of communicating need based information to the masses. This role has been taken up by the Open Universities by providing openness to learning activity.

The conventional system has to follow a stereo type time table, classroom sittings and a time bound programme for examination with no freedom for learners to learn at their own rate, pace and time. They have no choice of their own in deciding curriculum, selecting courses of their own choice and appearing in examination at a time of their own choice. There is an explosion of knowledge at an exponential rate, in every field. People want to update themselves with the latest information in their fields. The persons can't attend regular classes like youngsters because of being busy with their jobs and other social responsibilities. The Conventional system can not manage for such type of continuing education for needy persons in different fields. There are many persons, in need of upgrading literacy levels, learning skill based programmes and side by side preparing themselves for their routine degrees. These two things can not go together in conventional system. The ODL system gives this liberty and has a provision for offering many programmes at a time to its students.

Also, another choice of selecting a media by the learner is impossible with the conventional system which has classroom lecture only. The ODL system has a variety of media for the same course content. These may be print media, Audio and Video cassettes or CDs, Teleconferencing, Personal contact programmes etc. A major contribution of ODL system is having no fences or limitations in deciding its priorities. The conventional system has to concentrate on higher education level only while open and distance learning (ODL) system has a potential of initiating any type of need based programmes for masses. The limitations of Conventional systems in contrast with ODL system may be listed as below :

- (i) educational programmes and courses offered are not relevant to the existing social needs.
- (ii) the highest paid teachers are reaching an increasingly smaller number of selected students,
- (iii) the age-old classroom teaching method is becoming more and more obsolete and ineffective as is indicated by the present levels of absenteeism,

- (iv) the rigidity regarding the duration of courses, classroom attendance, remains unchallenged, and
- (v) the benefits of higher and better education continue to be enjoyed by a privileged class of population.

11.2.4 Potential of Distance Education System

Distance Education is predominantly meant for providing educational facilities to a larger number of people scattered all over and providing greater access to education. The term distance education basically emphasizes separation of the teacher and the learner, and planning of educational programmes and material by an educational organization and the use of technical media on a large scale. This system has two other socio cultural determinants which are necessary pre conditions and necessary consequences of distance education such as (i) the presence of more industrialized features than in conventional education system and (ii) privatization of institutional learning.

This system has a potential of managing need based mass education because it has following provisions :

- (i) The quasi permanent separation of teacher and learner throughout the process of learning.
- (ii) It has the influence of an educational organization both in planning and preparation of learning materials and in the provision of student support services.
- (iii) The use of technical media – print, audio, video or computer, unites the teacher and learner and carries the content of the course.
- (iv) It has a provision of two way communication which benefits the students from a dialogue.
- (v) The quasi permanent absence of a learning group throughout the learning process gives a chance to learn as individuals and not in groups with a possibility of occasional meetings for both didactic and socialization purposes.

Separation of the teacher and learner emphasizes that the later can learn autonomously. Team teaching is an organizational effort in Distance Education System. A lesson is developed not by one expert but by a team of experts drawn from different areas of specialization. Some may be content expert while some are language and media experts and some are editors for content, language and media. Also, various activities directly contribute to import, conversion and export processes which define the nature of the enterprise and differentiate it from other enterprises. The need for distance education is being recognized both in developed and developing countries for a variety of reasons being common as well as specific too.

The objective of distance education is to provide second opportunity to study for those who missed such an opportunity earlier. It provides equality of opportunities for higher education. The open universities may meet the shortage of scientific and technical manpower in some countries and the conventional universities are unable to cope with the demand. The China's Central Radio and Television University (CRTVU) is best example in this respect. This system has been found cost effective by the researchers. Distance education with the help of communication technologies have made it possible for every person to see that education of his choice is knocking his doors. Today, we have the means of bringing every information to the student. It is time that the educational planners take full advantage of the technologies available for extending educational opportunities to all those who want to have access to them. Therefore, the open universities may be treated as the new temples of learning, as per the new needs of an individual.

The open and distance learning system can operate on two levels :

- (1) It can provide traditional courses in a more smaller form and allow for individual variations in programming.
- (2) It can provide a variety of post experience and in service courses that are better geared to the requirements of the adults and of society in general.

The emerging fourth generation of distance education i.e. the flexible learning model promises to combine the benefits of high quality interactive multimedia with access to an increasingly extensive range of teaching and learning resources and enhanced interactivity through computer mediated communication offered by Internet.

11.2.5 Distance Education as an Educational System.

The relevance of any educational system adjudged in terms of the criteria that gives the system a significant social function. Thus, it is not presumption to say that the basic issue of credibility can be seen as one of either success or failure to meet such criteria. To serve our immediate purpose, we have listed the following four required aims that characterize the functioning of an educational system.

- (i) To give instruction in skills,
- (ii) To build a cultivated society,
- (iii) To advance learning, and
- (iv) To transmit the secular view of human beings.

The primary function of an educational system is to give instruction in skills that are related to and promote a general division of labour and at the same time respond to changes in such division of labour. It should be mentioned here that students come to institutions of higher learning, mainly because their studies and training are related to future prospects.

Besides imparting skills that are purely practical, education aims at teaching whatever it does in a manner calculated to develop the powers of the mind. It thus attempts to produce a cultivated society, and it is this particular function of the educational system that places it in a highly eminent light.

An educational system, furthermore, makes a contribution to the growth of knowledge which in turn, leads to the advancement of truth or the unveiling of ignorance. This growth of knowledge becomes a specialized function of the educational system, especially at the higher level, which explains the reason why research is generally coupled with teaching at this level of learning.

The educational system is unique in so far as it is the only system that seeks to transmit a common human culture and common standards of citizenship. It indicates the spread of rationality or of a certain view of people and so a vision of human potential that distinguishes it from other social institutions. To emphasise, educational institutions, thus, play a crucial role in the evolution of human culture. These being the criteria which determine the social credibility of an educational system.

11.3 Glossary

Upward Mobility : It indicates for generating a new knowledge in order to enrich the information valley of various disciplines.

Horizontal Mobility : The spread and spray of information among the needy persons of every class by using appropriate information communication technology.

Environment : It reflects towards the existing situation, civilization and social traditions in a society.

Women Empowerment : It is raising an awareness of potential to perform some important role by women.

Science of Management : These are managerial principles which help the person to do his work in an order. It divides every activity into three stages like Input, Process and Output.

Privatisation of Institutional Learning : The student learns at his own rate, pace and time. He has no binding to come to some institution for the purpose of learning.

Quasi Permanent Absence : In the process of teaching learning the teacher comes forward not at every time but sometimes when the student needs his help. This help is given through counselling. Thus, the teacher remains absent partly.

Import, Conversion and Export Process : In distance education, the student is imported from a society as raw material. He undergoes a process of conversion and finally is exported as a product of the ODL system. This process is similar to that of industries and thus ODL system may be also labeled as an industry producing in bulk.

Instruction in Skills : This is training for developing some skills essential for doing some work by a person. e.g. carpentry, scooter mechanic, wireman, typist, computer operations etc.

Secular View of Man : When a person's views are not influenced by any particular ideology, or religion or culture, he is known as unbiased and his views are in favour of social and community development. Thus, a view unbiased with any philosophy or culture or religion are known as secular view of a man.

11.4 Summary

Knowledge explosion in different fields and thirst of mankind for meeting social problems through researches has been witnessed everywhere. It has given birth to new fields of study known as Inter disciplinary and multi disciplinary in nature. The population of every country is increasing day by day and managing education to all as per the requirements, is very difficult or even impossible for every country. This problem has been solved by technological advancements. There is, a wide variety of electronic devices for mass communication as well as advancements in the fields of teaching learning and science of management. All these three have jointly enriched the system of distance education for providing need based mass education.

In fact, a wide variety of educational needs may be witnessed in the present day society. There are many who have been deprived of by the conventional mode for seeking education. Similarly, there are many who want to update their minds with latest information and skills in their fields. These two major categories are the target groups for Distance Education System. These type of educational programmes can not be managed by conventional system due to its limited resources and constraints. ODL system has successfully managed these programmes and China has made its technological advancement by using distance education mode only.

Another reason for ODL system to come up is social changes and equality of women at par with men. Earlier the education was limited to a particular class of people but now it is open for all in every country. There is no discrimination between male and female, rural and urban, old and young, rich and poor. Every one has a freedom to receive any type of education as per his need. This has increased the number of persons in search of education. ODL system can manage every type of education for these new learners.

Conventional system has its own limitations. It pays attention to Teaching (classroom lecture), Research (generation of new knowledge) and Extension (sharing views with fellow scholars in other organizations). There is no provision for spreading the knowledge in horizontal direction for reaching the masses being in need of the same. This job can very well be done by the ODL system. The potential of Distance

Education system can cover up these target groups like Scheduled Tribes, Scheduled Castes and Women for getting education of their need. Staff Development and Human Resource Development (HRD) apart from education can be met by the ODL system. In fact the distance education is a complete education system because it covers four basic aims that characterize the functioning of an educational system. These are to give instruction in skills, to build a cultivated society, to advance learning, and to transmit the secular view of human beings.

11.5 Exercises for Practice

Write answers of following questions in about 200 words each.

1. Explain Need Analysis Process in distance education to adult learners.
2. Compare and differentiate scope and limitations of conventional education system and distance education system.
3. Explain potential and limitations of distance education system in India.
4. Write note on distance education is need based and contemporary system of mass education.

Unit 12 : Distance Education in Developed Countries

Index

12.1 Introduction

12.2 Content

12.2.1 The Regional Perspective of Distance Education in Europe

12.2.2 The Scenario of Distance Education in Canada and U.S.A.

12.2.3 The Developments of Distance Education in Russia

12.2.4 The Success story of Distance Education in China and Japan.

12.2.5 The Practices of Distance Education in Australia and New Zealand.

12.3 Glossary

12.4 Summary

12.5 Exercises for Practice

12.1 Introduction

Distance Education has priorities which differ from one nation to another depending upon the needs of country people and socio-cultural as well as Educational and Economical conditions of the country. It is essential to study priorities before Distance Education in developed countries and means to meet the same. Here the term developed is used for the countries having high economical, scientific, industrial and educational growth, with high standard of living. The countries included here may be USA, UK, France, Germany, Japan, Canada, Russia, Australia, New Zealand, etc. It is evident from the developments in the twentieth century that the period between 1970 and 1990 has been the most progressive for the development and credibility of distance education. The period between 1990 and 2000 marks a stage of stability. Now, from 2000 onwards the focus has shifted to consolidation and further innovations in this system of education. Currently the emphasis is on assuring quality in all its operations.

A major work in this field is establishment of an international forum for this innovative system of education. International Council for Distance Education (ICDE) was established in 1938. It has its permanent International Headquarters at Oslo, Norway. The Commonwealth Of Learning (COL) is another body established by Commonwealth Governments in 1988 with its headquarters at Vancouver, Canada. It takes care of to create and widen access to education, and to improve its quality, utilizing distance education techniques and associate information communication technologies to meet the particular requirements of member countries. There are 1117 institutions in 103 countries offering distance education programmes. The total number of courses available is over 38,000 in 103 countries launched by 1117 institutions covering 30 million learners worldwide as given below :

Distance Education Scenario

<i>Regions</i>	<i>Countries</i>	<i>Institutions</i>
1. Africa	31	159
2. Asia	19	109
3. Australia and Pacific	05	096
4. Europe	25	412
5. Middle East	03	003
6. North America	03	278
7. Carribean	05	007
8. Latin America	12	053
Total	103	1117

After the study of this unit, you will be able to know and understand :

- The Regional of perspectives of distance education in Europe
- The Scenario of distance education in Canada and USA.
- The developments of distance education in Russia.
- The success story of distance education in China and Japan
- The practices of distance education in Australia and New Zealand

12.2 Content

12.2.1 The Regional Perspective of Distance Education in Europe

The development of Distance Education in this region particularly in England, Germany, Sweden, Norway, Netherlands and Spain is influenced by Educational Technology. It helped in detailed analysis of educational objectives, target groups, judicious selection of various communication media, evaluation of courses and programmes etc. Research in Distance Education is another important area in which some institutions in Western Europe have made a significant contribution.

Below is description of developments and progress of distance education in some countries.

England

The establishment of the Open University at Milton Keynes, near London, in England in 1969 turned out to be a significant milestone in the development of distance education in the world. The Open University was established by a Royal Charter in 1969 as an independent and autonomous institution authorized to confer its own degrees. The University aims to provide a second chance to adults learners who have not received higher education and professional training and qualifications for those who prefer to study while on working and to contribute substantially to continuing education in the UK. The University is located on a 70 acres site in Milton Keynes, Buckinghamshire, and has offices in 13 regions covering the whole country and even outside U.K.

This university has created a world wide impact by producing effective course materials for all kinds of people, irrespective of age, sex, place of residence and formal qualifications. In fact, no educational qualifications are required for admission to undergraduate courses, but students must be at least 18+ years old and residing in European union countries and other countries in which it has agreed to register students. The normal minimum entrance requirement for undergraduates is identical to that which applies in conventional universities in the UK. The age and residential requirements of the undergraduate programme also apply to the continuing education

programme, but in the case of professional and skill updating courses in this programme, stipulations are made concerning required levels of previous knowledge. In 1993, the University enrolled more than 1,20,000 students.

The TV and Radio programmes of the university has good educational value and are of interest to the general public as well. This university has provided expertise to a number of developing countries in establishing Open Universities or Distance Education Institutes. A wide variety of courses is offered by the Open University, and their respective components are similarly varied. The printed materials which form the core of the university's taught courses are supplemented by one or more of the following: audio cassettes, field trips, summer schools, and weekend or day schools. Attendance in tutorial and counselling sessions available in the university's 250 Study Centres is optional. A student newspaper, *Sesame*, is published regularly and circulated to current students. The Open University Student's Association organizes study-related and social activities, Study clubs and Academic societies. The Open University, through the Longman Group Ltd. brings out a journal *Open Learning* from 1980.

International Extension College (IEC), Cambridge, is another well known distance education institution, which in addition to offering distance education courses provides consultancy and expertise to developing countries, particularly in Africa, for developing distance education institutions and distance education programmes.

Besides, there are a large number of private correspondence institutions in England preparing external students for various public schools and university examinations, and so offer a variety of correspondence courses. The council for the Accreditation of Correspondence Colleges looks after the maintenance of standards by these institutions which account for more than 5 million students.

Germany

The then German Democratic Republic (GDR) entered a new stage of social development around 1976, while and education was expected to be a productive phase in students' life and to play a positive role in social development. Special emphasis was laid on the education of working people by means of distance education and evening classes leading to a university or technical degree. Distance Education

was also used, for several years, to provide further education to graduates of technical schools in the fields of agriculture, economics and technology. Approximately 40 per cent of technical school students were trained through distance education. Except for medicine all other subjects available to on-campus students at the conventional universities were covered by distance education and evening colleges as well. Commercial Correspondence Schools (CCS) were quite popular in the then West Germany, (Federal Republic of Germany). Considering the increasing demands of the people, the State and Federal governments realized the need for their involvement in the development of distance education. This resulted in the establishment of the **German Institute of Distance Education (Deutsches Institute fur Fernstudien, DIFF) at Tubingen** in 1965. It is an institute for research and development in the field of continuing education.

The aim is to optimize methods in continuing education, in particular for guided, media-supported self-study, which also plays a major role in distance education. DIFF collaborated with various providers of continuing education in research and development, for instance, with institutions of higher education and with industry and commerce. Forms of collaboration range from providing advice on questions of continuing education methods to full-scale co-operative research and development projects.

In the wake of pressures from students seeking admission to institutions of higher learning, and keeping in mind international trends in distance education, the North Rhine Westfalia State has established Distance Teaching University, **the Fern Universitate, at Hagen in 1974**. Although this university kept in mind the experience of other distance education universities, particularly the Open University in England, it has developed a character of its own and is specially known for research on distance education. It offers degree and other courses to over 20,000 German-speaking students and has broken new grounds by instituting a distance education courses namely 'Essentials of Distance Education' for distance educators. Printed materials, tapes, video cassettes, computers, telephone etc. are the media being used to disseminate information. The emphasis on face-to-face teaching is relatively insignificant.

France

In France, university teaching at a distance was originally designed for initial training to upgrade teachers, but the scope was widened in due course of time. By 1986, eighteen formal universities were renamed Radio Universities. **The Centre de Tele Enseignement Universitaire** provide university level courses of 2, 3 and 4 year duration. In addition to the students who enroll in these courses, other people also derive some benefit from the TV and radio programmes of these universities. There is active collaboration between some universities with regard to materials for various courses and also useful exchange with overseas French speaking universities, particularly in the developing countries.

The Centre National d'Enseignement a Distance (CNED) is a state institution under the authority of the Ministry of Education. The CNED comprises eight different centres in France. It offers opportunities for joining distance higher education programmes, salitary courses and foundation courses at all levels, in France and abroad. Every year, about 70,000 young people of school age are registered at the CNED. Among those, many cannot go to school for various reasons, such as poor health or because they are high-level artists or athletes.

The CNED not only offers all levels of studies from the first-year-infants school (course preparatoire) to the secondary school examination (Baccalaureat), but also home packages for subjects which are not taught in school and support courses or summer courses. 80% of students registered at the CNED are adults and are in full-time employment. They follow courses in order to take one of the various competitive examination commonly held in France. Other students seek complementary training or even a change of profession.

Traditional media such as printed materials and audio and video cassettes are supported by advanced technology such as floppy discs, telemetric (minitel), television, video-discs, CD-ROM, CD- video, visual conference links, video transmission for lessons, lectures, debates and seminars.

The number of students enrolled rose from 83,000 in 1950 to 350,000 in 1992, 80% of whom take courses from 150 different countries. Besides this, there is much advancement in Norway, Italy and Netherlands in the field of Distance Education.

12.2.2 The Scenario of Distance Education in Canada & USA.

The United States of America has an old tradition of establishing Centre for Distance Education in conventional universities. They have accepted and used the learning material developed by 'The Open University' of U.K. Canada has established an Open University known as 'The Athabasca University'. The country has credit of having Headquarters of international apex organization for monitoring distance education known as Commonwealth Of Learning (COL) at Vancouver.

Distance education has greatly influenced the educational systems of North America, particularly in the USA and Canada. North America has a fairly large network of distance education institutions offering school and university level courses and also a wide variety of continuing education and non-credit courses. There has been a remarkable development of distance education in varied directions in, these countries. A brief account of developments in distance education in North American countries are as follows :

Canada

Canada is one of the important regions in North America as far as distance education is concerned. Here, we are talking about the development of distance education in Canada with particular reference to Athabasca University. But before we deal with this university we shall touch upon The University of British Columbia, which is the birth place of the International Council for Correspondence Education, (ICCE), now International Council for Distance Education (ICDE). It has established the Open University Consortium to facilitate the offering of degrees, diplomas and certificate programmes. The Consortium allows students to obtain degrees by choosing any courses from the three universities of the Consortium and the Open Learning Agency. The courses offered by these three universities and the Open Learning Agency are listed in the Consortium calendar and a student can make their own choice of courses for obtaining a degree. To complement the course materials the Consortium has established high quality satellite and cable TV programmes of the Knowledge Network. In fact, the distance education programmes of British Columbia have received wide publicity throughout the world.

The Athabasca University, established in 1975 at Edmonton, marked a significant development in the field of distance education in Canada to meet the rapidly increasing demand for university education at universities in Alberta and to explore new ideas in education. A sudden drop in enrolments at other universities in Alberta and a change of government brought about a change in the original mandate given to the university. The university was authorized to undertake a pilot study to develop home study courses. The government eventually granted permanent status to the university as an undergraduate degree-granting institution. In 1978, Athabasca University was formally established under the Universities Act to provide higher education opportunities to adults who were deprived of this privilege at the conventional universities.

The university is partly modelled after the UK Open University. Housed at Athabasca Village, it offers four kinds of distance education programmes.

- (i) **Degree programmes** : Bachelor of Arts, Administration and General Studies;
- (ii) **Transfer programmes for students** wishing to start, add to or complete degree programmes at other universities.
- (iii) **Non-programme studies for adults** who want to pursue personal or career related interests without working towards a specific degree or for those who wish to explore their interests before choosing a particular programme;
- (iv) **Visiting Students' Programmes** for students at other universities who are unable to study full time and would like to take some distance education courses at Athabasca University for adding credits to their degree programmes.

Since 1980, the student body has more than tripled from 3,446 in 1980 to 11,351 in 1990. The number of courses has also increased six fold, from 40 in 1980 to 248 in 1990. The university brought out a quarterly namely Research in Distance Education. It has however suspended from 1993 owing to financial difficulties. Instruction is imparted to students registered for various programmes through home study courses, television programmes, seminar-supported tele-conference courses and reading courses. Canada has, moreover, a number of correspondence schools which were set up mostly on account of shortage of teachers. These schools help provide educational

opportunities to children. One of the best known schools in this category is the **Alberta Correspondence School (ACS)** which was established in 1923. In June 1983, the **Canadian Association for Distance Education (CADE)** was formed. It operated for sometime under the Canadian Association for Continuing Education and then developed an independent identity of its own. Since 1986 CADE has been publishing a biannual international journal called Journal of Distance Education.

The United States of America (USA)

Though the role of distance education in the USA is a limited one, it is more extensive than in most other countries. The largest user of distance education is USA is Armed Forces.

The United States Armed Forces Institute (USAFI) is the unique distance education organization offering an extensive array of correspondence courses to enable the Armed Forces persons to acquire secondary and post-secondary, occupational and traditional education. The chief motive of the distance education programme offered by USAFI is to facilitate rehabilitation of the soldiers, sailors and airmen after their retirement from active service. **The Inter-Service Correspondence Exchange (ISCE)** formed by military distance educators serves as a forum for the exchange of views, researchers and ideas on distance education. Over two million defence service personnel take diverse military speciality subjects offered by the ISCE. Further, distance education plays a prominent role in the professional fields as well.

The area in which distance education plays an important role in the USA is adult and continuing education. The fast growth of knowledge, particularly in the professional fields led to popularisation of the concept of 'continuing education' or life-long learning. The induction of highly sophisticated machines which resulted in greater leisure for the working people also contributed to this popularity, because the working people wanted to utilize their leisure time to enrich their knowledge and skills or to acquire new skills for improving their career prospects. Thus, the education system in the USA, as in other developed countries had to be geared to meet the varied educational needs of the adult population. This obviously led to the remarkable development of distance education in the USA. The extension departments of the

universities and independent study institute provide a wide range of vocational, technical and career-oriented courses, besides continuing education courses, to keep people up-to-date in their profession. According to a 1982 survey of the correspondence programmes of the **National University Continuing Education Association (NUCEA)** of the USA there were 71 American institutions with 240,488 new enrolments. The following 10 universities operate well known correspondence institutions/directorates/departments with annual enrolments varying from 17,500 to 18,000. Brigham Young University; University of Missouri; University of Nebraska; Indiana State University; Pennsylvania State University; Texas Technical University; University of Wisconsin; Louisiana State University; University of Minnesota; and University of California. The University of Wisconsin has done commendable work through its Communication Programmes Department in developing telephone as an effective educational tool. It has a state-wide Extension Education Network which uses leased, commercial telephone lines to simultaneously transmit audio and visual materials to a number of classrooms at different places. The American Journal of Distance Education is being brought out by the Pennsylvania State University.

Hadley School for the Blind runs the courses for the visually handicapped at Winnetka, Illinois, is indeed a laudable feature of distance education in the USA. It started with 100 students. The students are spread out throughout the United States and more than 60 other countries. The school was granted accreditation by the National Home Study Council in 1958 by the National Accreditation Council for the Blind and Visually Handicapped in 1970 and by the North Central Association of colleges and Schools in 1978. Apart from courses that help the blind to learn the Braille system, the school offers over 100 varied types of rehabilitation, high school, vocational and college level courses to enable the visually handicapped to achieve their educational goals or learn vocational skills. The school has its own amateur radio station. The students in the USA communicate with the school staff through the Hadley Wats line which is available non-gratia for eight hours every day. The students have easy access to information through the combination of micro-computers and voice synthesizers. Almost all independent study programmes in the USA are financially self-supporting. The whole-time staff of these programmes is usually very small 2-5 professionals and

5 office staff for 3,340 enrolments. The national ratio of teacher to student is 1:463. There are two well known national associations/organizations in the USA which are devoted to the development, collaboration, accreditation and maintenance of standards of distance education programmes. These are :

- (i) National Home Study Council (NHSC) based in Washington and recognized by the Federal Government. The council has a well organized Accrediting Commission which celebrated its 40th Anniversary in 1995.
- (ii) National University Continuing Education Association (NUCEA), Washington.

These associations regularly organize seminars/workshops/conferences for the benefit of distance educators publishes a Newsletter in distance education.

12.2.3 The Developments of Distance Education in Russia

Before we discuss the present Russian Open University (ROU), we should touch upon the educational scenario in the former USSR. Distance Education in the former USSR was born out of the necessity to train thousands of volunteers who offered their services to teach illiterate adults throughout the country, where about 76 per cent of the population was illiterate in the early 1920s. The vast contingent of ‘people teachers’ were trained through specially devised correspondence courses. As a result of this massive campaign illiteracy was completely eradicated within two decades since the 1917 Russian Revolution.

The success of correspondence education in training people for adult literacy work led to the extension of this non-formal system of education to other areas also, because the traditional channel of full-time education could not ensure quality for education, knowledge and culture to every citizen of every age group. Therefore, it was decided to have three channels of formal education full-time, part time and correspondence courses for providing professional training and higher education through universities, Teacher Training Colleges, Polytechnics.

Correspondence courses in the then USSR were organized on an All Union basis, so far as syllabus and course materials were concerned. The universities or polytechnics followed the national syllabus and the course material was produced

and distributed by the Ministry of Education. The universities/institutions in the different Republics had the course materials translated and the basic course materials were supplemented according to local needs. Correspondence courses during 1970s attracted more students than the formal channel of full time education and the ratio, for quite a few years, was 55:45. There were over 500 correspondence faculties or departments attached to various universities or institutes throughout the then USSR and 16 autonomous institutes/polytechnics of correspondence studies offering diplomas as well as higher research courses. A wide range of courses were available to over three million students.

Correspondence education students were required to take one more year than the students from the formal channel of studies, i.e., six years as compared to five years for the formal Diploma Courses. However, they were given a number of incentives like paid leave and travel subsidy for attending contact sessions and taking the examinations, and a day off every week for studies in the fifth and sixth years. Like other students they were entitled to free education up to the highest level.

The Russian Open University, established in 1990, is both a scientific and an educational organization established by the **Union of Soviet Teacher Innovators (USTI)**, the Academy of Sciences of the USSR, and the Soviet Culture Foundation. The mission of the University is to carry out research, to design projects, and to implement scientific achievements. The primary purpose of Russian Open University (ROU) is to provide access to higher education to all those adults who are admitted to and who left in the appropriate secondary schools. ROU provides access to education for people of all ages who may wish to learn, for any reason whatsoever. The University grew from 20,000 students in 1990 to more than 100,000 in 1992. At present efforts are on to involve industry and the private sector to offer quality courses which can compete in the changed market driven economy.

12.2.4 The Success Story of Distance Education in China and Japan

The whole technological advancement of China and Japan is because of Distance Education. China has a long tradition of correspondence education from the beginning of the twentieth century and it has at present a good network of Central and State

Level open universities. In Japan, the 'University of Air' is meeting a wide variety of learning needs of different class of people.

China

Increasing population, the necessity to expand the educational base of people, upgrade the skills of workers and broaden the awareness of each Chinese person about the Cultural Revolution necessitated the establishment of correspondence education in China in dual mode universities. During 1960's, Television Universities were set up in Beijing, Shanghai, Sehenyang and some other cities in order to provide a convenient means for adult students to improve their education. The socialist modernization project, which demanded extensive education facilities for the people, led to the establishment of the **Central Radio and Television University (CRTVU) in Beijing in 1978** which is at present the largest distance education university in the world with nearly 2 million students on its rolls. This university offers educational opportunities to workers all over China. Admission to this university is done mainly on the basis of an entrance test. Instruction is imparted chiefly through television, back up written materials and face-to-face contact sessions.

The university also offers degree programmes in science and technology, social sciences, etc. By 1985, over 400,000 had graduated from the 28 Provincial Radio Television universities, set up all over the country. Besides, one million free viewers and listeners also benefited from the programmes on a nationwide scale. There are 43 Provincial Radio and Television Universities, 595 Branch Schools and 1500 Work Stations which offer distance education programmes, mainly through radio and television to over 4 million students. By 1990 a national system of higher education through radio and television had taken full shape. Out of a total distance education student strength of 2.4 million, more than 75 percent study through the radio and television universities. Besides, to cater to educational needs at the school level, China uses correspondence, Radio and Television School.

In Shanghai, there is a Television university viz the Shanghai Television University (STVU). It is an institution of adult higher education under the Shanghai Municipality and is also one of the earliest Radio and Television universities in China. It was

jointly established by East China University, Fudan University and East China Chemical Engineering Institute in Shanghai in 1960. It was temporarily closed down in 1966 during the Cultural Revolution and reopened in 1978. STVU has built collaborative relationships with open universities in Asia, Britain and the United States.

STVU has been offering courses in science and engineering, liberal arts, medicine, agriculture and economic management at the undergraduate and sub-undergraduate levels. STVU also offers over 140 non-degree programmes of different levels and types such as in-service training, training for advanced professional certificates and continuing education. Over 1,000 students have completed their undergraduate studies and over 62,000 students have completed sub-undergraduate studies. So far, a total of 22,000 self-study adult students have been enrolled and of these approximately 200 have obtained diplomas and 2,000 have obtained certificates. The National Open University, established in 1986, began telecasting and broadcasting courses on Radio and Television.

The objectives of the National Open University are to:

- Provide opportunities for Life Long Learning (L₃ education);
- Offer equal higher education opportunities for all people who are unable to enroll in traditional colleges and universities;
- Convey knowledge to the whole society via new communication technologies; and
- Promote the quality of the country's human resources.

Courses are developed and offered in three categories i.e. core courses, foreign languages, and specialized courses. The last category includes courses in three academic areas of study i.e. business studies, humanities and social sciences. Each area is further divided into several grouping of study. By 1990, the number of students had reached over 62,800 including regular students and non-diploma student. Of these, 63% are female students and 37% male are students. Regular students made up 64% and non-diploma students 36%. The largest age group was between 25 and 30, comprising 36% of student population. Of the total number of students 26% were businessmen, 25% public officials and 15% labourers. The rest of the students were teachers, self-employed, housewives, unemployed people and others.

Hong Kong was a British colony enjoying the status of a Free Trade Zone until 1997 and it became an integral part of China in the same year. It has a number of institutions besides The Open University of Hong Kong which have been offering distance education courses in various subjects.

Cartias Adult and Higher Education Service is a non-profit making educational organization managed by Cartias-Hong Kong. It started its service in 1962. At present, it has 26 day schools and evening schools offering full-time and part-time programmes in commercial, language and practical areas. Multi Media Education Programme (MMEP) is a special department under Cartias Adult and Higher Education Service established in 1978. It offers distance learning courses to local learners ranging from primary to post-secondary levels. In principle, their distance learning programme, based on target groups and level of studies, includes the following areas:

- Parent's education
- Secondary education and para-professional studies for working adults
- Overseas collaborative programmes
- Joint-programme with higher education institutions in China,
- Re-training programme for redundant workers.

Hong Kong Baptist University had a school of studies formerly known as the Department of Extra Mural Studies of the Hong Kong Baptist College when it was first established. In 1983, the department was renamed as the Division of Continuing Education (DCE) of HKBC. In July, 1990, DCE was granted the status of a full school and is now known as the School of Continuing Education. In November 1994 the Hong Kong Baptist College assumed the status of University known as Hong Kong Baptist University. The School has undergone considerable development and expansion and offers 600 part-time evening short courses covering a broad range of cultural, vocational and professional interests. The School is a self-financing unit whose aim is to promote open education in Hong Kong. It offers both academic and non-academic programmes to meet the educational demands and aspirations of working people. A number of part-time diploma and certificate programmes offered by the University are recognized by professional institutions in Hong Kong and the United Kingdom.

The Hong Kong Polytechnic University is the largest tertiary education institution funded by the Hong Kong Government through the University and Polytechnic Grants Committee (UPGC). Distance teaching activities began in 1986 with the launch of the Certificate in Fashion and Clothing Manufacturing. This programme, is available in both English and Chinese streams since 1991.

The Open Learning Institute of Hong Kong (OLIHK) was set up by the Hong Kong Government in 1989. It began its operations with over 4,000 students, many of whom did not have formal university entrance requirements. In 1995, about 20,000 students were studying with the institute. OLIHK intends to offer educational opportunities at the tertiary level to the widest possible range of Hong Kong residents wishing to take advantage of the opportunity.

Hong Kong established the Extra-Mural Department in the University of Hong Kong which was renamed as the School of Professional and continuing Education in 1956. In this country, less than ten per cent in the relevant age group get opportunities to study in conventional institutions of higher learning. Therefore, the national priority, in the context of the fast changing economic scenario, is to provide other channels of opportunities for education for those who missed education earlier, who need further education, and those who want to upgrade and update their knowledge and skill to cope with changing business expectations or to change their career and profession. In Hong Kong nearly 40 institutions have been empowered by law to provide distance education programmes.

Japan

University level correspondence courses in Japan are usually the regular courses within the framework of conventional universities and they form a part of the activities of the parent faculties. However, the operations of correspondence courses are carried out by the Correspondence Education Division. The school level correspondence courses were started as a part of the post-war educational reforms and the upper secondary correspondence schools have their own organizations. Although qualifications for the university correspondence courses are stringently prescribed in the university departments, in centres that serve the purpose of social education,

admission is open to students who do not have formal entrance qualifications. They allow the students to take all or a part of the prescribed course, depending on their convenience. Students can obtain credits by using 'University Correspondence Lecture' on **Japan Broadcasting Corporation Radio and Television**. In the beginning, correspondence education experienced a boom and spread like wild fire. Later, the enrolment saw some ups and downs.

Ultimately, with the use of correspondence education made by the business sector and industries for the re-education of their employees, the training and retraining of teachers, and its popularity among women, enrolment continued to improve from 1960 onwards. This led to a new consciousness regarding the open education system in Japan. In 1978, the National Centre for Development of Broadcast Education was established as a cooperative organization of national universities under the direct control of the Ministry of Education. This was a planned step towards the establishment of the **University of the Air of Japan (UAJ)**, Japan's first independent single-mode distance education institution. This was set up by the **University of the Air Foundation**, a special corporation which works in cooperation with both public and private universities. The first registration of students began in 1985. Television and radio broadcasts were used as core-media supplemented by face-to-face contact sessions, printed textbooks and audio visual materials. Broadcast programmes are prepared by instructors and programme directors at the **National Institute of Multi-Media Education (NIME)** and the academic staff of the university of the Air. Printed materials are prepared by instructors. These broadcasts covered only the Kanto area. The 8 Study Centres, and the outside the Kanto area are provided with video-study centres. Plans are under way for the University to make use of satellite broadcasts to expand its educational programmes to cover the whole country. The language of instruction is predominantly Japanese.

The number of students at the University has increased from 30,000 in 1990, 34,900 in 1991 to 46,500 in 1992. There is a mix of full-time and part-time faculty member: full-time – 281 (academic 63; non-academic 218), and part time – 295. In the 15 week semester, 15 Television lectures (45 minutes each once a week) for 2-credit courses and 30 Television lectures (45 minutes each, twice a week) for 4-

credit courses are broadcast to students of the Kanto area alone. Those outside the Kanto area get access to those programmes at video-study centres. In all, 253 courses and 146 courses were broadcast through Television and Radio respectively in 1993. The recommendation of the Radio Regulatory Council has led to the perception of University of Air Japan as one of the main enterprises to utilize a separate satellite launched to have nation-wide coverage.

12.2.5 The practices of Distance Education in Australia and New Zealand (Oceania)

There has been a tremendous growth and consistent development of distance education in Australia and New Zealand. With a small population scattered widely over vast areas, Australia found that distance education proved a boon in meeting the individual educational needs of its society. Distance education courses were started at many levels during the first decade of the twentieth century. Over the past 90 years or so, distance education has developed into an integral part of all systems of Government funded education with each state having a correspondence school and programmes of technical training through correspondence. Australia founded an active regional association of distance education centre called the **Australian South Pacific External Studies Association (ASPESA)** to keep an eye on their functioning. This Association is now known as **Open and Distance Learning Association of Australia (ODLAA)**. It publishes a reputed biannual international journal called 'Distance Education', from 1980.

Australia

Early in the twentieth century, distance education became part and parcel of universities and other institutions of higher learning in Australia. World War II provided a further boost to its development because of increasing demands for education from the American Armed Force personnel, who were based in Australia. There has been a dramatic development of distance education in that region over the past few decades or so. Some of the well known universities and institutes providing distance education in Australia are Charles Sturt University (CSU), Wagga-Wagga, Canberra University

Canberra (CUC), Deakin University, University of New England, Murdoch University, Queensland University and Royal Melbourne Institute of Technology (RMIT).

Though distance education at the university level follows the 'integrated model'-common faculty for both on and off-campus students, the universities and institutes that offer distance education courses have a special division, unit, department or school which is responsible for organizing these courses. **Technical and Further Education (TAFE)** through distance education is a new form of tertiary education available in Australian colleges of external studies. The Charles Sturt University (CSU) established in 1989 is dual mode university, operating programmes in Agriculture, Wine Sciences, Humanities and Management with some 33000 full time students and 36000 distance learners. comprising of 60% female students and 40% male students.

The Deakin university was originally established in Geelong by an Act of Parliament in 1974 and the institution was named after Australia's second Prime Minister, Alfred Deakin. The mergers with Warnambool Institute of Advanced Education in 1990 and with Victoria College have significantly extended the scope and size of Deakin University.

There is a student body of 22,000 studying a wide range of disciplines through both on campus and off campus study courses. The university offers programmes in the arts, sciences, business studies and economics, education, sciences, technology, nursing and architecture. In 1992, new courses in law and engineering were also made available. The university is a leading provider of courses for external students and is one of the eight national distance education centres specializing in the delivery of off-campus courses.

To support its off campus programme the university specializes in the product of high quality study materials, audio and video cassettes. Teaching using teleconferencing, teletutorials and computers is accepted as part of the university's programmes. The categories of entry which apply to off-campus undergraduate students also apply to on-campus students.

New Zealand

New Zealand is known for a well developed system of distance education

providing instruction at all levels. A noteworthy feature of distance education in this country is that most of the institutes work in collaboration and avoid aggressive competition. The Open Polytechnic of New Zealand (TOPNZ) Lower Hutt, Wellington is the largest distance education institute in the region offers a wide range of technical and vocational education at a distance. The Institute plays a vital role in development programmes in the Pacific area with regard to building up technical and vocational skills. In addition, the New Zealand Correspondence School, Wellington has been serving the needs of students in remote areas through packaged correspondence lessons, correspondence school broadcasts and television programmes. It has introduced advanced studies for teachers as well. Besides, a number of other organizations and the New Zealand Radio provide distance education courses.

In New Zealand, distance education was first introduced when the New Zealand Correspondence School (NZCS) was established in 1922. Also, the Centre for Extramural Studies at the Massey University, Palmerston North, The Open Polytechnic, Lower Hutt, and the University of Otago provide distance education programmes. Besides print, the distance teaching institutions expose students to radio programmes, television through public TV network, video-lesson, computer communication, and tele-conferencing. While the first radio broadcast for distance students was started by NZCS in 1931, the teachers started visiting the homes of distance students in 1935. There is a strong teacher guidance arrangements in place for all types of students – starting from pre-school to adult continuing education. Around 300 courses offered by the Correspondence School includes 15-20 assignments called sets or lessons for each course, which are complemented by audio and video programmes, print materials, practical kits, etc. Increasingly, telephone and audio-video tapes and letters are used by teachers to encourage and provide personalized support to students. Computer Aided Learning (CAL) programmes are also being produced to individualise learning; and teachers maintain records of each student on the computer so as to review progress and arrange for extra support.

Massey University, situated on the outskirts of the city of Palmerston North, is the only university in New Zealand which offers degree and diploma level courses through correspondence and distance education. It was established in the beginning

of 1964 when Massey Agricultural College was combined with a branch college of Victoria University, Wellington, The history of Massey's extramural study programmes, however, goes back to 1960.

With a few exceptions, extramural courses are similar to internal courses. It is therefore possible to switch to full-time study if a student so wishes. Students have over 800 courses to choose from within approximately 70 programmes which includes degrees, diplomas, certificates offered by Massey University. Currently its student population is 18,000 with an annual intake of 5,000. The total staff within Massey University's extramural studies programme is 450, of whom 300 are engaged full-time. The annual budget for the entire university during 1994 was 110 million New Zealand dollars.

12.3 Glossary

Credibility of Distance Education : It indicates towards social image of distance education in meeting the objectives of managing variety of education.

Judicious Selection : This term has been used for media selection. The word judicious indicates towards selection as per learner requirements and their level as well as potential of media to communicate among the learners.

Consortium : It is group of organization with common goal which monitors the progress of work and advises for further progress and networking with other sister organizations.

Amateur : A person who is not skilled to do a work.

Genesis of Distance Education : It indicates the account of beginning stages of distance education.

Socialist Modernization Project : It is the name of a project taken for modernization of society in China. The distance education played a vital role in achieving this target.

Radio Regulatory Council : In Japan this body controls and monitors the use of satellite for broadcasting. Looking to commendable work done by the university of Air, the council has given every support for broadcast.

Commonwealth of Learning (COL) : The Association of Commonwealth countries (ACU) have established jointly an organization for promotion of educational activities and in particular Distance Education among Commonwealth countries, with its Headquarters at Vancouver in Canada.

International Council of Distance Education (ICDE) : This is an association of Distance education with its Headquarters at Norway. It had accepted the idea of openness in Distance Education and gave birth to an idea of establishing open universities.

Full Scale Co-operative Research : These researches done in USA are meant for developing co-operation or networking among sister organization in the field of Distance Education.

AAOU : Asian Association of Open Universities.

Oceania Region : This is a continent consists of Australia, New Zealand and other island countries.

12.4 Summary

Distance education has been continuously evolving in response to the educational needs of society and the expectations of the learners. This, indeed is a very progressive and healthy trend which is bound to further enhance the credibility of the system and the consequent benefits accruing to the learners. It should be noted that from mere home study, independent learning, correspondence education, the distance mode of teaching and learning has developed into a multi-media teaching and learning system. The explosion in the field of communication technology has led to the integration of new and innovative communication media with the distance education system resulting in new types of distance education institutes such as Universities of the Air, Tele-Universities and Open Universities. It has made education open to many, irrespective of age, formal entry qualification, place of residence, sex, pace of learning or completion time, etc. Distance Education system gives orientation to in-service teachers, specially in countries where there is a shortage of teachers, especially trained teachers.

With growing collaboration at Regional, National and International levels and strong international forums like the ICDE, AAOU, and COL, distance education has developed into a highly specialized teaching and learning methodology based on the principles of adult learning. As the traditional system is too rigid to meet the educational and professional challenges of modern society, distance education by virtue of its openness, flexibility and multi-media teaching and learning methodology promises to play a pivotal role in the future by restructuring the 'delivery system' of education and information and by making education responsive and relevant to the needs of the learner.

To achieve this, within distance education, attempts have been made to evolve an alternative kind of education or curriculum, rather than imparting the conventional type of education through an alternative channel. The remarkable developments during the past two decades or so resulting in the establishment of open universities across the world are clear pointers in that direction.

12.5 Exercises for Practice

Write answers of following questions in about 200 words each.

1. Write on distance education scenario in the world with special reference to European distance education.
2. Give an account of open and distance education situation in North American region.
3. What are the features and peculiarities of distance education in China ?
4. Explain practices of distance education in Oceania region.

Unit 13 : Distance Education in Developing Countries

Index

13.1 Introduction

13.2 Content

13.2.1 The Regional Perspective of Distance Education in Asia

13.2.2 The Scenario of Distance Education in South American Continent

13.2.3 The Success Story of Distance Education in African Continent

13.2.4 The Developments of Distance Education in Middle East

13.2.5 The Practices of Distance Education in South Pacific Region

13.3 Glossary

13.4 Summary

13.5 Exercises

13.1 Introduction

The developing countries have a variety of educational issues and problems which may be classified into three major heads as below.

- (1) The disadvantaged group of population being deprived of the education by conventional system of education.
- (2) The working class people are in need of upgrading their skill based education.
- (3) The illiterate group in need of developing their literacy skills and technological applications in its life.

Accordingly, every developing country has chosen different priorities for ODL system as per needs. The Pakistan has its Open University to take care of literacy to higher education and in India there is separate organization known as National Institute for Open Schooling (NIOS) at New Delhi to take care of School level education through open and distance mode. In Asia, the system has been found capable of

communicating with larger segments of the population – even with people who are in remote corners of country. It has been found that the workers are not much trained to carry out the jobs they have to do with. They need training and so, the system in Asia is paying attention towards staff development activities by using distance mode. A major group comprises of counsellors and tutors, are supposed to provide Human Support to the students. Also, a variety of technological appliances are to be installed and used for providing academic and non-academic support to students. The availability and judicious use of the Information Communication Technology by ODL system requires capital as one time investment and training to workers for using the same.

Thus, we see that the issues and problems of ODL system in developing countries are different than those in developed countries.

After the study of this unit, you will be able to know and understand :

- The regional perspectives of distance education in Asia.
- The scenario of distance education in South American continent.
- The success story of distance education African continent.
- The developments of distance education in Middle East.
- The practices of distance education in South Pacific region.

13.2 Content

13.2.1 The Regional Perspectives of Distance Education in Asia

The Asian region has witnessed much development of distance education within the last two decades. Most of the countries in this region have adopted the latest innovations of distance education and established open universities on large scale. A large number of students for various programmes indicates that distance education has been recognized as a viable and effective system being complementary or alternative system to the traditional one. The countries like Bangladesh, China, India, Indonesia, Japan, Korea, Malaysia, Singapore, Hong Kong, Pakistan, The Philippines, Sri Lanka and Thailand have established open universities in their countries. We have already

covered China and Japan in previous unit and shall take up Indian continent in this unit. The scenario in other countries are summarized herewith.

Indonesia

Universitas Terbuka Indonesia (UTI) The Open University in Indonesia, was established in 1984 as a distance teaching institution. It has admitted 5,00,00 students in the very first year of its existence. By the end of 1994, the number of students had crossed 5,50,00. Apart from self-instructional learning materials, the university provides tutorials and general lectures on radio and television, for which satellite facilities are used.

The Universitas Terbuka is open to everyone who possesses Senior Secondary School certificate or diploma. Students do not have to take any test or face any interview to enroll for the courses. The only exception to this 'open entry' rule is enrolment in the Faculty of Education, which provides courses only for in-service teachers.

Korea

Correspondence education in Korea began in the form of non-credit and non-degree correspondence courses around 1930. Later on, when conventional universities could not accommodate the ever growing numbers of university education aspirants, the Seoul National University established a Department of Correspondence Courses in 1972, offering junior college level courses. In 1982, the Department was elevated to the status of an independent university. **The Korea Air and Correspondence University** which was then renamed as the **Korea National Open University**. The estimated annual intake is 70,000 students, the total student enrolment in 1992 was 180,358. There are 186 full-time and 412 part-time staff members. The university offers Bachelor's Degree programme and hundreds of other (475) courses.

Malaysia

In Malaysia, **The Universiti Sains, Malaysia (USM)**. The university of sciences was established in 1971 at Penang took the initiative of organizing off-campus academic programmes to provide opportunities for university education to adults, to

democratize education and also to cope up with the increasing demands for higher education. The university organized a Regional Symposium on Distance Teaching in Asia, in 1981. There are also some private correspondence courses institutes which offer various school level, commercial and vocational courses. Stanford College Group has been very active in catering to the needs of people for such courses in Singapore and Malaysia.

Modules are the main teaching materials in the off-campus Study Programme. A module is a set of printed materials consisting of teaching notes and activities which students work on independently. In addition, multi-media self-instructional teaching materials in the form of video-tapes, audio-cassettes, audio-graphics and slides are also provided. To help students in their learning activities, 11 regional study centres have been set up throughout Malaysia. These centres are managed by a resident tutor with the assistance of part-time tutors who conduct weekend laboratory exercises and periodic tests, besides acting as occasional teacher counsellors for students. The centres also serve as venues for group discussion, and as examination centres for various continuous assessments. In addition to a postal lending service provided by the Universiti Sains Malaysia Library, a basic reference collection is maintained by the university in eleven regional public libraries, thus making available to students basic reading materials closer to their homes.

Since 1987, the university has introduced tele-tutorials through audio conferencing, and in 1989 the system has been expanded to include audio graphic facilities. This system enables two-way communication between the staff at the Universiti Sains Malaysia and the off-campus students at their respective regional study centres. This interaction, among other things, ensures immediate feedback. Tele-tutorials have been implemented in all study centres throughout Malaysia except in Sabah and Sarawak region of Malaysia. The University holds a compulsory residential school programme annually in mid-November. It runs for three weeks and provides an opportunity for students to meet lecturers and attend lectures, tutorials and laboratory classes on the campus. Radio Malaysia's National Network broadcasts a special 20 minute off-campus radio programme every Sunday at night. Total enrolment of students during the 1992 academic year was 2874.

The Philippines

The distance education system was launched in the Philippines in 1976 to reach 35,000 teachers spread over 7,100 islands in the Archipelago. A special feature of distance education in the Philippines is that curriculum materials are generally initiated by the 'consumers' and then revised and edited by experts. Courses are developed according to their relevance to social needs and are generally application-oriented, e.g. nutrition, cottage industry, environmental planning, poultry and live-stock, vegetable production, fruit production, etc. The requisite number of credits earned by doing the courses leads to the award of a degree. No learner fails in the distance education system of the Philippines, as it is a self-paced learning system in which the learner receives a final rating after completion of the package of self-learning modules. There is great emphasis on providing knowledge to teachers on problems of social importance so that others may be educated through them on those lines.

Thailand

Sukhothai Thammathirat Open University (STOU) was established as a single mode distance education university by a Royal Charter in 1978. It was established as a National University under the Ministry of University affairs in response to individual and societal needs. The university is situated on a 54 acre site in Nonthaburi Province 18 kilometers north of Bangkok city in Thailand.

STOU aims at contributing to citizens' personal development; the expansion of educational opportunities, life-long recurrent education, teacher education and training, advance training to skilled manpower, economic development, national development, political and economic ideology and promotion of democracy.

The university provides three kinds of courses – Bachelor's Degree Courses, Short-term vocational Enrichment Courses, and Basic Rural Development Courses. Two marked features of the courses offered by this university are:

- (i) provision of training resources for several Government agencies for personnel development and
- (ii) new teaching programmes like agricultural extension and cooperatives, health-science, management, communication, arts, etc.

The estimated annual enrolment is around 80,000 students. Total student enrolment to date is 2,50,000 students. The number of full-time staff is 1,985 (312 are full-time academics); in addition, there are about 4,000 part-time academic and professional staff from conventional universities, public agencies and private firms appointed as external experts in various course teams for courseware and media production, conducting tutorial sessions, and preparing test and evaluating examination papers. According to the Ten years (1980-1990) statistics, the largest group of students are those aged between 21 and 30, making up 64% of the student population and those between 31 and 40 make up 25%. About 11% of the student population are under the age of twenty-one. Students from urban areas comprise 26% and those from rural areas 74%. In terms of occupational composition, students from the public sector account for 60% and those from the private sector form 20% of the total. According to the statistics, 49% of the students are male and 51% are female students.

STOU's revenue comes from its tuition fees, investment and the Government grants. There are 10 Certificate programmes and 20 Bachelor's Degree programmes available at STOU, and the total number of courses is 448.

13.2.2 The Scenario of Distance Education in South American Continent

This continent includes many countries which are in a developing stages of distance education. This unit will consider the ODL scenario in these countries. Here we will discuss about Brazils, Costa Rica, Venezuela and Argentina situated in the South American continent.

Brazil

Brazil is an important country with a large population and a long academic tradition. Distance education in Brazil offers a variety of programmes in academic disciplines, teacher training and training of health workers, using print and electronic media. There is little information available in English on the practice of distance education in the Latin American countries, including Brazil. Based on the ICDL database, we are giving you the following information about five leading universities

offering distance education courses and programmes in Brazil. Portuguese is the medium of instruction for most of educational programmes.

Centro de Ensino Tecnológico de Brasília (CETEB) – Centre for Technological Teaching in Brasília is a human-resource training agency. Its main activities are Research, Development, and Application of teaching methodologies that best suit the Brazilian needs.

CETEB was established in the 1960s and is situated in the heart of the country, in Brasília, the capital of the Federed Republic of Brazil, which is the only Portuguese speaking Country South American region.

The first distance education course was planned in 1973. CETEB's experience has shown that distance education is viable and appropriate to offer general knowledge to those who could not complete their primary and secondary studies by the age of 14, and for professional qualification at various levels, including the technical teaching and training of professionals in some areas with specified and limited demand. The courses offered by CETEB include:

- Courses for youngsters and adults who have not attended school.
- In-service training to the vocational school teachers at their own workplaces.
- A range of programmes for teachers.

Since 1994 CETEB has been developing an advisory project on education in Mozambique. The project, financed by United Nations Development Programme (UNDP) and British Institute for Rural Development (BIRD) aims to develop a distance education strategy to train 3,000 primary teachers in the country.

Courses are delivered using printed correspondence texts prepared by the institution. Primary and Secondary school courses for youngsters and adults take place in Pedagogical Centres that are located in CETEB, in companies or even in other states.

CETEB had offered education to over 25000 students by 1995. **Fundacao Brasileira para o Desenvolvimento do Ensino de Ciencias** began its distance education programme in 1987. This institution offers a continuing education programme – Maths for Primary Teachers. Subjects offered in the programme include: Mathematics education; Mathematics; Mathematical sciences. Courses are delivered

using printed correspondence texts prepared by/for the institution. The duration of the course is 34 weeks. There were 17,631 students enrolled with the institution in 1992; the annual intake was 4,731 students and 4,000 students had completed the programme.

Fundacao Educational e Cultural Padre Landell de Moura was established in 1967. The main aims and objectives of the institution are:

- To spread education by means of sound and images.
- To reach deprived and under-educated adolescents and adults in the outer urban zones and rural regions.

The institution offers Literacy, Pre-Primary and Primary courses, and Community Education courses on: Civic and Social Issues; Rural Life; Health, Car Mechanics; Domestic Electrical Appliances; Radio, Television and Printing. No specific entrance qualifications are required for admission. Courses are delivered using printed materials; radio; television; audio and video cassettes; slides; an instructor-monitor. **Instituto de Radiodifusao Educative da Bahia** commenced its distance education programmes in 1963. It offers a Secondary School programme for adults and a Training of Primary School Teachers programme. Subjects taught include Curriculum development; Educational psychology; Mathematics education; Science education; Foundations of education; Social integration; Art education; Communication; and Sex education. **Universidade Federl do Rio Grande do Sul** was founded in 1934 as **Universidade do Porto Alegre**, a State institution. It acquired its status as a federal institution and its present title in 1965. It began its distance education programmes in 1988. Subjects offered include; Agricultural Sciences; Architecture; Town planning and Urban studies; Humanities; History; Literature and Regional studies; English, Spanish, French, Hebrew, Russian, Polish and Japanese languages; Commercial and Management Studies; Accountancy; Administration; Office studies; Public administration; Education and teaching; Curriculum development; Educational policy and management; Mathematics education; Science education; Mathematics; Mathematical sciences; Medicine and Health; Medicine; Nursing; Pharmaceutical sciences; Science and Technology; Genetics; Engineering and Technology; Civil Engineering; Electrical, Electronic and Microelectronic engineering; Materials science and Metallurgy;

Mechanical and production engineering; Physical sciences; Physics; Services; Library and information studies; Social studies and Geography.

In 1992 there were 2,000 staff members involved part-time in the production and delivery of the courses. There are currently 15,000 students enrolled on courses and 28,000 students have completed programmes.

Costa Rica

Distance Education in Costa Rica has taken a leap forward with the establishment of **Universidad Estatal a Distancia (UNED)** university for distance education in 1977. Originally the university developed a series of professionally oriented diploma and degree programmes, comprising courses like general studies and professional studies in educational sciences, educational administration, business administration, public administration and banking, farm management and nursing, health services and child social services.

The university also launched some extension courses, such as environmental studies, teaching of geography, professional education, development of scientific interests and extension studies in health, family life, agriculture, crafts, etc. Moreover, the university allows Free Studies Programmes under the scheme in which students can take any diploma or degree level programmes. Currently, nearly 15,000 students are on rolls. The annual enrolment is approximately 7,000. Since 1980 the university has been collaborating with the Ministry of Public Education in developing course materials and training tutors for the Ministry. Thus, in addition to going same way towards alleviating the shortage of places in higher education, it was hoped that the university would fulfill two other functions – it should make higher education accessible to those who could not take advantage of traditional courses, and to the agricultural and working populations.

Venezuela

Venezuela has taken to distance education in a big way to meet the educational needs of her people. Since university education is considered a means of improving one's socio-economic status, it was felt that lack of adequate facilities to meet the demands of the people for higher education could lead to frustration. To check this

frustration and to make higher education relevant to the needs of the countrymen the government of Venezuela decided to establish a distance teaching university in 1957, and appointed a planning committee for the proposed **Universidad Nacional Abierta (UNA)**. The National University was established in 1977, on the principles of open and distance education. The main aims and objectives of the university are:

- To train professionals in areas which are priorities for national development,
- To offer educational opportunities to those who have been unable to attend traditional higher educational institutions.

There is one National Centre in Caracas and 20 Regional Centres has been set up throughout the country. A Centre of Excellence in Distance Education has been established at UNA. It offers mostly formal academic programmes. But prior to admission to these programmes, the students are required to pass introductory courses which aim at orienting them to the practices of learning at a distance. After completing the introductory courses, the students can go in for their degree programmes which comprise general studies followed by professional studies. While the general studies provide an inter-disciplinary foundation to facilitate subsequent studies, the professional studies provide technical level short courses and full length professional courses leading to a degree in Administration, Education, Engineering, Mathematics, etc. In 1978 the University had registered 17,160 students for its introductory courses.

Argentina

Argentina too has a similar profile of distance education as Brazil, though its additional interests are in military training and training of industrial workers. The following information about the seven institutions offering distance education programmes in Argentina would give an idea of the country's priorities and concerns.

Circulo de Suboficiales de Suboficiales del Ejercito (CIRSE) started its distance education activities in 1978. Courses are offered in the areas of arts; humanities; contemporary and cultural studies; History; Spanish and English languages; Argentine literature; commercial and management studies; accountancy; personnel and industrial relations; law; medicine and health; health education; social studies; geography and psychology.

Escuela de Ingenieria Aeronautica was founded in 1947 however distance teaching programmes were included in 1987. The main aims and objectives of the institutions are to help military and civilian personnel, both in Argentina and other Latin American countries, who cannot attend courses offered by conventional systems.

The institution offers courses at degree level. Subjects include systems Engineering, Systems analyst epistemology; English; administration; introduction to law; computing; information technology and systems; mathematical sciences; operational research, statistics, decision making; electronics and microelectronics; physics; economics; behavioural sciences; how to study; drawing and introduction to technology. Courses offered in the area of Business Administration include: philosophy; accountancy; administration; public law; computing; mathematical sciences; statistics; economics; professional ethics and taxation.

Universidad de Belgrano was established in 1964 and included distance teaching programmes in 1983. The courses offered as continuing education programmes are: agriculture and agricultural sciences; agricultural engineering; veterinary sciences; humanities; history; administration; business administration; finance; management; marketing; personnel and industrial relations; public administration; education and teaching; teacher upgrading; educational objectives; evaluation; psychology and educational technology.

Universidad Nacional de la Patagonia San Juan Bosco Region was founded in 1980 as a result of the merger of **Universidad de la Patagonia San Juna Bosco** and **Universidad Nacional de la Patagonia**. Distance Education commenced at the University in 1987. Its primary aims and objectives are to solve the problem of shortage of trained teachers in certain subjects and to extend the education to other places. A survey was carried out in several regions of Patagonia during 1988 to ascertain the socio-economic, educational, political and cultural problems of the region and what role distance education might have to play to solve them. The survey brought to light serious problems in the area of health, and the university decided to offer a distance education course for practising health workers. **Universidad Nacional de San Luis** started its distance education courses in 1971, which came to an end in 1976. It was again revived towards the end of 1990. The courses which the university was hoping

to offer include curriculum development and adolescent group learning in Diploma and Certificate levels. **Universidad Naional de Tucuman** was founded in 1914 and began its distance education programme in 1988. Its main aim is to revitalize the higher education teaching function. The university offers a Post-graduate Certificate (Formacion Pedagogica para Docentes Universitarios) in the distance teaching mode. Subjects taught include education and teaching; curriculum development; educational psychology and university teaching. **Universidad Technologica Nacional (UTN)** was founded in 1959 and began its distance education programme in 1985. The university offers distance courses and training on specific subjects as continuing education programmes.

13.2.3 The Success Story of Distance Education in African Continent

In most countries in the African region, the educational level of a majority of the people continues to be relatively low. As a result, some of the countries in this region decided to make primary education compulsory and to improve the overall educational level of the people. But the colossal problem that they confronted was the training of teachers. Most of the school teachers were either undertrained or untrained. Considering the necessity of training the in-service teachers and the future need of employing large numbers of trained teachers to cope with the programmes of educational expansions, a number of countries like Nigeria, Zimbabwe, Tanzania, Kenya, Botswana, Lesotho, Swaziland, Guyana, Ethiopia and Ghana organized distance education courses for the training of teachers. The courses primarily comprise self-instructional print materials being supplemented by radio and television programmes, audio-visual tapes, films, face-to-face contact sessions, vacation workshops, etc. The first correspondence college in Africa was set up at Brazzaville in 1962. At present there are over 122 institutes using the distance education system. Some countries were able to secure technical support from UNESCO and various other international organizations and institutions for developing self-instructional materials. Later, distance education institutions were established in Botswana, Lesotho and Swaziland. These institutions have set a fine example for collaboration in developing distance education courses to cater to the educational needs of people in

these three countries. Similarly, the distance education programme of the Namibian Extension Unit, a non-profit making educational institution catering mainly to the educational needs of the South-West African Peoples' Organisation (SWAPO of Namibia) and of the Namibians in refugee camps in Angola and Zambia is indeed a commendable effort. The Educational Resources Centre for refugees from South Africa and Zimbabwe adopted the distance teaching methodology in 1981 for preparing refugees for the government examinations.

Various international foundations have been providing special assistance to the African countries for organizing and participating in international seminars, workshops and conferences. **The African Association for Correspondence Education** which works to coordinate the functions of the distance education institutions in the African region was initiated in 1973, but it became only recently. Visualising the future educational needs of the people in Africa, some conventional universities also have introduced some distance education programmes.

In 1983, Nigeria established a **National Open University**, attracting 20,000 applications for admission. However, unfortunately it was suspended by the military regime from 1984. However, the **Correspondence and Open Studies Institute (COSIT)** established in 1994 at the University of Lagos, Nigeria is playing a vital role in spreading distance education. The total student population is currently 6500. Approximately 2000 enroll annually. Students offering one of the three programmes can choose from among 200 available courses. The annual number of graduates is around 450.

Owing to the increasing number of refugees from Ethiopia and other countries who arrived in the Eastern region of Sudan, **The Sudan Open Learning Unit** was established in 1984. It was based on a needs survey conducted in 1982, and established with the help of the International Extension College, UK.

The objectives of this Open Learning Unit are:

- To offer a new, specially tailored educational programme for refugees, displaced and other Sudanese people who are not able to receive any form of formal schooling;

- To offer adequate in-service job training opportunities through distance education techniques;
- To provide literacy courses mainly for women. These courses are designed to provide instruction including life skills, trade promotion and functional adult education, and
- To develop the unit's structure into a national self-supporting organization for open learning, maintaining its social rather than commercial orientation. During 1988, there were 1297 students enrolled at the unit.

Zimbabwe got into distance education in a big way by establishing the **Zimbabwe Distance Education College** in 1980. The philosophy of the college is that education is of intrinsic value to the individual and to society. Therefore, its educational programmes are geared to meet the needs of the individual students and of the country.

The Objectives of the colleges are :

- To provide a broad spectrum of practical education programmes which are concerned with skill building;
- To provide learning experience that will contribute to the individual's self development, national development, and betterment of one's fellow human beings;
- To develop a keen interest in the scientific approach to learning and its application to problems for practical solutions;
- To cultivate a sense of observation and investigation in the scientific, managerial, technological, vocational and agricultural subjects;
- To provide training for the physically handicapped, and
- To instill a sense of love and appreciation for the country and its culture.

13.2.4 The Developments of Distance Education in Middle East

The impact of distance education may also be seen in West Asian Countries like Iran and Israel. These countries have made good headway in the field of distance education. **Payame Noor University (PNU)** was founded in Iran in 1987 to challenge the staff shortage of schools and the pressure of student numbers at the tertiary level. It is situated close to the Alborz mountain and its headquarters serves as the heart of

the system, as it controls and maintains 72 active study centres, operating throughout the country. In 1997, 70,000 students were enrolled in PNU programme.

Israel had set up **The Open University of Israel** in 1974 to provide pre-academic vocational and adult education courses. Vocational courses are planned in conjunction with the Ministry of Labour, these include courses for electronic technicians, accounting, technical drafting and adult education courses pertaining to areas like environmental studies, spoken and literary, Arabic and special interest courses. Russia and Commonwealth of Independent States (CIS) has enrolled around 1000 students in the Open University Judaic Studies programmes. They are taught in Russian and in the CIS in a format similar to studies in Israel, with tutors assisting students and a course coordinator in Israel responsible for supervising the work of tutors; preparing assignments and exams. The University has an enrolment of approximately 20,000 students. There are some 80 study centres throughout Israel and 650 tutors involved in course offerings.

13.2.5 The Practices of Distance Education in South Pacific Region

The description about Australia and New Zealand has been already given in previous unit. Here we will discuss about developing countries like Papua New Guinea and The Pacific Islands.

Papua New Guinea

Papua New Guinea, with diverse communities isolated from one another and the outside world on account of various geographical factors, offers a vast scope for distance education. In 1974, a Department of External Studies was established at the **University of Papua New Guinea (UPNG)**, Waigani along with the college of External Studies in Port Moresby, it has instituted varied distance education courses to meet the educational demands of the people. The department of External Studies was established in 1974, following the submission of the Gris committee which recommended an “expanding service” with programmes to be offered ‘beyond the capital city’. The committee also advocated the development of both a continuing education programme for graduates and formal external courses meant to ‘broaden

the base of higher education and produce graduates and diplomats who are likely to be less elitist in outlook'. The Department of Extension Studies is based in the Education Faculty at Waigani campus, which is the main campus of the University. In addition, there are eleven University Extension Centres. The Advanced Diploma in Teaching was introduced in 1984 by the University at the Goroka Teachers' College Campus as an in-service programme for practicing provincial high school teachers and is available in the distance learning mode. The programme is a significant innovation for the education of teachers in the country. It has the potential to assist all provincial high school teachers to undertake their duties in a more professional and confident way.

The Pacific Islands

Up to 1970, students in the Pacific Islands desirous of tertiary level education had to go to Australia and New Zealand. The establishment of **The University of the South Pacific (USP)** Suva, Fiji in 1968 brought these facilities to the doorsteps of the people, through off-campus studies supported by a strong satellite network. Those students who cannot come to a campus are able to begin their studies through one of the centres as part of USP's University Extension Scheme. By using various means of communication – course books, written assignments, audio tapes, the satellite USPNET – the university is able to bridge the distance between its campus and non-campus students.

The total enrolment of students in the USP distance teaching scheme is 10,000 with as many as 5000 enrolling in a semester. 150 courses are available within 25 programmes. Although the need for part-time staff varies according to the number of programmes and according to the funding available, the number of full-time staff involved is 120, of whom 51 operate from the headquarters in Suva, Fiji.

13.3 Glossary

Garis Committee : The Government of Papua New Guinea had appointed a committee known as 'Garis Committee' for establishing Department of External Studies in 1974.

Self Paced Learning : No learner is declared as failed. In this system the learner is given a final rating after completion of the package of self learning modules.

Free Studies Programmes : The University of Distance Education at Costa Rica has made a provision of permitting any person for any degree or diploma without some entry qualifications. This is known as Free Studies Programmes.

Pedagogical Centres : The Brazil Open University has established some centres in companies or even in other states for training primary and secondary school teachers through distance mode. These are called as Pedagogical Centres.

Epistemology : These are religious ideas expressed by some persons in the beginning of a religion. For example Profet Mohammad's views about Islam.

Less Elitist in Outlook : This is a condition of people who are not much exposed to the external world and so, Distance Education University of Papua New Guinea has started a programme for diplomats to be posted in other countries.

SWAPO : This is South West African Peoples' Organisation established in Namibia. It takes care of education of Namibians in refugee camps through distance education.

Colossal Problem : A problem which is extremely huge and large is known as colossal problem. e.g. poverty in India is Colossal Problem.

UNDP & BIRD : United Nations Developmental Programmes (UNDP) & British Institute for Rural Development (BIRD) are financing some projects in Africa for rural development including education through distance education.

13.4 Summary

The purpose of writing this unit was to explain the distance education scenario in developing countries of the world. The Indian continent has not been covered here because there is a separate unit devoted for the same. The problems of almost all the developing countries are more or less similar. The structure of distance education is also similar. There is a large group known as Illiterate cannot read or write and are living below poverty line. Also, persons are in search of some arrangement for updating their knowledge and skills in their areas of work. Technological revolution has created new learning regions for all and persons are trying to cover the same. There is a large group being deprived of by conventional system for a quality education at different

levels. This group is also in search of some alternative for their educational needs.

Thus, we see that distance education covers all these needs in almost every developing country. We have described the regional perspectives in Asia by covering Indonesia, Korea, Malaysia, The Philippines, and Thailand. The countries of Indian Continent like Pakistan, Sri Lanka, Singapore etc. have not been taken here because there is a separate Unit for these countries.

The scenario in South America continent (Latin America) covered Brazil, Costa Rica, Venezuela and Argentina. These countries have also similar type of distance education organizations because of similar needs and aspirations.

The African continent has educational level of a majority of people as low in comparison with the rest of the world. Training of teachers through distance education was given first priority in this region. The countries like Nigeria, Zimbabwe, Tanzania, Kenya, South Africa and others have large number of distance education institutes.

The developments in the middle east region can not be ignored. The Payame Noor University of Iran and Open University of Israel are doing well in different fields like Electronics, Agriculture, Religious studies, etc. In South Pacific also, the countries like Papua New Guinea, the pacific islands are meeting a variety of educational needs of learners in their country through distance education. Thus, we see that inspite of limited resources and shortage of skilled persons, the distance education system is doing a wonderful work in meeting educational needs of its people. However, these countries need one time expenditure in Managing technology and training of workers for quick and quality services to its learners.

13.5 Exercises for Practice

Write answers of following questions in about 200 words each.

1. Describe the distance education scenario in developing countries with special reference to Asia.
2. Explain and differentiate status of distance education in South America in comparison with North America.
3. Write note on prospectus of distance education in Africa with reference to illiteracy and poverty.
4. Compare and contrast global distance education system in developed and underdeveloped regions of the world.

Unit 14 : Distance Education in India and Around

Index

14.1 Introduction

14.2 Content

14.2.1 Dual Mode of Education

14.2.2 Growth of Open Universities in India

14.2.3 Scenario of Distance Education in Neighboring Countries

14.2.4 Issues before Distance Education in India

14.2.5 Future of Distance Education in India

14.3 Glossary

14.4 Summary

14.5 Exercises for Practice

14.1 Introduction

The distance education entered in a neighboring country Pakistan, much before it was adopted by India. The problems to be taken up by the system of Distance Education are similar in all neighboring countries around India. Illiteracy, poverty, unemployment, lack of skilled persons, staff development, etc. are the common problems of these countries. Accordingly, the distance education has been gearing up to solve these problems.

Apart from this, there are some specific problems which are to be taken up by the Distance Education System of the country. India is a land of diversities. Unity in diversity is a major challenge before the country. There are 16 major languages in India and many states have their own language as mother tongue as well as official language. There are many religions and people have freedom to adopt a religion of their own choice. These persons need instructions in their mother tongue. Therefore, state open universities and state open schools are emerging well with success in the

regional language. The success story of Open Universities in Maharashtra, Andhra Pradesh, Gujarat and Karnataka is an evidence to this effect. However, the system is divided into two folds as single mode and dual mode institutions. A strong financial support from single mode to dual mode would help in strengthening the quality of programmes and student support. The dual mode is earning a lot which goes as revenue to the university. The dual mode has no right to use this money for strengthening the system. There are many micro and macro issues before the system which require an urgent attention of the governments at Central and State levels. If these issues are addressed properly, the system may provide a quality education to its customers.

After the study of this unit, you will be able to know and understand :

- Conditions prevailing with Dual Mode Institutions in India.
- Scenario of Open Universities in India.
- Developments of distance education in Pakistan, Sri Lanka and Bangladesh.
- Some major issues before distance education in India.
- Prospectus of Distance Education in India.

14.2 Content

14.2.1 Dual Mode of Education

In spite of more than 262 Universities, 9000 colleges and over 6 million students involved in higher education, in India, however, India has only about 6% of the age group going in colleges and universities. It's literacy percentage is still not satisfactory.

India is one of the earliest countries to adopt the system of 'open university', system after the United Kingdom. In 1962 correspondence courses were introduced at the University of Delhi. It was during the 1970s that the momentum picked up with nineteen more universities introducing correspondence mode of education, and the trend continued in the 80s. Now more than 70 universities are offering courses through the correspondence and distance mode in India.

Looking to the progress made by U.S.S.R. in general and distance education,

Government of India asked Prof. D. S. Kothari to visit U.S.S.R. in 1962 and study its system of distance education. On the recommendations made by this committee, the Government of India permitted Delhi University for launching distance education programme with its jurisdiction throughout India. A large number of persons registered themselves for various programmes and completed the same. However, many persons demanded the same facility at other universities also, looking to the language problem with them. They wanted mother tongue as medium of instruction. Looking to this demand, the Government permitted various states to start distance education in different universities.

The handbook on distance education (2000) published by Association of Indian Universities (AIU), New Delhi indicates that 68 universities are offering various programmes through distance mode. Himachal university established International Centre for Distance Education and Open Learning. This University has a credit of launching M.Ed. programme first in India through Distance Mode of Education. They started degree and post-graduate courses in many subjects. In Punjab, University of Patiala took a lead in this matter. They offered the programmes in Punjabi also for catering the needs of local people. In South India this momentum got much publicity and the University of Madras, Madurai Kamraj University at Madurai started many programmes in Tamil and English both. The Kurukshetra University, Kurukshetra took a lead in this matter and offered various programmes through distance mode of education. The growth of dual mode distance education in India may be witnessed in two stages.

Pre-take off stage : This stage can be identified with the efforts made during the sixties, when only 4 Institutes of Correspondence Education were established, viz. Delhi University, Delhi (1962), Punjabi University, Patiala (1968), Meerut University (1969) and Mysore University (1969). The sixties was, therefore a period during which the idea of using distance education took shape and began to strike roots in the Indian soil. The movement of distance education had thus started in India, and was slowly and gradually gathering momentum so that it could enter the take-off stage.

Take off stage : During the 1970-80 decade, nineteen universities started Institutes/Directorates of Correspondence Education and thus a major thrust to distance education was provided. The institutes/Directorates established during this period also took up post-graduate courses and some diploma and certificate courses.

The following distance teaching units were established during this decade. Punjab and Himachal Pradesh University (1971), Andhra and Sri Venkateswara University (1972), CIEFL, Hyderabad (1973), Patna University (1974), Bhopal, Utkal and Bombay University (1975), Madurai-Kamraj, Jammu, Kashmir and Rajasthan University (1976), Osmania and Kerala University (1977), Allahabad and SNTU University (1978), Annamalai and Udaipur University (1979). Distance education got a big push during the seventies. More and more universities look to distance education as an alternative system of education. Moreover, whereas during the sixties, as an experimental measure, only undergraduate courses were started, it was in the seventies that Institute/Directorates of Correspondence Courses started post-graduate and diploma and certificate courses.

It is very difficult to state university wise details looking to a large number. However, there are about 43 such universities offering some common programmes at graduate and post graduate levels.

14.2.2 Growth of Open Universities in India

The first Open University which is now called Dr. B. R. Ambedkar Open University (BRAOU) at Hyderabad was established in Andhra Pradesh in 1982. The Indira Gandhi National Open University (IGNOU), New Delhi was established in 1985. There are 12 open universities functioning in India including one at National and 11 at State level. The Tamilnadu Open University (TNOU) at Chennai and Chhattisgarh Open University (COU) at Raipur has been established recently in 2003. Therefore, it requires some time to launch their educational programmes. Moreover, according to recommendation of University Grants Commission, each State would have one Open University in tenth five year plan period.

Below is a short description of different open universities in India.

01. Indira Gandhi National Open University (IGNOU) : It was established in 1985 at New Delhi. Though its jurisdiction is whole of India, yet it has study centres in many countries. The medium of instruction is mainly Hindi and English. The details of information is given in the enclosed chart. The programmes on offer are as stated below :

1. Master of Arts in Distance Education (M.A.D.E)
2. Master of Library & Information Sciences (M.Lib & I.Sc.)
3. Master of Computer Appliances (M.C.A.)
4. Master of Business Administration (M.B.A.)
5. Bachelor of Science in Nursing (B.Sc. Nursing)
6. Bachelor in Technology in Construction Management (B.Tech)
7. Bachelor in Technology in Water Resources Engineering (B.Tech)
8. Bachelor of Library & Information Sciences (B.Lib & I.Sc.)
9. Bachelor of Science (B.Sc.)
10. Bachelor's Preparatory Programme
11. Bachelor of Arts (B.A.)
12. Bachelor of Commerce (B.Com)
13. Bachelor in Computer Applications (B.C.A.)
14. Bachelor in Tourism Studies (B.T.S.)
15. Bachelor of Education (B.Ed)
16. Post Graduate Diploma in Human Resource Management (P.G.D.H.R.M.)
17. Post Graduate Diploma in Financial Management (P.G.D.F.M.)
18. Post Graduate Diploma in Operations Management (P.G.D.O.M.)
19. Post Graduate Diploma in Marketing Management (P.G.D.M.M.)
20. Post Graduate Diploma in Management (P.G.D.M.)
21. Post Graduate Diploma in Journalism and Mass Communication (PGDJMC)
22. Post Graduate Diploma in Distance Education (P.G.D.D.E.)
23. Post Graduate Diploma in Higher Education (P.G.D.H.E.)
24. Post Graduate Diploma in Maternal & Child Health (P.G.D.M.C.H.)
25. Post Graduate Diploma in Rural Development (P.G.D.R.D.)
26. Post Graduate Diploma in Translation (P.G.D.T.)
27. Post Graduate Certificate in Radio Writing (P.G.C.R.W.)
28. Advanced Diploma in Construction Management (A.D.C.M.)
29. Advanced Diploma in Water Resource Engineering (A.D.W.R.E.)
30. Diploma in Management (D.M.)
31. Diploma in Computers in Office Management (D.C.O.M.)
32. Diploma in Creative Writing in English (D.C.W.E.)
33. Diploma in Creative Writing in Hindi (D.C.W.H.)
34. Diploma in Nutrition and Health Education (D.N.H.E.)
35. Diploma in Early Childhood Care and Education (D.E.C.C.E.)
36. Advanced Diploma in Tourism Studies (A.D.T.S.)
37. Diploma in Tourism Studies (D.T.S)
38. Certificate in Computing (C.C.)
39. Certificate Programme in Tourism Studies (C.P.T.S.)
40. Certificate in Food & Nutrition (C.F.N.)

41. Certificate in Guidance (C.G.)
42. Certificate in Nutrition and Child Care (C.N.C.C.)
43. Certificate in Teaching of English (C.T.E.)
44. Certificate Programme in Environmental Studies (C.P.E.S.)
45. Certificate Programme in Participatory Forest Management (C.P.P.F.M.)
46. Certificate Programme in Disaster Management (C.P.D.M.)
47. Certificate in Network Oriented Office Computing (C.N.O.O.C.)
48. Certificate in Website Design & Management (C.W.D.M.)

02. Dr. B. R. Ambedkar Open University (BRAOU) : This Open University has a credit of being first open university of India. It was established in 1982 at Hyderabad, Andhra Pradesh. Its jurisdiction is whole Andhra Pradesh and is offering instructions mainly in Telugu and English languages. The programmes on offer are as stated below :

1. Ph.D in Developmental Studies.
2. M. Phil. In Development at Studies (M.A.)
3. Master of Arts in History. (M.A.)
4. Master of Arts in Economics. (M.A.)
5. Master of Arts in Public Administration. (M.A.)
6. Master of Arts in Political Science. (M.A.)
7. Master of Science Mathematics. (M.Sc.)
8. Master of Business Administration. (M.B.A.)
9. Master in Library Science. (M.Lib Sc.)
10. Bachelor of Arts. (B.A.)
11. Bachelor of Commerce. (B.Com)
12. Bachelor of Science. (B.Sc.)
13. Bachelor of Library & Information Science. (B.Lib & I.Sc.)
14. Bachelor of Public Relations. (B.A.)
15. Post Graduate Diploma in Environmental Studies.(P.G.D.E.S.)
16. Post Graduate Diploma in Business Finance. (P.G..D.B.F)
17. Post Graduate Diploma in Marketing Management. (P.D.D.M.M.)
18. Diploma in Writing for Mass Media. (D.W.M.M.)
19. Certificate Programme in Food & Nutrition. (C.F.N.)
20. Certificate Programme in Mushroom Cultivation. (C.M.C.)
21. Certificate in Computing.(C.M.C.)

03. Kota Open University (KOU) : The Kota Open University as a state open university of Rajasthan was established in 1987 at Kota (Rajasthan). The Jurisdiction of this university is whole state of Rajasthan. The medium of instruction is mainly Hindi and English. The programmes on offer are as stated below :

1. Ph. D.
2. Master of Arts. (M.A.)
3. Master of Business Administration. (M.B.A.)
4. Master of Education. (M.Ed.)
5. Bachelor of Arts. (B.A.)

6. Bachelor of Commerce. (B.Com)
7. Bachelor's Degree in Journalism and Mass Communication. (B.J.M.C.)
8. B. Ed. (In-service Teachers).
9. Post Graduate Diploma in Human Resource Management. (P.G.D.H.R.M.)
10. Post Graduate Diploma in Financial Management. (P.G.D.F.M.)
11. Post Graduate Diploma in Marketing Management. (P.G.D.M.M.)
12. Post Graduate Diploma in Operations Management. (P.G.D.O.M.)
13. Post Graduate Diploma in Labour Law, Industrial Relations (P.G.D.L.I.R.)
14. Diploma in Management. (D.M.)
15. Diploma in Library & Information Science. (D.Lib & I.Sc.)
16. Diploma in Tourism and Hotel Management. (D.T.H.M.)
17. Diploma in Nutrition and Health Education. (D.N.H.E.)
18. Diploma in Computers in Office Management. (D.C.O.M.)
19. Certificate course in Computer Programme. (C.C.P.)
20. Certificate in Food and Nutrition. (C.F.N.)
21. Preparatory Course for BA and B.Com.

04. Nalanda Open University (NOU) : The Nalanda Open University is a state Open University established by the Government of Bihar in 1987 at Patna with its jurisdiction in the state of Bihar. The medium of instruction is Hindi. The details of information are given in the enclosed chart. The programmes on offer are as stated below:

1. Master of Arts in Political Science (M.A.)
2. Master of Arts in Psychology. (M.A.)
3. Master of Education. (M.Ed.)
4. Bachelor in Library & Information Science. (B.Lib & I.Sc.)
5. Post Graduate Diploma in Journalism & Mass Communication. (P.G.D.J.M.C.)
6. Post Graduate Diploma in Marketing Management.(P.G.D.M.M.)
7. Post Graduate Diploma in Financial Management. (P.G.D.F.M.)
8. Certificate in Computing. (C.C.)
9. Certificate in Food & Nutrition. (C.F.N.)

05. Yashwantrao Chavan Maharashtra Open University (YCMOU) : This University was established in 1989 at Nasik, Maharashtra by the Govt of Maharashtra with its jurisdiction in Maharashtra state. The medium of instruction is Marathi and English. The details of information are given in the enclosed chart. The programmes on offer are as stated below:

1. Doctor of Philosophy in Agricultural Communication (Ph.D.)
2. Doctor of Philosophy in Agricultural Extension (Ph.D.)
3. Doctor of Philosophy in Agricultural Development (Ph.D.)
4. Doctor of Philosophy in Communication and Distance Education (Ph.D.)
5. Master of Philosophy (M. Phil.)
6. Master of Science in Agricultural Communication (M.Sc.)
7. Master of Science in Agricultural Extension (M.Sc.)
8. Master of Science in Agricultural Development (M.Sc.)
9. Master of Arts (M.A.)

10. Master of Commerce (M.Com.)
11. Master of Science (M.Sc.)
12. Master of Business Administration (M.B.A.)
13. Master of Education (M.A.)
14. Master of Library and Information Sciences (M.lib & I.sc.)
15. Bachelor of Science in Agriculture (B.Sc. Agri.)
16. Bachelor of Science in Horticulture (B.Sc. Horti)
17. Bachelor of Education.(B.Ed.)
18. Bachelor in Library Science. (B.Lib & I.Sc.)
19. Bachelor in Commerce (B.Com.)
20. Bachelor in Arts (B.A.)
21. Diploma in Fruit Production.
22. Diploma in Vegetable Production.
23. Diploma in Floriculture & Landscape Gardening.
24. Diploma in Agri-business Management.
25. Diploma in Computerized Business Computing.
26. Diploma in Office Automation.
27. Diploma in Computerized Financial Accounting.
28. Diploma in Business Computing.
28. Diploma in Advance Software technology.
30. Diploma in Computer Operations.
31. Diploma in Computers in Office Services.
32. Diploma in Software Technology for Exports.
33. Diploma in School Management.
34. Diploma in Computer Technology.
35. Diploma in Computer Hardware Maintenance & Network Technology.
36. Post Graduate Diploma in Management.(P.G.D.I.M.)
37. Diploma in Management (D.I.M.)
38. Diploma in Journalism.
39. Diploma in Communication Engineering.
40. Diploma in Instrumentation Engineering.
41. Diploma in Industrial Electronics.
42. Certificate in Gardening
43. Certificate in Programming in C.
44. Certificate in Programming in FoxPro.
45. Certificate in Word Processing (Word).
46. Certificate in PC Data bases (Access).
47. Certificate in spreadsheets (Excel).
48. Certificate in PC Data bases Programming.
49. Certificate in DTP.
50. Certificate in CAD.
51. Certificate in Computerized Financial Accounting.
52. Certificate in Computer Basics.
53. Certificate in Word star.
54. Certificate in Spreadsheets 1 Spread Sheets.
55. Certificate in PC Data Bases 1 PC Data Bases.

56. Certificate in Office Computing.
57. Certificate Programme in Journalism.
58. Certificate Programme in Gardener's Training.
59. Certificate Prog. In Engineering Vocation: Mason.
60. Certificate Prog. In Engineering Vocation: Plumber.
61. Certificate Prog. In Engineering Vocation: Fitter (General)
62. Certificate Prog. In Engineering Vocation: Two Wheeler Mechanics.
63. Certificate Prog. In Engineering Vocation: Domestic Wireman.
64. Certificate Prog. In Engineering Vocation: Lathe Operator.
65. In Service Teacher's Training Programme.
66. Certificate Prog. In Engineering Vocation: Radio & Tape-recorder.
67. Certificate Prog. In Industrial Painting Technician.
68. Certificate Prog. In Preparatory for entry to degree.
69. Certificate Prog. In Web Development.
70. Certificate Prog. In Four Wheeler Mechanic.

06. Madhya Pradesh Bhoj Open University (MPBOU) : This University is a state Open University established by the Govt. of Madhya Pradesh in 1991 at Bhopal with its jurisdiction in the state of Madhya Pradesh. The medium of Instruction is Hindi. The details of information are given in the enclosed chart.

The programmes on offer are as stated below:

1. Master of Computer Application (M.C.A.)
2. Master of Business Administration (M.B.A.)
3. Bachelor of Arts (B.A.)
4. Bachelor of Science (B.Sc.)
5. Bachelor of Science (Nursing) (B.Sc.N.)
6. Bachelor of Commerce (B.Com.)
7. Bachelor of Computer Application (B.C.A.)
8. Bachelor of Business Administration (B.B.A.)
9. B.Sc. (Hons) Mathematics National Programme (B.Sc. (Hons))
10. Post Graduate Diploma in Computer Application (P.G.D.C.A.)
11. Post Graduate Diploma in Management (P.G.D.M.)
12. Post Graduate Diploma in Human Resource Management (P.G.D.H.R.M.)
13. Post Graduate Diploma in Financial Management (P.G.D.F.M.)
14. Post Graduate Diploma in Operations Management (P.G.D.O.M.)
15. Post Graduate Diploma in Marketing Management (P.G.D.B.A.)
16. Post Graduate Diploma in Business Administration (P.G.D.B.A.)
17. Advanced Post Graduate Diploma in Computer Application (A.P.G.D.C.A.)
18. Diploma in Business Administration (D.B.A.)
19. Diploma in Management (D.M.)
20. Diploma in Computer Applications (D.C.A.)
21. Diploma in Communicative English (D.C.E.)
22. Advanced Diploma in Computer Application (A.D.C.A.)
23. Certificate in Computer Operations (C.C.O.)
24. Certificate in Computer Applications (C.C.A.)
25. Certificate in Computing (C.C.)

26. Certificate in Communicative English (C.C.E.)
27. First Certificate in Communicative English.
28. Advanced Certificate in Communicative English (A.C.C.E.)
29. Knowledge and Skill Upgradation of Rural Doctors and Para medicals

07. Dr. Babasaheb Ambedkar Open University (BAOU) : This University was established in 1994 at Ahmedabad, Gujarat by the Govt. of Gujarat with its jurisdiction in Gujarat state. The medium of instruction is Gujarati. The details of information are given in the enclosed chart. The programmes on offer are as stated below :

1. Bachelor's Preparatory Programme.
2. Bachelor of Arts. (B.A.)
3. Bachelor of Commerce. (B.Com)
4. Certificate in Food & Nutrition. (C.F.N.)
5. Certificate in Computing. (C.C.)
6. Certificate in Tourism Marketing. (C.T.M.)
7. Certificate in Tourism Management. (C.T.M.)
8. Certificate in Child Care & Development. (C.C.C.D.)
9. Certificate in PC Software. (C.P.C.S.)

08. Karnataka State Open University (KSOU) : This open university was established in 1996 by the Govt. of Karnataka at Mysore with its jurisdiction in the state of Karnataka. The medium of instruction is Kannada. The details of information are given in the enclosed chart. The programmes on offer are as stated below :

1. Ph.D.
2. M. Phil
3. Master of Business Administration (M.B.A.)
4. Master of Education (M.Ed.)
5. Master of Arts in English (M.A.)
6. Master of Arts in Kannada (M.A.)
7. Master of Arts in Hindi (M.A.)
8. Master of Arts in Urdu (M.A.)
9. Master of Arts in Sanskrit (M.A.)
10. Master of Arts in History (M.A.)
11. Master of Arts in Political Science (M.A.)
12. Master of Arts in Economics (M.A.)
13. Master of Arts in Sociology (M.A.)
14. Master of Commerce (M.Com)
15. Bachelor of Arts (B.A.)
16. Bachelor of Commerce (B.Com)
17. Bachelor of Education (B.Ed.)
18. Post Graduate Diploma in English (P.G.D.E.)
19. Post Graduate Diploma in Marketing Management (P.G.D.M.M.)
20. Post Graduate Diploma in Human Resource Management (P.G.D.H.R.M.)

21. Diploma in Kannada (D.K.)
22. Diploma in Journalism (D.J.)
23. Certificate Course in Kannada (C.C.K.)

09. Netaji Subhash Open University (NSOU) : This Open University was established in 1996 by the Government of West Bengal at Calcutta with its jurisdiction in the State of West Bengal. The medium of instruction is Bengali. The details of information are given in the enclosed chart. The programmes on offer are as stated below :

1. Bachelor of Arts (B.A.)
2. Bachelor of Commerce (B.Com)
3. Bachelor of Science (B.Sc.)

10. U.P. Rajarshri Tandon Open University (UPRTOU) : This open university was established in 1999 by the Government of Uttar Pradesh at Allahabad with its jurisdiction in the state of Uttar Pradesh. The medium of instruction is Hindi. The details of information are given in the enclosed chart. The programmes on offer are as stated below :

1. Bachelor of Arts (B.A.)
2. Bachelor of Commerce (B.Com)
3. Bachelor of Tourism Studies (B.T.S.)
4. Bachelor of Library & Information Science (B.Lib. & I.Sc.)
5. Post Graduate Diploma in Journalism and Mass Communication (P.G.D.J.M.C.)
6. Diploma in Tourism Studies (D.T.S.)
7. Diploma in Creative writing in English (D.C.W.E.)
8. Diploma in Creative Writing in Hindi (D.C.W.H.)
9. Diploma in Health Education and Nutrition (D.H.E.N.)
10. Diploma in Financial Management (D.F.M.)
11. Diploma in computers in Office Management (D.C.O.M.)
12. Diploma in Accountancy through Computers (D.A.C.)
13. Diploma in Desk Top Publishing (D.D.T.P.)
14. Certificate Programme in Tourism Studies (C.P.T.S.)
15. Certificate in Nutrition & Food (C.N.F.)
16. Certificate in Child Care & Nutrition (C..C.C.N.)
17. General Certificate Course in Computers (G.C.C.C.)
18. Certificate Course in Desk Top Publishing (C.D.T.P.)

14.2.3 Scenario of Distance Education in Neighboring Countries

At present three countries around India have successfully established the system of distance education. These are Pakistan, Bangladesh, Sri Lanka. However other countries like Bhutan, Nepal, Maldives have no significant development in this field. Below is a short description of developments in Pakistan, Bangladesh and Sri Lanka.

Details of Open Universities in India

(Summary Data as on January 2002)

Sr. No.	Details of Information	University												TOTAL
		IGNOU New Delhi	BRAOU Hyderabad	KOU Kota	NOU Patana	YCMOU Nashik	MPBOU Bhopal	BAOU Ahmednagar	KSOU Mysore	NSOU Kolkata	UPRTOU Allahabad	TNOU Chennai *	COU Raipur *	
01.	Year of establishment	1985	1982	1987	1987	1989	1991	1994	1996	1997	1998	2003	2003	
02.	Educational programmes on offer	60	23	22	08	60	30	11	29	03	41	-	-	288
03.	Courses on offer	640	307	195	09	236	49	96	244	18	126	-	-	1920
04.	Students Registered in the year	287366	106748	8980	1221	113500	55360	8575	32658	2798	1089	-	-	618295
05.	Total Students on Rolls	646651	450000	13000	1644	486651	108549	33892	40690	2798	1089	-	-	1784964
06.	Regional Centres	44	21	6	-	10	9	2	4	-	-	-	-	96
07.	Study Centres / Work centres	624	137	40	5	1451	667	61	52	36	38	-	-	3111
08.	Academic Counsellors	20364	4837	541	28	4521	3200	776	2812	733	214	-	-	38026
09.	Students awarded Diploma & Degrees	53298	3030	-	404	44554	9343	1403	5065	-	-	-	-	117097
10.	Audio Programmes (Cumulative)	1100	1759	7	-	298	5	10	285	4	-	-	-	3468
11.	Video Programmes (Cumulative)	1050	298	1	-	189	18	-	132	-	2	-	-	1690
12.	Staff Strength (Total)	1389	473	324	25	263	69	85	321	51	2	-	-	3027
	i. Academic / Professional	295	98	25	1	60	36	39	66	10	1	-	-	631
	ii. Administrative	856	340	294	23	173	} 33 }	} 46 }	} 255 }	} 41 }	} 26 }			} 2396 }
	iii. Technical / Production		35	5	1	30								
	iv. Others	238	-	-	-	-								

* TOU & COU data not available

Bangladesh

The population of Bangladesh has crossed the 110 million and the country is thus one of the most densely populated areas of the world. One of the acute problems Bangladesh faces is that of the shortage of well-qualified and adequately trained workforce. Being convinced of the relevance of distance education to the country's educational needs, the Government of Bangladesh established the **Bangladesh Institute of Distance Education (BIDE)** under the Ministry of Education to tackle this problem. Some of the important programmes launched by the BIDE are:

- (i) Bachelor of education course for school teachers,
- (ii) Regular broadcasts and videos for school teachers, and
- (iii) Support to primary teacher's training institutes and the national academy, and primary education for pre-service and in-service training of primary school teachers.

The institute was intended to serve as a new nucleus for an open university. Recently, the Government of Bangladesh has established the **Bangladesh Open University (BOU)** at Dhakka, to which BIDE was merged. BOU provides not only higher education but also cover the educational and training needs for human resource development. It focus on non-formal education through short courses in areas such as agricultural extension, community health and nursing. It also expects to make a contribution to informal education through the provision of courses and programmes of general value in areas such as environmental protection, health, hygiene, sanitation, family planning, women in development and poverty alleviation.

Pakistan

Allama Iqbal Open University (AIOU) at Islamabad, was established in 1974, under the Open University Act XXXX. It provides continuing and higher education courses to students throughout the country. Its academic programmes cover four major areas: Functional Education; General Education; Teacher Education and, Research & Development. It offers a wide range of over 200 courses from the 'literacy' level to the post-graduate level. The Integrated Functional Education

Programme (IFEP) of the university has achieved a significant breakthrough in teaching, reading, writing basic arithmetic and in providing functional education to people in the villages.

The objectives of this open university include taking education to the grassroot level, with a focus on women. The university operates through 30 Regional Centres and 425 Study Centres, besides the headquarters. The AIOU is claimed to be the only open institution in the region which has a complete structure of distance education; starting from literacy programmes to higher education and research programmes. There were 86,529 students enrolled during 1992.

Sri Lanka

Apart from the need for expansion of educational facilities for those who were unable to go to the conventional universities, Sri Lanka faced a major problem of training a large number of teachers. To meet this demand the Government set up three special institutions during the seventies – External Services Agency (ESA) to take over the extension programmes of the universities, The Institute of Workers' Education to extend opportunities for university education beyond the normal undergraduate category and the **Sri Lanka Institute of Distance Education (SLIDE)** to take over the Extension Services Programmes of the Ceylon Technical College.

The Open University of Sri Lanka (OUSL) was established in 1980 through the amalgamation of the External Services Agency (ESA) and the Sri Lanka Institute of Distance Education (SLIDE). It has the same legal and academic status as the other universities in Sri Lanka. It prepares its own courses and offers its own degrees, diplomas and certificates. The university's main campus is located on a 40 acre site at Nawala, Nuneguda, about 3 km south east from the centre of Colombo. The total number of students enrolled with the Open University of Sri Lanka has reached 19,622 in 1992, with an annual enrolment of 1,800. There are 64 full-time and 516 part-time staff engaged to prepare, teach and support over 200 courses in the 20 programmes provided by the university. The Sri Lanka Government has collaborations with Swedish International Development Agency (SIDA) for their distance education programmes.

14.2.4 Issues before Distance Education in India

The system of Distance Education in India has many challenges because of many diversities. The higher education facility is being enjoyed by 25% of 33% people belonging to upper class of society. Few from middle class and very few from poor class people enjoy the fruits of Higher Education. Thus, a very large section of the society is still deprived of Higher education in India. This section may be accommodated by the system of Distance Education for a need based mass education at Higher level. Another situation is also very grave. The technological challenges have developed many types of continuing educational needs which may be met by distance education. In spite of many efforts by the government at Central, State and local levels we have failed to eradicate illiteracy from India. 1991 census indicates 64% literacy level. No doubt, the percentage of literacy in India is increasing, but the number of illiterates in absolute number are also increasing at a very high rate. It is because of population explosion at a high rate in India.

Under the circumstances, the system of distance education has to meet all these challenges at a faster rate. But, there are two types of issues before the system of Distance Education in India. Some issues are macro issues while others are micro issues.

(1) Macro issues

- (a) Too much dependence of dual mode system in conventional universities.
- (b) No proper allocation of funds for developmental activities.
- (c) Need for providing openness to the learner for different activities.
- (d) Staff Development for both part time as well as full time workers.
- (e) Lack of networking with open universities for various activities.

(2) Micro issues

- (a) No staff of its own. Those found surplus or with complaints, are transferred to distance education in conventional universities.
- (b) No incentives to the teachers working with Distance Education System.
- (c) Learners are not given any care between registration and examination.

- (d) The learning material for all the learners is same.
- (e) There is no guarantee for a teacher to continue for long with the centre for distance education.

The above issues need to be address by the universities intended to provide a quality education through distance mode of education. The distance learner has no freedom to learn and appear for exam at his own convenience. He has to follow the stereo typed time table framed for conventional learners by the university. The distance learner can not follow the same because of his other assignments. The budgets of the universities indicate that very poor allocation of funds is made available for distance education, while it gives maximum revenue to the university. The proper funds allocation would increase the staff in quality and quantity. The concept of openness to distance learner would remain a dream, if these centers are not separated from the conventional system. These should be affiliated with state Open University or National Open University (IGNOU) in case of state having no open university of its own. The National Open University will, supply its learning material, train the staff from time to time on various issues and finally conduct the examination of the learners. These Centres be under the control of open universities for all of its requirements, dealings and affiliation etc.

The complete divorce with the conventional university system and a legal marriage with Open University system would solve its all problems. The Open University academics and non-academics may be transferred and posted to these Centres. An exchange of staff would develop a strong networking between the Open University and these Centres. There should be a provision for motivation and incentives to staff joining the center for Distance Education. It will also motivate them for joining the distance education system. The training of tutors or counsellors is organized for orienting them about their role. It will encourage the students and counsellors for coming closer to each other and make the teaching learning process more live and meaningful.

Thus, we see that a separation from conventional system and association with Open University system may be a solution to various issues with dual mode of distance education system in India.

14.2.5 Future of Distance Education in India

It is well known that India is a developing country having diversities of different kinds. Persons could not get higher education in large number because; the medium of instruction has been English. They need education in their own language being mother tongue. Distance Education can do so by establishing State Open Universities offering education in regional languages, our experience shows that open universities offering education in mother tongue. It is seen that non-Hindi speaking State Open Universities, are flourishing well while in northern belt the progress is very slow because IGNOU is also offering same programmes in Hindi.

Therefore, it seems that the future of Distance Education in India is very bright and prosperous. Our experience shows that inspite of much effort by the governments and NGOs, the problem of illiteracy could not be solved. The distance education system may take up this problem and spread literacy by developing Multimedia of desired nature. A wide variety of continuing education needs can not be met by the organizations itself. The system of distance education by using Multimedia can meet these training needs. The work experience can be organized at the work Centres for skill development. Thus, the open universities, in collaboration with various organizations, may meet continuing educational needs of workers. Thus, various activities related to staff development and Human Resource Development (HRD) may be met successfully by the system of Distance Education.

The higher and technical education of every type may be well organized by the system of distance education. The production of learning material in bulk and also students for different programmes in bulk, are an evidence of large potential of the system in managing various types of education in India.

This system has a big challenge of imparting quality education by bringing Quality control and Total Quality Management (TQM). For this purpose, it is essential to organize orientation, workshops and seminars of the academic as well as non-academic staff members.

Therefore, we see that Distance Education system has high potential for launching any type of need-based programme by strengthening different media available in the society. Assessment of training needs and accordingly launching a programme flexible

in nature is essential. Otherwise, without need assessment, the programme may face a problem of heavy drop out and finally a closure of the programme. A wide publicity of available programmes and Assessment of training and learning needs of people for developing new programmes is the need of the hour. It will increase the student number and finally very little drop out may be seen in every programme.

A large number of persons known as Scheduled Caste and Tribes are part and parcel of the national system in India. Providing programmes for making them literate, skilled to do some job in and around their home may be a priority before the nation.

There are other challenges before the system of Distance Education in India.

- (1) Inculcating nationalism and secularism among its citizens.
- (2) Feeling of unity in diversity is also very essential.
- (3) Population control be observed and implemented by the citizens.
- (4) Protection of environment and pollution control be communicated to every citizen.

Thus, we see that the future of distance education in India is very bright and very soon, every state will have one open university imparting education of different types with instruction in mother tongue.

14.3 Glossary

Illiteracy : The operational definition of this term indicates towards a person who cannot read, write and make calculations (arithmetic). They put their left hand thumb impression in lieu of their signatures.

Diversity : If there are differences in various activities, thinking, languages, perceptions etc., we call it as Diversity.

Micro Issues : These are small issues, which can be solved by the concerned university. e.g., surplus or unwanted staff members are posted with center for distance education.

Macro Issues : These are big issues, which are related to policy matters and affect other organizations. e.g. affiliation of Centres of Distance Education with Open Universities.

Pollution Control : This indicates towards control of excess or unwanted elements in Air, Water, Land, etc.

Dropout in Distance Education : When a learner is not responding to universities letters, activities and examination since long, he may be labeled as dropout.

National Language : A language to be spoken by a majority of citizens is recognized by the parliament of the country as National language. In India Hindi has been recognized as National language of the country.

Regional Language : It is the language having its own dialect and script being in use in any region or small part of the country. e.g., Telugu in Andhra Pradesh, Kannada in Karnataka etc. are regional languages.

14.4 Summary

The distance education scenario in India and in neighbouring countries like Bangladesh, Sri Lanka and Pakistan are almost similar. Persons being deprived off getting higher education join this mode and attain the degrees. The upgradation of skills as part of continuing education for different work places as well as removing illiteracy from the country are the priorities before the system of Distance education. In India, we have two modes of distance education as i. Dual mode and ii. Single mode. The first one is an attachment to the conventional universities offering distance education programmes while the second mode is open university system offering its own programmes by developing its own learning material in bulk and its supply to the students. There are 12 open universities in India while dual mode is operated by about 68 conventional universities including agricultural universities. There are some common programmes listed in this unit at degree and post graduate levels. The state open universities are offering programmes through Regional Language of the region while the National Open University (IGNOU) offering programme in Hindi and English.

In Bangladesh, the Institute of Distance Education served as a nucleus for Bangladesh Open University (BOU). This university covers not only higher education but also cover other educational and training needs for human resource development.

The Open University of Pakistan named as Allama Iqbal Open University covers various programmes from illiteracy to higher education and research programmes. The open university of Sri Lanka was established in 1980 through amalgamation of the External Services Agency (ESA) and the Sri Lanka Institute of Distance Education (SLIDE). It has a collaboration with Swedish International Development Agency.

There are micro and macro issues before Distance Education system in India. The macro issues are much dependence upon conventional system, no provision of training to staff, no service guarantee for academics serving in distance education system of dual mode. The micro issues deal with lack of adequate and proper staff, no incentives to the teachers, no proper care of students during study, no learning material is prepared separately for distance learners, drop out rate is normally high and differs from programme to programme. The only solution to this problem is a strong networking of dual system with the single mode of distance education for strengthening various activities.

The future of distance education is very bright. It has to take up certain national issues apart from educating the people. Regional language must be made as medium for educating local people in every state.

14.5 Exercises for Practice

Write answers of following questions in about 200 words each.

1. Write note on Genesis of distance education system in India.
2. Explain similarities and dissimilarities among the open universities in India with reference to their educational programmes.
3. What are the major macro and micro issues in Indian distance education system? Give your suggestions to address them effectively.
4. Write note on future of open and distance education in India with reference to farmers education.

Unit 15 : Growth of Mega Open Universities

Index

15.1 Introduction

15.2 Content

15.2.1 Open and Distance Education as Social Practice

15.2.2 Development of Mega Open Universities

15.2.3 Status of Distance Education Across the World

15.2.4 Networking with Open Universities

15.2.5 Monitoring of Distance Education

15.3 Glossary

15.4 Summary

15.5 Exercises

15.1 Introduction

The system of Distance Education has accepted a huge challenge of providing openness to the learners at each and every stage. The application of Andragogy in place of Pedagogy was accepted everywhere because the learners are adults being mature to take decision about themselves. This target of openness could be achieved by managing technology and various teaching learning devices useful for the purpose. The system of Distance Education came in the form of open universities being single mode distance education institutions. These open universities, like factories, had a provision to develop and produce their own learning material, distribute it on large scale through study centres to the students. This potential made the open universities as industries in the field of education.

Looking to the success of these open universities, the Governments of different countries have sanctioned to set up similar organization for meeting variety of educational needs of people. In China, they have national open university as well as

state open universities too. In India, the states have different languages and most of the persons do not understand any other language except their mother tongue. Therefore, the efforts are made to develop at least one open university in each state for meeting educational needs of people in local language.

After the study of this unit, you will be able to know and understand :

- Social development through open and distance education system.
- Activities taken up by some giant open universities of the world.
- Status of Distance Education across the world.
- Need for networking among open universities.
- Monitoring distance education.

15.2 Content

15.2.1 Open and Distance Education as Social Practice

The Distance education depends upon socio-linguistics and theories of communication. It is through language that teachers construct texts which indicate student learning intentions and it is through language that students reconstruct these intended meanings and give expression to them. The education fundamentally involves the production and interpretation of particular kinds of text by teachers and learners. The settings of open and distance education share some of these texts with conventional education, but they also give rise to certain other kinds of texts which make specific demands on both teachers and learners. Thus, language has an essential position in all social practice, specifically open and distance education. Communication is a fundamental concept in educational practice. General education contexts use a range of language experiences to convey meaning. These include various face-to-face experiences including lectures and tutorials as well as mediated forms such as film and written texts in various forms. Within open and distance education the potential range of textual experiences is narrowed because of the non-contiguous context. There is a significant dependence on written language, with audio and video tapes also being important teaching resources. In addition, telephone contacts through

conferencing or individual encounters are also common experiences. There is also occasional use of visual forms by way of diagrams.

In order to study the effect of language, upon educational experiences we have to take care of certain important aspects as below.

Firstly, it was argued that the most useful way of understanding education is based on a semiotic view of communication, what is called as ‘**sociolinguistic theory of learning**’. Language has a particular role in the education process because it is through language we communicate our views. That is, the most useful way to understand learning in any models by the active reconstruction of the message by the receiver rather than by the transmission of messages. The reconstruction of meaning is fundamentally linked to the context in which the language occurs and other texts on which the language draws.

Secondly, the point was made that the context out of which the text emerges is not natural. The social and cultural values of the context are encoded in the language of the text. These social values are not haphazard but systematically organized to particular patterns of knowledge and relationships. These are referred to as social institutions. Social institutions express meaning in specific ways known as discourses. Making meaning either producing or interpreting texts in a particular social situation depends on being able to operate within these discourses. Familiarity with the various discourses is not evenly distributed throughout the population and depends on the discursive history of the individual. This raises issues of access and success as well as other ideologically based concerns.

Thirdly, teaching and learning was discussed with respect to the discourses with which students and teachers need to be familiar in order to be successful participants in the social practices of open and distance education. This includes the specific consideration of propositional and ideological aspects of the field specific discourses as well as the more general academic discourses.

Finally the importance of teaching discourses in the construction of the learning experience was advocated. Two teaching and learning foci were identified: considerations of the field and considerations of the student. To ignore the cultural, social and textual considerations of the students is to put in jeopardy the likely success

of particular groups of students. It is likely that these students will arrive at quite different interpretations of the educational texts than the one intended by the producer (teacher) of the text.

This has some major short term and potentially long term consequences. Failure to gain a particular qualification may well result in exclusion from a particular sector of society, with all the social implications that exclusion brings. Students are particularly vulnerable in this regard because of the somewhat powerless position they occupy in the educational discourse.

15.2.2 Development of Mega Open Universities

During the course of our discussion on the distance education system in various countries, we have referred to the contribution of some of the open universities, some of which were categorized as mega-open universities of the world at the Seventeenth World Conference of the International Council for Distance Education (ICDE) in Birmingham, U.K. Mega Open Universities are those institutions which have a student enrolment of over 100,000. These mega open universities share between them a staggering total of over 25 million enrolled students.

We provide here some information with reference to the growth and structure of open and distance education in different countries.

1. Anadolu University, Turkey : The Academics of Economics and Commercial Sciences founded in 1958 and the Academics of Engineering and Architecture founded in 1970 were recognized and united as Anadolu University in 1982 in Turkey. The Open Education Faculty (OEF) was initially set up to offer the B.A. degree programme through the distance mode. Over the years, the faculty has developed associate degrees and certificate programmes in different fields, including teacher training, tourism and hotel management, health education, social sciences and support programmes for high school students. The open education faculty also runs degree programmes for Turkish national in Western Europe.

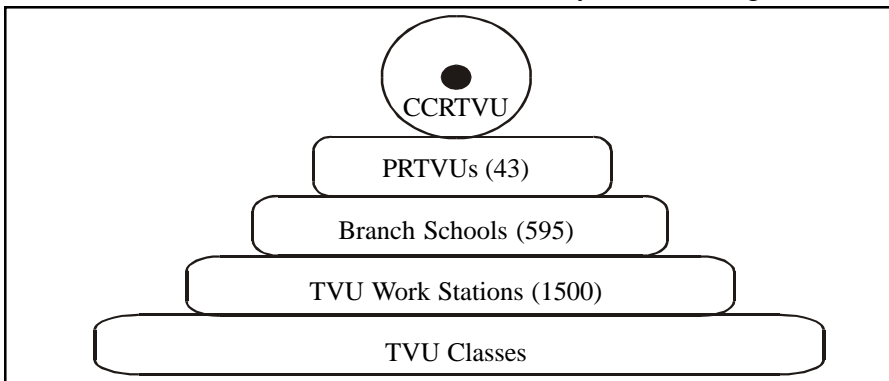
Open education faculty students are placed in various programmes through an admission examination held by the State Central Student Placement. All students taking these examinations must be high school graduates. The total number of students

enrolled in distance education programmes in economics and business administration were 4,70,072 in 1992.

2. Central National d' Enseignement a Distance (CNED), France : CNED was established in 1939 to cater to the needs of young refugees of the War. In 1991, CNED was partly decentralized from its Paris operational base as a result of the new national and regional development schemes. Its Directorate is being established near Poitiers, on the Futuroscope site, a symbol of innovation. At the CNED headquarters, a single telephone reception video transmits applications from students all over the world and allows interactive sessions to take place during the video transmissions.

CNED offers all levels of studies from first year infants school to higher education and vocational and in-service training. Besides, it offers home packages for subjects which are not taught in schools. From 83,000 students in 1950 the number swelled to 350,000 in 1995. Of the present total 26,500 are scattered in 176 different countries. Twelve countries in Central and Eastern Europe receive the CNED's programmes through the statellite interaction video transmissions of the Ecole Francophone de Droit, the French Law School which facilitates live dialogue with academics and legal specialists. CNED has about 1,800 full-time and 3,000 part-time teachers.

3. China Central Radio and Television University (CCRTVU), China : The national network of Radio and Television Universities was set up in 1979. The system of RTVUs is organized at central and regional levels and has a five tier structure. At the apex is the CCRTVU and at the provincial level, there are Provincial Radio and Television Universities (PRTVUs). A diagrammatic representation of the Chinese Central Network of Radio and Television University structure is given below:



While the CCRTVU offers courses at the degree and continuing education levels, the PRTVUs offer courses that meet local economic and educational needs. In 1992, the number of students enrolled was 1,46,000; the number of graduates was 1,21,000 and that of registered students was 3,30,400. Students are required to complete 114 credits, one credit is about 18 hours of study, for a three year full-time equivalent degree and 76 credits for a two year full-time equivalent degree. The CCRTVU follows both continuous and final assessment schemes. The former is done through written assignments and tests, attendance at regular workshops and seminars at other institutions/study centres and contact with the tutor, and the latter is done through written examination. In CCRTVU, nearly 15,300 full-time and 12,500 part-time academic staff are involved in the process of teaching and learning at a distance.

4. Indira Gandhi National Open University (IGNOU), India : Established in 1985, IGNOU started offering academic programmes in 1987. Over a span of 15 years, the university now has a wide range of programmes in various disciplines at different levels – certificate, diploma, degree and post graduate programmes. As a matter of policy, the university has relaxed entry requirements. However, they vary from one programme to the other depending on the level and size of the student clientele. Besides, nearly 400 study centers functionally governed by 25 Regional Centres, throughout India. IGNOU has 100 Work Programmes Centres to serve the students. It has nearly 50 programmes with about 610 courses. In 2000, the total number of students was above 600,000 with an estimated annual enrolment of 150,000. IGNOU has 1338 full-time and 12,800 part-time academics and teachers.

5. Korea National Open University (KNOU), Korea : As mentioned earlier, in 1994 the Korea Air and Correspondence University (KACU) was renamed as Korea National Open University (KNOU). The University offers one Bachelors' Degree programme and 475 other courses.

There are 12 Regional Study Centres and 27 Local Study Centres to serve the students. In 1995, the total student enrolment was 196,175. The estimated annual student enrolment is 70,000. KNOU has 678 full-time and 2,6449 part-time academic staff members.

6. Open University (OU), United Kingdom : Established by a Royal Charter in 1969, open university offers three types of programme – undergraduate, post graduate and continuing education. A range of free-standing self study packs are also available. The university offers more than 400 programmes in all, both courses and study packets. No educational qualifications are required for admission to undergraduate courses, but students must be at least 18 years old and resident in any European Union Country. This open university has 13 Regional Offices and 290 Student Centres. Attendance in the tutorial and counselling sessions available at the Study Centres is optional. A student newspaper, ‘Sesame’, is published regularly and circulated to current students. The Open University Students’ Association organizes study-related and social activities. More than 200,000 students study with the OU at present; 132,000 are taking undergraduate level courses and another 10,000 are enrolled at the postgraduate level. Approximately 157,000 students have graduated with BA/BSc degrees. The university employs more than 3,000 full-time staff and 7,000 part-time tutorial and counselling staff.

7. University of South Africa (UNISA), South Africa : The history of UNISA dates back to the establishment of the University of the Cape of Good Hope in 1873. It was initially an examining body and now a teaching university, with which some teaching colleges were affiliated. In 1946, the University was renamed the University of South Africa and moved to Pretoria. In 1964 the University of South Africa (UNISA) started giving distance education to off-campus students. UNISA offers educational opportunities for degrees and diplomas, ranging from undergraduate diplomas to doctorates. For admission to undergraduate diplomas, candidates must hold a senior School Leaving Certificate with at least five subjects on Higher and/or Standard Grade, or qualify for a certificate of full or conditional exemption. In 1995, UNISA had about 130,000 students with equal representation from both males and females. It has a academic staff of 3,400. There are six faculties and 59 departments form the building blocks of UNISA.

8. Universitas Terbuka (UT), Indonesia : UT was established in 1984 as the first distance teaching university in Indonesia. The Universitas Terbuka is open to everyone who possess the senior secondary school diploma. Students do not have to

take any test or face any interview to enroll for the courses. The only exception to the 'open entry' rule is registration in the Faculty of Education. At the end of each course, usually at the end of a semester, students sit for an examination. After registration with the university, those who have already earned a number of credits from other universities may claim the transfer of credits. By the end of 1995, the number of students had reached 353,000.

15.2.3 Status of Distance Education Across the World.

The analysis of the development of distance education in various regions of the world helps us to know some of the emerging trends and draw inferences regarding the future of this innovative teaching and learning system. It is clear that distance education:

- (i) has established its credibility as an academic and cost-effective alternative channel for imparting education with considerable improvement in the quality of teaching materials, support services and integration of new information communication technology,
- (ii) has the potential to extend and equalize educational opportunities and take education to the doorsteps of the neglected and poorly served segments of population – even to those who live in remote areas,
- (iii) is specially suitable for the education of adults, drop-outs from the formal system and the working people,
- (iv) can provide education to all levels and to varied clientele,
- (v) is capable of providing a wide range of varied types of courses under general education, including in-service training, refresher and enrichment courses, further education, extension education, hobby course, etc.
- (vi) is specially relevant to the ever-increasing educational needs of developing countries,
- (vii) can reduce pressure on the conventional universities colleges and schools which have only a limited intake capacity,
- (viii) has the potential to bring about innovations and improve the quality of education,

- (ix) is more learner-oriented and therefore capable of making the learner more self-reliant and confident,
- (x) is capable of allowing considerable flexibility to the learner with regard to choice of study areas, completion time, etc.
- (xi) gives a chance to those who do not have formal academic qualifications to fulfill their desire for higher education.

Distance education has been continuously evolving in response to the educational needs of society and the expectations of the learners. This, indeed is a very progressive and healthy trend which is bound to further enhance the credibility of the system and the consequent benefits accruing to the learners. It should be noted that from mere home study, independent learning, correspondence education, the distance mode of teaching and learning has developed into a multi-media teaching and learning system. The explosion in the field of information communication technology has led to the integration of new and innovative communication media with the distance education system resulting in new types of distance education institutes such as Universities of the Air, Tele-Universities and Open Universities. It has made education open to many, irrespective of age, formal entry qualification, place of residence, sex, pace of learning or completion time, etc. Distance Education system gives orientation to in-service teachers, specially in countries where there is a shortage of teachers, especially properly trained ones.

Active regional, national and international level rapport and collaboration among distance education institutes has led to significant collective thinking and sustained efforts for further improvement in the range of course offerings, teaching and learning methodologies. It should also be mentioned that in some countries where private enterprise has made a considerable contribution towards providing distance education, useful collaboration between private and public sectors has become a reality.

With growing collaboration at regional, national and international levels and strong international forums like the ICDE, AAOU and COL, distance education has developed into a highly specialized teaching and learning methodology based on the principles of adult learning. As the traditional system is too rigid to meet the educational and professional challenges of modern society, distance education by virtue of its

openness, flexibility and multi-media teaching and learning methodology promises to play a pivotal role in the future by restructuring the 'delivery system' of education and information and by making education responsive and relevant to the needs of the learner.

To achieve this, within distance education, attempts have been made to evolve an alternative kind of education or curriculum, rather than impart merely the conventional type of education through an alternative channel. The discernible developments during the past two decades or so resulting in the establishment of open universities across the world are clear pointers in that direction.

Countries with large populations, particularly the developing countries, will be able to meet the challenge of ever-increasing demands for varied kinds of education only if they take to distance education in a big way. But the success of the open universities would depend upon the spirit of innovation and enthusiasm to come out of the rigid conventional system of education. The future also demands a chain of open schools which would help us build up a truly open distance education system from a lower level upwards.

It is a healthy indication that there is growing awareness and earnestness for organizing and strengthening varied 'support services' – information dissemination, counselling, study centers, contact sessions, library facilities, mobile learning centers, prompt evaluation of the assignment-responses in the minimum time, telephone tutoring and varied media back-up. These support services would bring about yet another development, i.e., from individual learning to group learning, in distance education. It makes education not only interactive but also reactive, collaborative and creative.

Distance Education has emerged as a distinct discipline and considerable research is being carried out on various aspects of this innovative system. This bound to lead to further improvement and integration of the variety of new communication media which are now easily available. The areas, range and variety of distance education courses is ever widening. This will make such education relevant to the needs of society, and bring about reforms in curriculum development and in the evaluation of students' performance.

Below is a table, which presents a summarized status of distance education.

<i>Continent</i>	<i>Aims and Features</i>
Africa	<ul style="list-style-type: none"> ● To train the teachers and to educate the masses, countries like Nigeria, Kenya, Tanzania, Guyana, Ethiopia and Ghana offer distance education courses. ● Print and electronic media and personal contact programmes are the primary means used to impart knowledge and skills.
America	<ul style="list-style-type: none"> ● Distance education has grown considerably in the USA, Canada, Venezuela, Costa Rica, Brazil and Argentina ● Application and professionally oriented courses are being offered. ● Print and electronic media play an important role in disseminating information, knowledge and skills.
Asia	<ul style="list-style-type: none"> ● An ever-increasing demand for education and the policy to democratize education compelled countries like India, Pakistan, Thailand, Sri Lanka, The Philippines, China, South Korea, Indonesia, Malaysia, Singapore, Hong Kong and Japan to adopt the distance education system. ● The spurt of enrolment rates in distance education institutions reveals the academic feasibility and pedagogic viability of distance education. ● Courses are based mainly on print materials, which are supplemented by electronic media and contact programmes.
Australia	<ul style="list-style-type: none"> ● Australia, New Zealand, Papua New Guinea and the Pacific Islands are the countries, which promote distance education in a big way. ● The University courses of Australia are based on an integrated model of dual mode education.

15.2.4 Networking with Open Universities

Every Open University has an objective of meeting regional needs related to education, training, and staff development as well as Human Resource Development.

Accordingly, they gear up by using local language for launching the programmes. But, apart from this there are some issues common among various open universities, which can not be met, by one university alone due to certain constraints. These issues may be :

- (1) Quality Control and Total Quality Management (TQM)
- (2) Providing openness to learners at various stages
- (3) Staff development for Distance Education
- (4) Programme Evaluation
- (5) Research in Distance Education
- (6) Production of Media for common courses

These issues require more money and skilled manpower as well as time also. But, we can cover them if a strong networking is developed among various open universities. The idea of networking covers joint efforts by different open universities for completing a task. It may be on sharing business by allotting parts or work components to different open universities or selecting some resource persons from different open universities capable to do the work and take up the project jointly. In this respect, some apex monitoring agency like Commonwealth Of Learning (COL) at international level or Distance Education Council (DEC) at national level may provide leadership and monitor the work progress.

The issue of Quality Control requires training of regular and part time staff members to achieve certain work norms and think over for further improvement as Total Quality Management (TQM). A networking with Indian Institute of Quality Management (IIQM) and National Assesment Accreditation Council (NAAC) of open universities may help to achieve this target. Also, networking among open universities as well as with some institutes of reputation is essential. For example, Tata Institute of Social Sciences (TISS), Mumbai has produced wonderful researches in various fields by using SPSS Package (Statistical Package for Social Science) for data analysis and its interpretation. The open universities may develop a networking with this organization for using SPSS Package for Programme Evaluation work and research for distance education. Similarly, the University of Science & Technology at Calicut (Kerala) has expertise in developing web based learning material for students.

The need of hour is to manage for such training either by calling them at Open University headquarters or by sending persons to that university for training.

Openness has an old explanation of learner freedom to learn at his own rate, pace and time. Every Open University has achieved this. Another meaning of openness may be a freedom to select a learning media of his/her own choice by the learner. This freedom requires development of various media for same content and produces them in bulk for use by the learner. No open university can alone take up this task. It requires huge financial allocation expertise, to produce and finally a collective wisdom for a quality production. A strong networking among open universities may help in sharing these burdens. Also, a networking with expertise from Cinema, Doordarshan Serial makers, Computer software & hardware experts may help in achieving this target. Thus, this networking will help in providing openness to the learner for selecting a learning strategy of his/her own choice.

Staff development for distance education is very essential. Either a rigorous training to staff or an exchange of staff members among various open universities for a short period may help to learn from each other's knowledge, skills and attitude. This exchange programme among regular and part time staff will help them to understand about their role, responsibilities and a quality work.

Programme Evaluation by seeking opinion of course users (students and counsellors or tutors) will help the university for course revisions and updating the information with making it easy for learner to understand. Every person is not expert in every field. But, a co-operation among skilled academics of different open universities may manage a good quality programme and evaluation work. A collective wisdom may develop good questionnaires and opinionnaires for learner opinion on various issues, Data analysis and drawing inferences etc. Also a comparative study is essential for learner performance among various open universities for some common programmes.

15.2.5 Monitoring of Distance Education

Distance Education has been getting much academic support from the conference, seminars and workshops organized by various associations at National, International

or even at regional levels. During last 15 years much developments have taken place for establishing such apex organizations, which monitor the progress of distance education and provide expertise for improvement.

The Commonwealth of Learning (COL) established long back in 1988, is monitoring the progress of distance education in various countries. It has established its regional offices in Asia, Africa and other main regions for providing expertise and assistance to neighboring countries. It has various schemes for calling academics by providing financial support for training, visiting fellows in other open universities as for Quality Improvement and Research. **A Centre for Educational Media Communication for Asia (CEMCA)** is the branch of COL in Asia with its headquarters in New Delhi. The Commonwealth of Learning is organizing a mega conference after every four years of period known as Pan Commonwealth of Learning Conference. It gives awards to personalities and institutions for their meritorious work in the field of Distance Education.

Similarly, the Government of India has established Distance Education Council (DEC) by an act of Parliament. Its Headquarters is at New Delhi in the campus of Indira Gandhi National Open University, New Delhi. This council has monetary role as well as provides funds for various developmental activities of state open universities and Directorates of Distance Education situated in conventional universities in India. The Vice Chancellor of IGNOU is Ex-officio Chairman of this Distance Education council. It has a good collaboration with the University Grants Commission (UGC), New Delhi in framing rules and regulations for open universities academics. This council provides financial assistance for conducting researches by academics of open universities as well as centers for distance education of conventional universities. It provides funds to organizations for the training of their academics, attending conferences, organizing seminars, conferences and publication of research reports.

There are many Associations and Councils for distance education at international levels and at national levels, which provide a platform for academics to express their views on various issues and interact with others for learning from each other's views. International Council of Distance Education (ICDE) is officially affiliated to United Nations Educational Scientific and Cultural Organization (UNESCO) international

non-government relations, and co-operates closely with the United Nations (UN). About 100 countries are members of this association, which functions as the window to the world of open and distance education. Acting as a co-ordinating body, ICDE strives to promote knowledge of and improvement in open and distance education throughout the world. It has established various ‘interest groups’. One such group for example is called the ICDE Women’s International Network offering opportunities for women in open and distance education to deliberate on special issues related to women. It has its permanent headquarters at Norway.

In India, we have established, an organization known as “Indian Distance Education Association” (IDEA) in 1992 with its Headquarters at Warangal (Andhra Pradesh). It is organizing conferences at different places every year on different issues related to Distance Education. It publishes yearbooks, newsletters and have regional chapters in different open universities of India. This association has been well recognized by the Commonwealth Of Learning (COL) Canada, which provides financial support for organizing conferences.

The purpose of the Commonwealth Of Learning, as reflected in the Memorandum of Understanding (MOU) among the Commonwealth Governments, is

- To create and widen access to education, and
- To improve its quality, utilizing distance education techniques and associate information communication technologies to meet the particular requirements of member countries

Thus, COL purports to strengthen member countries’ capacities to develop the human resources required for their economic and social advancement. The functions and objectives of COL include:

- Assisting the creation and development of institutional capacity in distance education in member countries;
- Facilitating and channeling of resources to projects and programmes in distance education;
- Providing information and consultancy services on any aspect of distance education including the selection of appropriate technology;

- Undertaking and supporting evaluation and applied research in distance education;
- Assisting the acquisition and delivery of teaching materials and more generally facilitating access to them;
- Commissioning and promoting the adaptation and development of academic credit;
- Assisting in the development of local support services to students; and
- Stimulating and supporting other activities that fall within the agency's areas of interest by such means as may be approved by the Board of Governors.

15.3 Glossary

Social Practice : It indicates towards prevailing tradition, norms and belief in the society.

Socio-linguistics : It is the prevailing dialects and pronunciations made by people of the society under consideration.

Non Contiguous Context : This indicates a reference of an environment or situation in which two things or persons are not close with each other.

Socio-linguistics Theory of Learning : It indicates that a person learns more if he is taught in a language and dialect being in use by a society around him.

Responsive Education : That education is called as responsive which provides some meaningful or fruitful return from the society in terms of job or capacity to perform some work in person's own organization.

Integrated Model : It is that combination in which different media are combined in such a way that their joint effect or effort helps more learning. For example, charts with demonstration by teacher makes learning more easy and permanent.

Contact Language : That language in which the person is in contact or well versed is known as contact language. It must be used for an effective communication.

SPSS Package : This is a window-based Software, developed for statistical analysis in Social Sciences Research. It is called as Statistical Package for Social Sciences.

Monitory Role : The role, which provides an authority to guide and help the persons or organizations for correcting the process of work. It helps in keeping strict vigil on the activities to be undertaken by the persons or organizations.

Directorates of Distance Education (DDE) : In India, many universities have a dual mode of education. Apart from conventional education, they practice distance education too. A department or school or center is established for running programmes through distance education. This school or department or center is named as Directorates of Distance Education (DDE) in some universities while some universities named it Correspondence Courses Institute (CCE).

15.4 Summary

The distance education is predominantly meant for social change, which is possible on effectively, if a person is given instruction in the language of his own. As far as possible, the prevailing dialects in practice be followed while developing the learning material and during the instructional process. Therefore, ODL system has to make use of that language which is in practice among target groups.

The world scenario has witnessed many mega open universities. An open university with more than 1,00,000 students on roll for various programmes may be termed as a mega open university. Such open universities are in India, Turkey, France, China, Korea, U.K., Indonesia etc. India is a multi-lingual country having diversities in culture, climate and local educational needs. It has necessitated for giving birth to state open universities in India. It is surprising to see that many state open universities are flourishing well due to instructions in regional language. **The Yashwantrao Chavan Maharashtra Open University, Nashik in Maharashtra has also become a Mega Open University because its annual student strength is 1,10,000 at present.**

Status of Distance Education across the world indicates that innovations made in the field of technology, teaching learning have made the persons even in remote areas to receive education with no difficulty. The African region gave much priority and attention to teacher education through distance mode. Later on, they started

other programmes as per demand from the society. In American context, we see that USA, Canada, Venezuela, Costa Rica, Brazil and Argentina are offering education through distance mode. The print and electronic media is used for the purpose of instruction. In Asia, many countries including India, China, Japan, Pakistan etc. have witnessed the success of distance education. Similarly, in Australia, New Zealand, Papua New Guinea and the Pacific Islands have been offering the distance education programmes to students.

Networking among open universities and with other reputed organizations is essential for bringing Quality in work, Openness to learners, Staff development, Programme evaluation, Production of media and research in distance education etc. This collaboration would provide collective wisdom to various activities and economy too. There are many organizations at International and National level for providing guidance to Open Universities and watching the progress too. Their attitude is not fault finding but supportive in nature. The role of Commonwealth Of Learning (COL), Canada, International Council of Distance Education (ICDE), Asian Association of Open Universities (AAOU), Distance Education Council (DEC), New Delhi and Indian Distance Education Association (IDEA), Warangal Andhra Pradesh are good examples in this regard.

15.5 Exercises for Practice

Write answers of following questions in about 200 words each.

1. Justify that the open and distance education is a socio-economic practice for social development.
2. Define mega open university and give account of mega open universities around the globe with reference to diversity of academic achievements.
3. Write account of status of distance education in the world with reference to mandates and innovations.
4. Write note on role and responsibilities of UNESCO, ICDE, COL, DEC and IDEA for promoting distance education in the world.

Unit 16 : Quality Control in Distance Education

Index

16.1 Introduction

16.2 Content

16.2.1 Open University as an Industry

16.2.2 Quality Control and Total Quality Management

16.2.3 ISO-9000 for Open and Distance Learning System

16.2.4 Learner Satisfaction : A Criteria for Quality

16.2.5 Barriers to Quality Control

16.3 Glossary

16.4 Summary

16.5 Exercises for Practices

16.1 Introduction

The present age is an age of competition. If we look towards one agency for some help or support, the other comes forward in comparison or competition with the previous one. Here we get an opportunity to judge the quality of services to be offered by both agencies from different angles. Quality is not a noun but an adjective. It always compares a thing/service/institution/person with the other. In the under developed and developing countries, the poor standard of health and education and lack of other infrastructure facilities have resulted in a low quality of life. A class of people or society will be a demanding one, if we have to transform it into a knowledgeable, matured and an advanced society. This calls for education of the masses, i.e. increase in the level of knowledge by which the society becomes aware of various issues and how to resolve them. Awareness of issues, such as ecology and the environment which are threatening the world as a whole, can be done only by education which will put pressures on the negative and disturbing forces against

green revolution. Hence, education will create awareness by addressing to a very large spectrum of issues and also by general upliftment of working life of its citizens. This is a programme for bringing Quality of life by educating them about various issues of life.

After the study of this unit, you will be able to know and understand :

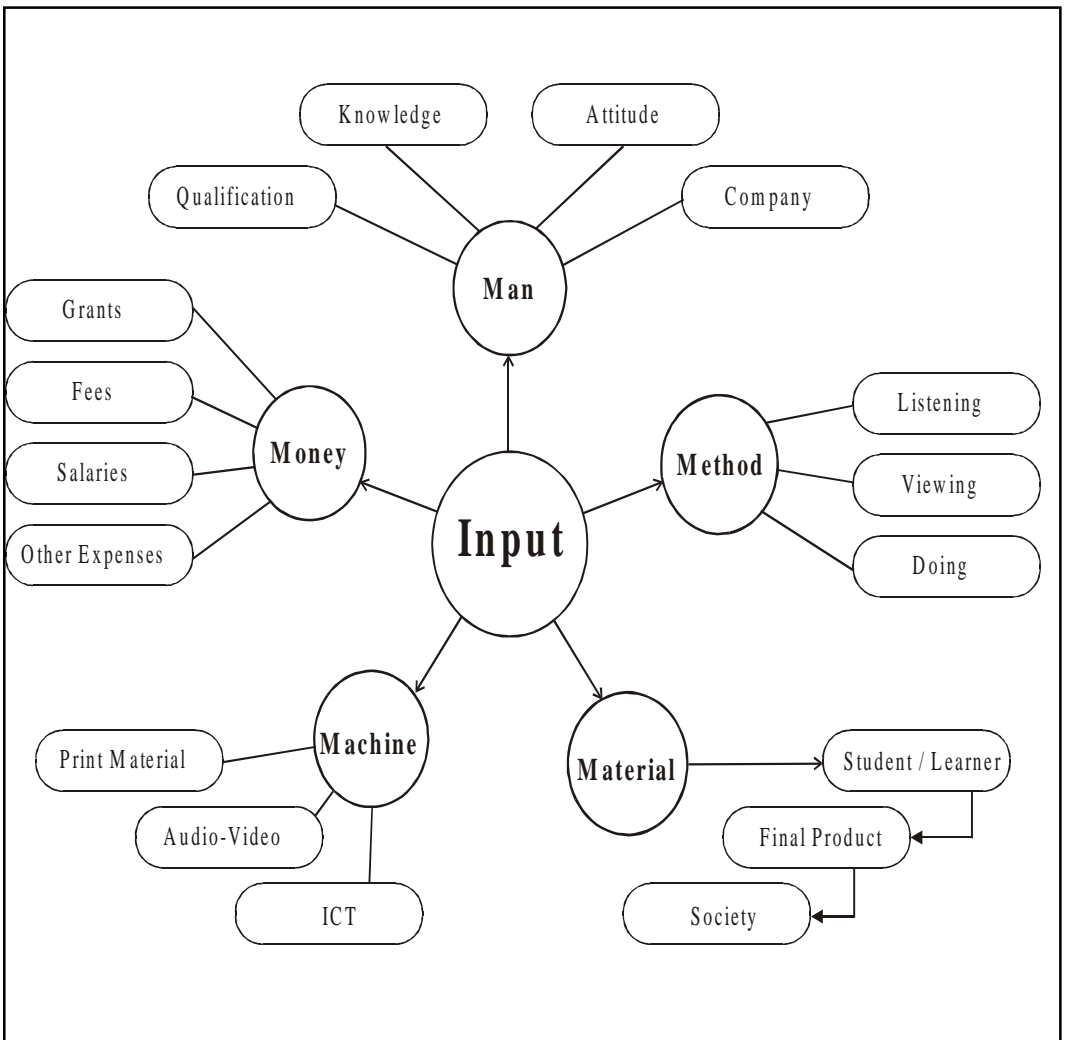
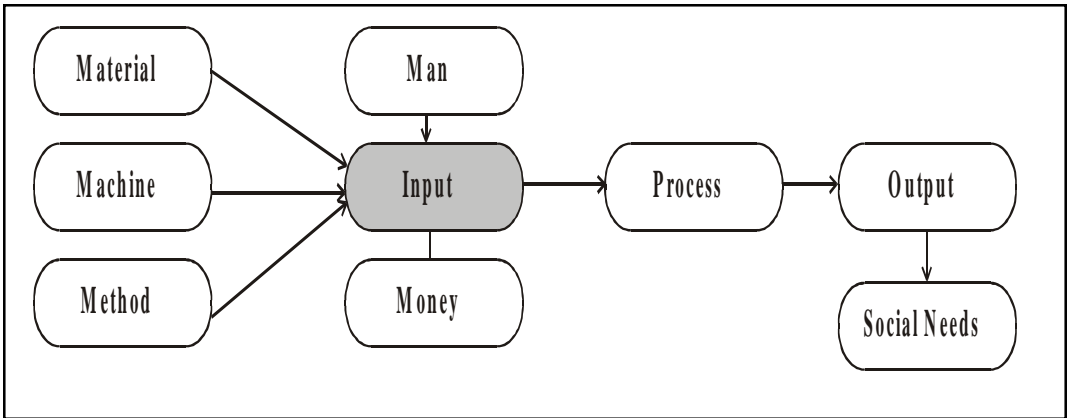
- The role of an open university as an industry.
- Quality Control and its need in an open university.
- The difference between Quality Control (QC) and Total Quality Management (TQM).
- The learner as Quality determining factor.
- Role of ISO 9000 and NAAC for Quality control.
- Various types of barriers to Quality control.

16.2 Content

16.2.1 Open University as an Industry

The term ‘Industry’ is used for a system converting raw materials into various types of products as per social requirements. These products are brought to society for sale. The publicity about merits of these products is done through various media. Certain incentives are declared from time to time for more sale of the same product. The following figure presents the process is used for converting raw materials into a fine product.

This applies to every activity, which produces something. If we divide whole process of production, into various fine sub activities, we see that above chart applies to various sub systems also. The output of one such activity becomes input of the other and finally plays a vital role in determining the quality of the final product. The Open University is an industry like other industries, which has various subunits for production. We may consider, learner as its raw material and finally its product after programme completion. But, here the difference comes when we compare an open university with an industry. The Open University produces its product i.e. student in



bulk and accepts them as raw material in bulk. This raw material is not of the same type. No two individuals, as raw material, are similar. Their Intelligent Quotient (I.Q.), interest levels, socio-economic status, way of perception, previous subject knowledge, home environment etc. are not similar. They join the industry and pass through a process and finally come out as product. No two individuals are again similar as the product. Therefore, a huge quantity of product differs from each other in many respects. In industries, every item is of similar type at input as well as output stage.

Another way of treating the Open University as an industry may consider the learner as customer, which has to interact with the learning material as product of University. It is the customer, which has to interact with this learning material and decide the quality of the same. But, the learning material can not meet every individual's academic needs, which differ from person to person. However, the Open University has been labeled as an industry because its input and output are in bulk. It produces learning material in bulk and is supplied to its customers. This is a unique feature, which is not seen with other conventional universities. The concepts of Quality Control and Total Quality Management are equally concerned with the open universities also. There have been efforts with open universities for Quality Control and Total Quality Management (TQM) also. The work in the field of Programme evaluation, Training programmes for Counsellors and tutors, Review of learning material, Orientation of part time and full time workers about their role and responsibilities are the measures in the field of bringing quality.

16.2.2 Quality Control and Total Quality Management

The concept of Quality Control refers to meeting desired objectives fixed to achieve by the organization. These quality objectives are a set of interlinked objectives, which create an enabling and sustaining environment for quality in an organization. The organization tries to achieve these objectives and monitors that these objectives must be in practice as guidelines or framework for performing the work. Total Quality Management is a continuous journey, which will never end. Even if your product is number one in market, you have to remain unsatisfied and try to bring more improvement. Always treat your services/product/status as number two and number

one is something else which you have to achieve. Thus, TQM is an endless effort, which keeps the person unsatisfied always, and motivates him always to achieve something more on the path of Quality.

There is no universal agreement on Quality. What is quality for one is not good enough for another. In the literature on Quality, the concepts of Quality Control, Quality Assurance and Total Quality Management have extensively been discussed and experimented in education in the West. The focus of all these is Higher Education. Distance Education is a different mode of education. In this system, the instruction is either synchronous or asynchronous. It uses printed study material, audio-video or computer technologies or combination of all these approaches. The growth of this system has heightened the concern for ensuring distance education programmes of high quality. In this system, there are different areas which are important and unique for assuring quality or the process and production of material, faculty, support services and technology, staff development, research, etc. Open Universities employ a variety of mechanisms for assuring the quality. Many conferences and seminars have been organized in India to discuss these mechanisms over the past few years. Indira Gandhi National Open University and the State Open Universities now recognize the need for assuring quality in the system of DE through viable mechanisms.

Total Quality Management, as a management philosophy and strategy have now been applied to both in industry and service sectors including those in government, education, etc. We may trace four stages of development of TQM. These are:

- (1) Awareness and early experiments,
- (2) Blind following characterized by frenzied activity,
- (3) Negative skepticism arising out of blind following and
- (4) Stage of maturity with continuing momentum and informed adoption.

Presumably, we are at the fourth stage. In India, however, we are just beginning to realize the potential and at the early stage of experimentation with TQM in education. Thus, a major difference between Quality Control and Total Quality Management (TQM) is that of feeling for satisfaction. When the objectives are achieved and system is following certain norms as per objectives for maintaining the pre fixed

status of quality, it is known as ‘Quality Control’. But, Total Quality Management is a feeling of unsatisfaction every time and making an effort to achieve something else which has not been achieved yet in the organization.

16.2.3 ISO 9000 for Open and Distance Learning System

There is a total revolution needed at Input, Process and Output stages for bringing quality in the Open University system. Adopting ‘ISO 9000’ being a process of Quality assessment and finally its improvement may make an enquiry at these stages. We have already observed that Quality is a matter of bringing some desired changes in the system. It aims to assess the student learning experience and student achievement against aims and objectives of the ‘Programme’. Six core aspects of higher education provide the framework for Quality Assessment. They are:

- (1) Curriculum Design, Content and Organization,
- (2) Teaching Learning and Assessment,
- (3) Student Progression and Achievement,
- (4) Student Support and Guidance,
- (5) Learning Resources,
- (6) Quality Assurance and Enhancement

In fact, we need high quality multimedia learning materials, dedicated personal academic support, careful attention towards student, and a strong research base for examining the validity and usability of the course content. These four elements are generally relevant to distance learning. Any technology used by distance education system has to pass through these four criteria for judging the quality. ISO 9000 is the procedure for recognizing the present situation and for enhancing the same.

ISO 9000 – An Introduction

About 63 countries jointly decided in Switzerland to develop some code of conducts for quality control in different organizations. They established an International Organization for Standardization and named it ISO 9000. Later on, this ISO 9000 was modified as per needs and renamed as ISO 9001, ISO 9002, ISO 9003, and ISO 9004 etc. The Bible of ISO 9000 having 20 steps was reviewed and the usability of various steps was analyzed as follows :

Alignment of Clauses

No. Quality System Requirements	ISO 9001	ISO 9002	ISO 9003
1. Management Responsibility	√	√	√
2. Quality System	√	√	√
3. Contract Review	√	√	√
4. Design Control	√	X	X
5. Document & Data Control	√	√	√
6. Purchasing	√	√	√
7. Control Of Customer Supplied Product	√	√	√
8. Product Identification & Traceability	√	√	√
9. Process Control	√	√	X
10. Inspection & Testing	√	√	√
11. Control Of Inspection, Measurement & Test Equipment	√	√	√
12. Inspection & Testing	√	√	√
13. Control Of Non-Conforming Product	√	√	√
14. Corrective And Preventive Action	√	√	√
15. Handling, Storage, Packaging Preservation & Delivery	√	√	√
16. Control Of Quality Records	√	√	√
17. Internal Quality Audits	√	√	√
18. Training	√	√	√
19. Servicing	√	√	√
20. Statistical Techniques	√	√	√

Note : √ : Applicable, x : Not applicable

The open and distance learning system is an industrialized system and so the steps can be followed for quality system management among open universities. The quality system requirements and their adoption for ODL is discussed below

01. Management Responsibility

The first responsibility of the top management e.g. Board of Management is to frame a Quality policy and define this policy and objectives for achieving quality. It will cover specific objectives of an open university and expectations and needs of the students. The top management should see that all workers, implemented and maintained at all levels of the organization, accept this policy. The role of workers of different categories be defined and documented. The requirement of resources e.g. men, money, material, machine and methods (5M) be identified and provided for various activities like course writing, editing, counselling etc. One internal senior person is appointed to monitor and ensure that a quality system is established, implemented and maintained as per quality policy and suggest for improvement. Any

Pro-Vice Chancellor or Senior Director may be assigned this responsibility in open universities. He would have a team of workers to assist and this team shall review the progress of work done at defined intervals sufficient to ensure the quality.

02. Quality System

Every Open University has to prepare activity wise Quality manual covering the requirements as per the standard. It will explain the procedures needed for achieving the Quality policy and method for implementation of this policy. It will cover the complexity of various tasks, methods to be used for them, skills and training needed by personnel involved in carrying out the activity. The preparation of quality plan, identification of controls, processes, equipments, resources and skills that may be needed to achieve the required quality. For example, paper-setters should have a knowledge of course content, skill of framing or selecting items covering different abilities, preparing blue prints and put the questions in given format. It should cover the procedure for inspection; testing techniques, procedures for enhancing capability of concerned workers, timely verification, clarification of standards, preparation of Quality records. It will help in assessing person's level of performance and the gaps as well as a procedure to bridge these gaps.

03. Contract Review

It is essential to review the quality of resources needed for the work. For example, persons having aptitude and interest for course-writing work. The Bio-data of the person concerned having his past performance and achievements may help in reviewing the quality of resources needed and those available for the work. The confusions or questions lying in the minds of researcher should be resolved for a smooth dealing with them. If needed, the contract with them is modified. This modification is recorded for future use.

04. Design Control

Every Open University has to verify the market needs and accordingly the competencies of its product e.g. students in order to ensure that the specified

requirements are met. The plans to be prepared shall describe various activities and define responsibility for implementation of the plans. The responsibilities within different groups of workers along with guidelines be transmitted to them and regularly reviewed also. The infrastructure for input and output be clearly designed and documented for verification and a review, if needed. For example, Language editor is unable to edit the manuscript, another some senior person be called and assigned the responsibility for this work. Design validation shall be performed to ensure that product conforms to defined user needs. It will help for making necessary changes in the work design at various stages.

05. Documents and Data Control

This step emphasizes for storing the documents and data. It can be in the form of any type of media like print or hand written, floppy, CD-ROM etc. This should be reviewed and approved for adequacy by the authorized quality Control team. These documents and data are given to all concerned persons so that they may check and control undesired situations. Invalid documentation should be removed from circulation in order to avoid any accident. The changes in documents and data be reviewed and approved by the Quality control group.

06. Purchasing

The Quality control group shall confirm that purchased product was as per specified requirements. For this purpose, the supplier and their product are evaluated. Their product is input for an open university. Therefore, a good quality purchase will finally give us a good quality input for our work. The standards for purchase of goods be defined clearly and be given to the suppliers. They should be given last audit reports, quality records etc. The purchase order must clearly mention the type, class, grade or other precise identification. If needed, the name of company, size of goods be mentioned clearly in order. The purchase order must be verified properly. It can be at the contractor's premises, and or, in Open University premises. This double verification may control the quality of the product supplied by the contractors.

07. Control of Customer Supplied Product

It is related to return of product if it is below desired level. For example, some audiocassette has problems and does not function properly, it should be taken back and a note be mentioned in the record stating every defect in it.

08 Product Identification and Traceability

It is essential to maintain documented procedures for identifying the product from raw material to production, delivery and installation. In case of Open University system, identification in-group, of product can be made.

09. Process Control

The open universities should have documented procedures defining the manner of production, installation and servicing etc. The absence of such procedures could adversely affect quality. Some standard and suitable working environment is created in the organization. Compare with some reference code/standards, quality plans and/or documented procedures be done. e.g B.Ed. training procedure through distance mode and conventional mode is compared for various process activities. The approval of process and equipments to be used, suitable maintenance of equipments to ensure containing process capability is done. Continuous monitoring and control of process parameters be done to ensure that the specified requirements are met.

10. Inspections and Testing

It is essential to verify that the specified requirements for the product are met. The details of such testing be established and documented for use. No product be allowed for use if it has not passed through inspection and testing for example, A/V cassettes produced by open university must be distributed only after it is tested by taking a sample of the same. The procedure is recorded for future use. In urgency if some product is used without inspection and testing, it should be recorded properly. No product shall be dispatched until all the activities specified in the quality plan and/or documented procedure, have been satisfactorily completed and verified. The inspection authority responsible for the release of product should verify records.

11. Control of Inspection, Measuring and Test Equipment and Devices

It is related to maintaining documents regarding procedure of inspection, measuring and test equipments used for assessing the quality of product. Competency of persons for such inspection is defined. It should be rechecked at specific intervals. The customers should be provided the data for verification that the inspection, measuring and test equipment is functionally adequate. Verification of marks and double assessment for M.Phil are the examples of the same. Selection of test equipments, capable of the necessary accuracy and precision is required. If no prescribed standards are available, the standard followed for this purpose is documented. Actions to be taken are documented, if results are unsatisfactory.

12. Inspections and Test Status

The identification of inspection and test status shall be maintained, as defined in the quality plan and / or documented procedures, throughout production, installation and servicing of the product to ensure that only product that has passed the required inspections and tests, is dispatched, used or installed.

13. Control of Non-Confirming Product

The low standard product be documented and prevented for use. This control shall provide for identification, documentation, evaluation, segregation, and disposition of rejected product. The quality control group should take responsibility of reviewing of undesired or non-confirming product in accordance with documented procedures. It may be accepted after some change like few pages in a book or some scene in a video film.

14. Corrective and Preventive Action

The university has to establish and maintain documented procedure for implementing corrective and preventive action. These actions will be for modifications in order to bring the product up to mark as far as possible. The whole procedure is documented and the change be recorded.

These can be based on customer complaints and reports from review committees.

It may be when controls are applied to ensure that corrective action is taken and that it is effective. The relevant information on actions taken is submitted for management review.

15. Handling, Storage, Packaging Preservation and Delivery

Documented procedures for all these are maintained. The methods of handling to prevent supply of damaged articles are chalked out. The storage or stock is made in rooms to prevent damage of product. In order to detect deterioration, the condition of product in stock shall be assessed at appropriate intervals. Packaging properly and preservation for long-term use be done as per norms already laid down. Delivery be made after assessing the quality of the product.

16. Control of Quality Records

It is essential to have documented procedures for identification, collection, indexing access, filing, storage, maintenance and disposition of quality records. It would help others to prevent damage loss. The customer or his representative shall make these records available for evaluation for an agreed period. These records may be in print form or any other form.

17. Internal Quality Audits

In order to determine the effectiveness of the quality system, quality audits be introduced. It should be third party audit. These results be recorded and brought to the notice of auditors already audited the product. The quality control group should take timely corrective action on deficiencies found during audit. This follow up audit activities shall verify and record the implementation and effectiveness of the corrective action taken.

18. Training

The training needs be assessed and documented for providing training to those who are performing activities affecting quality. Appropriate records of training shall be maintained.

19. Servicing

The Open Learning System should establish and maintain documented procedures for performing, verifying and reporting the information that servicing meets the specified requirements.

20. Statistical Techniques

Identification of needs be done in order to select a sample for quality examination and meeting / bridging the gaps.

Benefits of Application of ISO-9000

- (i) Bringing managers and staff closer together in pursuit of a common goal.
- (ii) Less frustration caused by misunderstanding of how systems operate.
- (iii) Identification of deficiencies in systems and their resolution.
- (iv) Development of new contacts with customers as staff works to ensure compliance with systems defined in the quality system at every stage.
- (v) Public relations benefits from '*showing we want to do better*'.
- (vi) Improvements in liaison between departments in the organization.
- (vii) Staffs have increased pride in the organization's performance.
- (viii) Pursuit of quality has strengthened awareness of the organization's own style.
- (ix) A strategy has been developed to which everyone in the organization can subscribe, and which forms the basis for further development.
- (x) Cost savings and productivity gains.

Thus, we see that ISO 9000 and its family have shown a procedure for Quality Control in industries. It can be used in Open Distance learning system also, if we consider our learner as our customer seeking for sale deed of a need based mass education. If implemented, the system may provide good quality services to be called as its product in the form of Learning materials, human support, Registration, Evaluation etc. Also, if this Quality control is applied, the customer will get a chance for optimum learning and a flavor of openness at each and every stage.

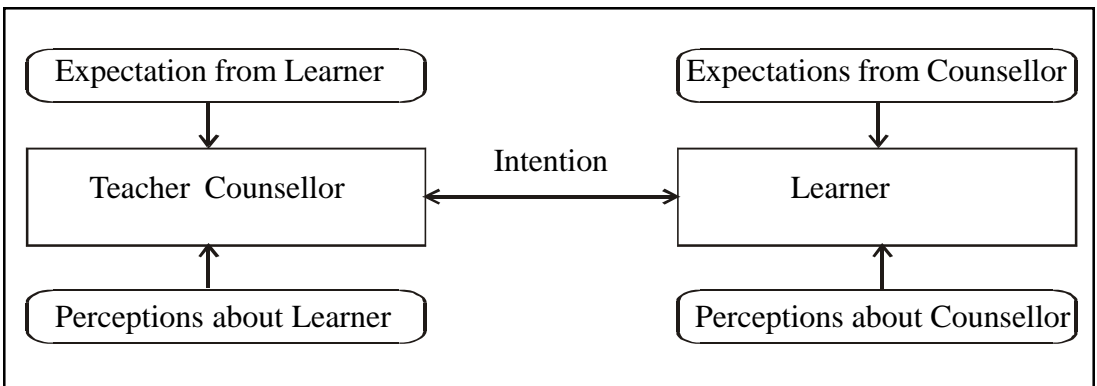
16.2.4 Learners Satisfaction : A Criteria for Quality

The students expect value for money not only for the fee they pay but also for the time invested in study. Value is a relative concept and whether a student obtained value, depends upon his/her perception of the teaching and learning situation. The distance education system suffers from three main drawbacks: -

- (i) The hesitancy of students to criticize individual staff.
- (ii) The poor participation rate.
- (iii) The validity and reliability of criticisms when made.

The most popular forms of obtaining students views of their experiences were questionnaire survey. The information from such questionnaire is used for assisting counsellors, tutors, to help administrators and students for selecting courses.

Few important factors that contribute to effective teaching and learning are – the content, the teaching techniques, the classroom management, student’s motivation, peer students behavior, and the timing of the session. There are two parties in the process of teaching – learning and their perceptions as well as expectations play a vital role in deciding remedy for quality control as stated below:



The above picture indicates perceptual gaps during counselling session. The differences in the ideas of students and the counsellor regarding what constitutes an ideal session and their perceptions of the actual session could lead to the existence of following four gaps :

Gap 1 : Between student’s expectations of an ideal counselling session and their perception of an actual counselling session.

Gap 2 : Between student's expectations of an ideal counselling session and the counsellors/tutors perception of the students expectations.

Gap 3 : Between student's perception of the actual session and his perception of the students expectations, and gap.

Gap 4 : Between the counsellors and students' perceptions of the actual session.

Once above four gaps are identified, then a tutor/counsellor could decide, depending on the importance and significance of the gaps, for improving the teaching and learning situation. Thus, we see that learner feedback provides us an idea about various gaps to be filled in. It helps the tutors/counsellors to modify delivery or style, and expectations of students. It helps in raising the quality of the programme as per learner expectations from the counsellors/tutors. In programme Evaluation work, the opinion of counsellors as well as students is collected on various common and specific issues. The views expressed by both groups provide guidelines for modifications of various activities and thus help in bringing quality. The learners' feedback serves the purpose of informing them about the steps to be taken up by the counsellor to bridge the gaps and the reasons for not meeting certain expectations of the students. There may be some areas where students might be finding it difficult to face up to their lack of comprehension of a session but the counsellor might be avoiding to cover these areas.

The learner satisfaction means the reduction of a gap between their perceptions and expectations. Here the counsellors have to change his style of counselling work also, to change students' expectations by explaining the reasons for not meeting their expectations.

16.2.5 Barriers to Quality Control

The process of Quality control requires a collective effort of all, directly or indirectly associated with the organization for its betterment. There may be some barriers in meeting this target. These may be as below :

- 1. Mind as the Biggest Barrier :** We see that resistance of mind is the biggest barrier to innovations and change. There is a proverb as – ‘You can bring the horse to drink but you can not make the horse drink’. This is true in every case.

There are persons not ready for taking up any innovative work. They create problems for few others who are involved in innovative work. Therefore, mental preparedness is the first and the most essential factor for bringing quality in education.

2. **Lack of Co-ordination Among Workers :** It is a team approach to bring quality. Every worker has to understand and accordingly to act in coordination with others. It will help them in learning from each other's knowledge, skills & attitude and finally would improve the work quality. This co-ordination would strengthen if the workers develop respect for each other's qualities and competencies. They should not criticize each other's work performance but should accept positive & good points by ignoring negative things.
3. **Shortage of Skilled Manpower :** Skill to perform a work with minimum help from others is known as Competency. If an organization has very few such persons, it will be very difficult to manage every activity in proper and desired way. Expectations of the customers and their perceptions will have a big gap. Therefore, it is essential to organize programmes for staff developments as per skills essential among workers.
4. **Lack of Training and Orientation Programme :** Staff Development is very essential for bringing quality in the organization. The technology is changing very fast in every sector and so in Education and now in Open and Distance Learning System. We require continuous Upgradation of workers if we have to bring quality in work. Knowledge of computer operation, Satellite Communication, Managerial role in performing a work, Technological explosion and its utility for skill Upgradation etc. may be some important areas for workers training in open and distance Learning System.
5. **Individual Differences Among Learners :** No two individuals are similar. The nature has produced them as different from each other in many respects. The physical appearance of every person is unique. Their mental abilities like I.Q, Aptitude, and Interest etc. differ from each other. One counsellor or tutor can not satisfy every learning need of all students at a time. The tutor/counsellor has to take help from various media for making the learner to learn. Every

learner has two types of problems and confusions. Some are common type of problems while the rest may be specific one. The students may raise any query during or after the counselling session. The counsellor has to keep himself updated with course content as well as Psychology of learning, Teaching technologies etc. It will increase quality of their work.

6. **Shortage of Funds :** Money plays an important role in making workers to be skilled through training and workshops. Purchase of various Electronic gadgets, training for their use, appointing more skilled workers at Headquarters as well as at study centers, etc. require one time expenditure as fixed cost. Thus, we see that funds and their proper use are very essential. Shortage of funds may delay the implementation of various plans essential for quality control.
7. **Lack of Management of Will Power :** The will power of top management body to take steps for quality control is very much essential. Failing which, there will be no co-operation and co-ordination between the top and the bottom of an organization. It is true that the quality filters from the top. It comes to middle level managers first and then to lower level supervisors and finally to the grass root workers being responsible for performing the work. Therefore, it is essential that top-level managerial body must consider seriously for bringing Quality Control in an organization. They can ask and order the workers for taking certain steps being essential for quality control.

Thus, we see that there are many hurdles in the way of quality control and Total Quality Management. It is essential for every organization to take care of all these hurdles and try to see that these are controlled properly in an organization.

16.3 Glossary

Quality Control : This is a process for gearing up the system to achieve the desired results in an organization.

Total Quality Management : It is a process beyond Quality control. It directs the persons to make continuous effort for achieving a target, which is far away from the reach at present.

Learner Perception : This is an expression of learners thoughts gained through many experiences about same situation or incident or activity.

Learner Expectation : This is an expression of learner’s desire of an ideal situation or activity as per his views.

Quality Assurance: It is a certification by some certified agency, which examines the organizational activities as per the desired norms of the organization. It works as third party. ISI mark is a symbol of Quality Assurance.

Synchronous: It indicates towards some activities or developments happening or existing at the same time. For example different persons playing different instruments in a band party or an orchestra.

Asynchronous: It indicates towards various activities, which do not take place together for example: Swimming, driving a car, walking on road and taking breakfast by a person.

Technological Explosion : During last 20 years, a wide variety of electronics goods like VCR, VCD, Computer, Xerox machine etc. have come in market.

ISO – 9000 : About 63 countries had jointly decided in a meeting at Switzerland to adopt a procedure for Quality Control. This Procedure is known as ISO 9000 (International Standards Organization).

Consistent Objectives : With every organization or activity or person, there are some objectives, which do not change as per time.

16.4 Summary

The concept of Quality and Total Quality Management has been a matter of concern for all Open Universities. The classroom situation can be improved by applying TQM. If student is treated as customer and Team process with student involvement as well as continuous improvement are accepted as essential, we can see a different role of the counsellor with multiple objectives as manager during counselling session. Total Quality Management (TQM) is a continuous journey, which would never end, while Quality control is a process to achieve the desired or predefined standards in an organization or an activity. TQM will help for taking care of learner’s quality,

competence and success after they leave educational system and become citizens. Also, specific skills, knowledge, attitudes and abilities of the learners are a matter of concern when student passes through various stages. It will help in evaluating the worth and value of teaching methods, means and resources as well as extent to reach the educational objectives.

ISO – 9000 is a widely accepted procedure for Quality Control and Total Quality Management (TQM). Various steps in this procedure are used to determine the quality as per desired norms and objectives. It can be used successfully in education, if whole team under the leadership of Top Management tries to implement it.

A review of researches and other activities like Programme Evaluation and Programme maintenance indicate that there is no reason in principle why distance learning cannot achieve high quality. The teaching systems of open universities can be organized to produce distance learning of quality. The knowledge media could be used to further improve the teaching and learning systems of Open Universities.

This is an exciting time for the Open Universities, which have made tremendous progress in a short time. We have brought the intellectual stimulation and economic benefit of higher education to very large numbers of new students. We have begun to establish a reputation for quality in higher education. There is a challenge of new generation of technology. We have seen that if we use them properly we can further improve the quality of the distance learning opportunities.

16.5 Exercises for Practice

Write answers of following questions in about 200 words each.

1. Justify open university education is an industrial form of education with reference to input and output management.
2. Define and differentiate between quality control and total quality management with stages of total quality management.
3. What is ISO 9000 and explain how it relate to open and distance education system
4. Enlist and explain barriers to quality control management in open and distance education system.

Unit 17 : Cost Effectiveness in Distance Education

Index

17.1 Introduction

17.2 Content

17.2.1 Cost Analysis in Distance Education

17.2.2 Financing in Distance Education

17.2.3 Cost Function in Distance Education

17.2.4 Cost Structure in Open and Distance Learning System

17.2.5 Cost in Open and Distance Learning System

17.3 Glossary

17.4 Summary

17.5 Exercises for Practices

17.1 Introduction

Economics of education seeks to study as to how the resources are allocated among educational institutions and activities and what benefits or returns both, the individuals and nations. Thus, economics of education may be defined as “the study of how people and society choose, with or without the use of money, to employ scarce productive resources, skills, mind, character etc. especially by formal schooling over a period of time, and distribute them, now and in the future, among various people and groups of society. The economics and education are interdependent upon each other. The education provides human resources who work for social and economic vertical mobility of the society. On the contrary, the economy provides resources to fulfill the educational aspirations of its members. Thus, we see that both are interdependent upon each other.

It is essential to study the ways for minimizing the cost without compromising the quality of education. For this purpose, we have to study various sources of financing

the distance education and cost functions as well as cost structure in Open and Distance Learning system. The work done by IGNOU for cost analysis may be an example for other Open Universities. This exercise would help in assessment of present cost patterns and finally in reducing the same for observing an economy without compromising the quality of process and resources. Such cost analysis may help to ensure efficiency in the allocation of resources to education and in making optimum use of available resources. The principles of financing in the context of education in general are applicable in the context of distance education as well. The financial management of the distance education system, with particular reference to the concepts of efficiency, equity and flexibility, will be discussed in this unit. It is essential to study input and output considerations and effect of use of electronic media on the cost of distance education. It is essential to throw some light on the cost. Structure in Distance Learning systems at different universities for taking a stock of international scenario in this field. In India, the IGNOU has done some work in this field and the study of the same may develop an idea of doing similar work by other open universities.

After the study of this unit, you will be able to know and understand :

- Need for cost analysis in distance education.
- Various sources of financing in distance education.
- Different cost functions and cost structure in ODL system.
- Work done by IGNOU in assessing the unit cost in distance education.
- The utility of this work in minimizing the expenditure without compromising the quality of input, process and output in distance education.

17.2 Content

17.2.1 Cost Analysis in Distance Education

Cost analysis in distance education seems to be essential to ensure efficiency in the allocation of resources to education and to make the expenditure on education as cost benefit and cost effectiveness. The cost of education is not the money that is

spent each year but the real resources that are devoted to education, and are therefore, not available for allocation to any other economic activity. These resources are time, books, equipment and buildings as well as the services of teachers. The student and his family may be treated as consumer/customer. The institute as producer/seller and teaching learning as the process for calculating the cost.

Determinants of Educational Costs

Knowledge of the major determinants of educational costs is very essential for anyone thinking of improving educational policy. The cost of an educational plan or innovation is often expressed in terms of its total cost to indicate the value of total resources devoted to it. But for diagnostic and evaluation purposes, unit cost is more meaningful. Unit cost is cost per educational unit, e.g., cost per student, cost per school, cost per teacher, etc. But education has multiple outputs measured variously in terms of the student achievement, number of graduates passed, and so on. Hence, while estimating unit cost, due care should be taken to avoid ambiguity. For example, cost per student may imply:

- (a) Cost per student enrolled.
- (b) Cost per student actually attending school, and
- (c) Cost per student successfully completing a given course.

The problem of deciding on the unit cost has to be solved carefully. Choosing the number of students may not always be the right thing to do because all costs do not vary with the number of the students; for instance, the teachers and their salaries, the building space, etc. Hence, cost per teacher or cost per school should also be considered. Educational costs may be divided into three categories:

- (1) Those related to the students,
- (2) Those related to the teachers, and
- (3) Those related to buildings and equipment.

In a normal growing state, a composite unit including all the three could be adopted. Unit costs are likely to rise due to changes in the price level, increase in learner population, rise in the educational standards, demand for education as well as the pressure for raising the level of school-going age. In making long-term forecasts,

we have to take note of first the increase in the number of students, teachers and schools and second, the rise in cost per unit.

It is essential to break up the expenditure on education, both by the government and private institutions, into different components like recurring expenditure and capital expenditure. Recurring expenditure as the name suggests their cost takes place regularly at certain intervals. Capital expenditure, on the other hand, are one-time investments. Cost depends upon :

- The level and structure of the teachers’ salaries,
- The average student-teacher ratio at each level,
- The non-salary costs of education, and
- The capital cost for buildings and other equipments.

Of course, each of these factors are themselves determined by a number of other factors like availability of funds, teachers, student enrollment, etc. It is because of the variation in these factors that countries or states and districts within the country differ with regard to their educational priorities and the corresponding expenditure. In order to study the behavior of costs of education, we can calculate them along different dimensions like cost by level (Primary/ Secondary/ Higher Education etc), cost by region (rural / urban), total cost, Unit cost, fixed and variable costs, average and marginal costs. The type of cost analysis will depend upon the purpose for which it is needed. The cost per successful student is higher than cost per student enrolled. The difference is a measure of the efficiency of the system as the lower the difference the more efficient is the system.

Social and private costs of education

Social Costs	Private costs
<i>Direct cost</i>	<i>Direct cost</i>
i. The teachers salaries	i. Fees minus average value of scholarships
ii. Current expenditure of goods and services	ii. Books and Learning material
iii. Expenditure on development of books.	iii. Travel costs
<i>Indirect cost</i>	<i>Indirect cost</i>
v. Earnings foregone	iv. Earnings foregone

You may observe two things from the table above. The first is that the social costs may fall under two categories. They are direct costs and the indirect costs to the society. The second observation you might make is that ‘earnings foregone’ is repeated under private costs as well as social costs. Earnings foregone by one individual is a private cost ‘paid’ by the individual for the sake of getting educated. At the same time, earnings foregone by individuals, in a broader perspective are earnings foregone by the nation or the society. Hence, earnings foregone constitute an indirect cost to the society, which plans to have its members educated.

Opportunity Cost

Opportunity cost is the cost of alternatives foregone. Let us consider a concrete but hypothetical example. Suppose you are working in a agrobased industry and by offering your service you are paid Rs. 10,000 per month. Had you not joined the above company, let’s suppose that you could have joined in a textile firm with a monthly salary of Rs. 8,000 per month. This means that your value in the next best alternative use is Rs. 8,000 per month. From the individual point of view, this is called transfer earning. Note that transfer earning is similar to opportunity cost. From the societal point of view this is called opportunity cost, which is Rs. 8,000 per month, on keeping you employed in the leather manufacturing company.

The three cost elements given above i.e. social cost, private cost and opportunity cost can easily be combined to give an estimate of the annual cost per student for each level of education. If there were no wastage or repetition, this would be sufficient for a cost-benefit calculation. Thus :

$$\text{Social cost} + \text{Private cost} + \text{Opportunity Cost} = \text{Annual Cost Per student.}$$

Fixed and Variable Cost

Whatever be the production level, a firm must always bear certain fixed expenses viz., Rent of premises occupied, staff salary etc. and certain variable expenses which depend on the production level or, in other words, which vary according to the number of units produced. The same distinction can be drawn in the field of education. In the case of a teaching establishment like a school or a university, the fixed expenses

include, the capital cost of the building, the equipment and furnishing cost and their corresponding annual rent, etc. The variable expenses include schoolbooks, teaching staff salaries, etc.

Major limitations of cost benefit analysis

- (i) Current benefits, as represented by the rate of returns from education, reflect the profitability of the past level of investment. Can the present rate of return serve as a basis for estimating future profitability? It can do so only if there are going to be small increases in investment in education.
- (ii) Not all the earnings of the educated can be attributed to education. There are earning differentials due to differences in ability, the amount of hard work one is ready to put in, etc. and, therefore, adjustment will have to be made accordingly.
- (iii) Not all the educated persons succeed in finding jobs immediately. The period of waiting before a job has to be taken into account.
- (iv) All those who are enrolled in a programme do not succeed in getting a degree. Allowance will have to be made for the wastage, since this will add to the initial social cost of education.

Following are the ways in which cost benefit analysis is useful for decision making in education.

- (i) It may point out the need for change in resource allocation in favour of those types of education, which can offer the highest rates of return.
- (ii) Cost-benefit analysis may suggest ways of increasing the profitability of education, either by increasing its benefits or by lowering the costs.
- (iii) Finally, the cost-benefit analysis provides a conceptual framework for the examination of the costs of education in relation to the relative earnings of the educated manpower.

17.2.2 Financing in Distance Education

The financial management of the distance education system is to be studied with particular reference to the concepts of efficiency, equity and flexibility. There are many factors that limit the validity of this exercise. These may be as below. Distance

Education, as it exists today, is predominantly complementary to the conventional system; largely utilizing the latter's academic and physical facilities. It would cost more, if it were to exist as an entirely separate entity. The quality of instruction is also a factor to be reckoned with. In distance education, it is likely that the quality of the output would be uneven. This is more so because the students have to study, most of the time, on their own and the students have widely different backgrounds of work and life experience among themselves. Unless that quality of the output can be matched between the two systems, it would be difficult to compare, with any degree of authenticity, the cost-effectiveness of the two systems. It needs to be noted here that the apprehensions expressed here are valid in the case of face-to-face education also. What we need to be careful about is that the best of face-to-face education should not be compared with the worst of distance education.

The number of courses offered under the two systems also affects their costing patterns. Because of limited courses on offer in distance learning systems to a large number of students, they have a favorable cost advantage. The available evidence shows that if there are sufficient numbers of students in high-technology systems, investments of resources on learning materials and cost involved in establishing production and transmission systems can be justified. The studies conducted on the academic programmes for higher education level in the distance teaching institutions suggest the following :

- the restriction to distance-learning systems' academic programmes to areas where there is known to be significant level of demand e.g. teacher training;
- the development of courses in wider number of subject areas, but with a severely restricted course choice in each discipline, thus forgoing the possibility of turning out graduates with a single honours degree;
- a conscious decision to ignore comparative unit costs and to embark upon a programme for social or political reasons, or because it is the only way of fulfilling specific goals and needs e.g. to reach deprived target population irrespective of the cost''

There are some core elements of financial management as follows :

- (i) **Financial resource mobilisation :** The first element is resource mobilization. This implies mobilization of adequate resources for distance education from various sources like government contribution, student fees and voluntary contributions from the community. An important source of finance is the fees collected from students. But, primarily in most cases the funds come from the central and the state governments. Yet another source is private funding, which however has yet to pick up to be of any real consequence.
- (ii) **Financial resource deployment :** Resource deployment is the second element in financial management. An efficient resource deployment mechanism would entail allocation of resources among the various components in order to ensure the optimum utilization of available resources. This underlines the need for evaluating the comparative utility of the various constituents of expenditure and allocating resources in a manner that the programmes be run with utmost efficiency, and any wastage of resources be avoided.
- (iii) **Financial resource generation and distribution :** This is the third element in the management of financial resources. An efficient system of financial management would ensure the emergence of an in-built process of resource generation. The educational institutions are expected to explore new avenues of resource-generation, so that unexpected expenditures are adequately met and they do not disturb the academic priorities of the institution.

Principles of Financial Management

There are three principles viz. efficiency, equity, and flexibility which are considered as crucial in establishing an effective financial management system.

- (i) **Efficiency :** The principle of efficiency signifies that the provision of financial resources for educational development should be prompt, and should not be subjected to unnecessary delays. It has been seen that often-considerable delays are caused in examining budgetary proposals. Even when the proposals are sanctioned, the actual release of grants is a time consuming process. The grants are often released at the fag end of the financial year and the institutions are forced to procure sub-standard materials because of lack of time or to work

through projects in wasteful haste. It has also been experienced that even after the financial grants are released, the institutions take quite some time in distributing the amounts among the various departments. This happens when the grant sanctioned by the government falls short of the financial estimates submitted by the institution. Considerable time is taken in reappropriating inter-departmental priorities in such cases. Consequently, even appropriately worked out plans achieve below par results. These delays can be avoided, if the institution, while submitting its budgetary requirements, also keeps in readiness a contingency plan, which could be put into operation in the event of the budget amount being curtailed. Sound financial planning necessitates undertaking a series of exercises so that no time is wasted in re-drawing priorities in view of resource constraints, which are quite normal in educational financing.

- (ii) **Equity** : The principle of equity demands that, while allocating resources, the problems of institutions located in backward areas or those catering to the weaker sections of society, should be given special attention. It has been generally found that the institutions, which are academically advanced or which have contacts with the decision-making authorities, get away with the larger bulk of resources and the institutions in backward areas are deprived of adequate sustenance. This aspect has, however, not clearly entered into the funding policy of the Central Government or its agencies. As a result, one might find that the institutions in advanced areas have developed more rapidly than those in backward states. This is also true of backward areas within a state. It might, therefore, be necessary to bring in this equity consideration in the allocation of funds". The observations made above, mostly in the context of conventional education, are applicable equally to the context of distance education.

While discussing the equity principle in relation to allocation of resources, it is pertinent to point out that equitable distribution does not mean equal distribution. Even under equitable allocation of resources, the quantum of funds available to various institutions will continue to be disparate. The point that needs to be stressed is that the vital requirements of all institutions should be given due consideration, and the available funds should be distributed keeping

in view the assessed needs of various institutions. Institutions, which are underdeveloped or which are located in backward areas should be given special consideration. Further, the impact of resource constraints should be felt by all the institutions, and not by a few which are unable to influence the decisions of the authorities concerned.

While we advocate special allocation for institutions, which are located in backward areas or which cater to the weaker sections of society, it would also be necessary that excellence is recognized and adequately rewarded. There is no contradiction in advocating equitable distribution of funds, while underlining the need for giving promotional assistance to institutions, which show better performance in academics, sports or cultural activities. Meritocracy should have an over-riding priority and it should not be allowed to be dwarfed due to want of adequate resources.

What has been said mainly in the context of institutions applies to students and educational programmes too, especially so in the case of distance education. Given an institution, it is not unusual to find the students from backward areas and weaker sections of society getting ignored. Distance Education institutions particularly have to find means and ways of spending their funds giving conscious and full consideration to the issue of equity.

(iii) Flexibility : Since the major concern of education is human resource development, its system of financing has to be flexible. Rigidity in rules and regulations cannot promote good education. An inflexible system of financial management is bound to prove counter-productive.

It has been often observed that because of extremely rigid and sometimes outdated rules and regulations, the development of education is hampered. For example, in the recruitment of academic and other staff, a definite procedure is rigorously followed so much so that quite often the appointments are delayed for long time. Similar rigid procedures are followed in the procurement of equipment, construction of buildings, etc. leading, sometimes, to long delays. As far as the process of budgeting is concerned, all of us are aware of the rigidity pertaining to various schemes and sub-schemes included in the budget. More often

than not, the schemes are considered to be too important to change and even small deviations in physical and financial terms are discouraged. It must be remembered that the budget proposals are made keeping in view certain factors, which may hold good at the time when the budget is finalized. It is possible that during the course of the year, the factors may undergo drastic changes. This would necessitate modifications in the inter-schematic priorities as also changes in the financial allocations in respect of some individual programmes. This freedom of re-appropriation of funds is essential for good financial management and should be encouraged for the development of the educational system, more so in the case of distance education which, being a new and innovative approach, has yet to develop a workable pattern of utilization to suit Indian environment. When we plead for flexibility, it is not intended that there should be an intentional violation of rules and regulations. It is also not suggested that the established norms of financial management should be flouted. The point that is stressed here, is that rules and regulations should not be the sole determinant of the administrative behavior. The rules and regulations are meant to facilitate action and not to be a stumbling block in the process of institutional development.

Another aspect of flexibility in this context is the sharing of financial power with other members of the academic staff. More often than not, the financial powers are concentrated in the head of the institution. This causes unnecessary delays in apportioning resources among various sub-sections in an institution.

It is, therefore, necessary that the financial powers should be delegated to the lower rank or order of the administrative system. Each Head of the Department or School should be made aware of the quantum of resources available to him/her during a particular year. He/She should be authorized to undertake expenditure within the total allotment in terms of the priorities set out for the department. He/She would, of course, be accountable for the performance of his/her department.

The point that we want to drive home through the above discussion is that a sound system of financial management necessitates a judicious combination of the three principles: efficiency, equity and flexibility. The extent to which these principles are applied to the financial system will depend upon the emerging situations, and will provide an acid test to the viability of administrative decisions.

17.2.3 Cost Function in Distance Education

The costs and benefits of education are, not easily susceptible to measurement owing largely to conceptual and statistical problems, as a result of which the agreement on the benefits of education is hard to arrive at. It is essential to understand few terms being in use in economics of distance education. These are fixed cost, variable cost, average cost, marginal cost, total cost, etc.

Those costs that change with the activity or production rates are called variable costs, and those, which remain unchanged in spite of changes in production rates, are identified as fixed costs. The average cost is total cost divided by the number of students registered. If some students are admitted late, the average fixed cost will decrease because total fixed cost will be divided by total number of students. The additional cost attributable to one extra student is called the marginal cost or the incremental cost. There are some factors affecting the costs of distance education. These may be described in two sets as below:

- (i) The first set relates to the supply of education and the amount of funds available to the government for financing education. The determinants of educational supply and budgets are quite complex. They include factors, such as, the rate of inflation, the range of competing demands for other public services, the rate of growth of the national economy, the diversity of tax bases for education, the sensitivity of educational revenue to changes in the national income, the impact of foreign trade, and the availability of foreign aid to education.
- (ii) The social set of factors relate to the demand for education. They include the growth in population and its age distribution, the importance of education for social mobility and national development, the choice and development of technology for economic production, the level of coverage of education to diverse segments of the population, and the direct and indirect impact of national and international development policies.

17.2.4 Cost Structure in Open and Distance Learning System

There are many factors that affect the cost of an academic programme. They are as follows :

- 1. Number of Courses Offered :** Since most of the organizations use print as the primary medium, the cost of a programme has a direct relationship with the number of courses offered under the programme. The greater the variety in the courses, the higher would be the cost, both for course production and implementation, as well as for course evaluation and revision including maintenance. If the organization considers the student enrolment/registration as the outcome of the institution, the cost for course development becomes a fixed cost; on the other hand, if course development is perceived as a product in itself, it gets treated as a variable cost.
- 2. Process of Course Development :** The decisions that you take regarding your approach to course development are crucial to the cost. Whether you prefer to have a course team of individual specialists to develop your courses; whether you decide to develop fresh course or to adopt courses already developed by other organisation; what ratio of part-time and full-time staff you intend to employ- all these and the like affect the programme cost. While adoption of a course team approach may become cost intensive, the writer-editor approach may be more effective. Similarly, while provision for full-time staff increases cost, part-time specialists might reduce it. But, in any case, it is the personnel cost that accounts for the major portion of the course development cost; and the larger the number of the full-time staff; the higher is the fixed cost.
- 3. Use of Part-time Faculty :** We have touched upon this factor in the sub-section above, but only with reference to the course development team. Perry (1976) noted that because the British Open University employed a large number of part-time staff those who were full-time employees of other educational institutions, it did not have to pay full salaries and the other benefits given to the full-time staff, and this approach to hiring of personnel services drastically reduced the overall cost of the university operations. In Australian universities and other dual mode institutions, the full-time face-to-face teachers also have the additional responsibilities of teaching at a distance. In American Universities, “a few distance education programmes have teaching faculty assigned to the permanent staff, though even in these cases there are far more part-time faculty employed”. These

part-time provisions match favourably with the overall programme cost; the permanent staff increase the fixed cost for the organisation as their salary is fixed irrespective of the quantum of their workload or actual output.

4. **Choice of Instructional Media :** Though most of the DTIs use sophisticated media as either supplementary or complementary components of or integrated them with the print media, there are institutes that use the sophisticated media like the TV as the master medium. It must be noted here that in spite of the facilities available in a country, the use of sophisticated media like the interactive video, computer, teleconferencing, etc. increases the fixed costs. If the courses themselves were considered as products, large scale use of sophisticated media would drastically increase the cost of course production. On the other hand, with every increase in the student enrolment for the particular course the cost per student would tend to decrease, thereby resulting in the multi-media distance education, at some stage, to be cheaper than the traditional system of education.
5. **Enrolment at the Institution :** You have seen that if the student enrolment is considered as the outcome, in spite of the increase in the variable cost, the fixed cost gets distributed over an increasing number of students, and thereby, reduces the cost per student. If the programme cost has to be reduced, either the student enrolment of or the fees per student (or even both) has to be increased. With low student enrolment, concentration on the variable cost is profitable; and with increase in the number of the students, it is always beneficial to shift some of the expenditure heads under variable costs to the fixed costs, so that economies of scale are achieved.

The five factors affecting programme costs as mentioned above represent the major cost factors. Besides, there are other cost factors that directly or indirectly influence the overall cost of a DTI. The three institutional case studies that we are going to discuss in the following three sections, in one way or the other, involve these factors affecting the programme costs. However, in our discussion on costs across these institutional case studies, we may not take all the five factors into consideration, because institutional decisions about the nature of courses, course production procedures, provision for student support, and institutional structures

differ from institution to institution. And these decisions affect the distance education costs considerably. But, at least, the underlying cost structures would be similar in all of them, with differences existing only in their implementation.

17.2.5 Cost in Open and Distance Learning System

It is essential to study the cost in ODL system because it help us to compare it with cost studies on both face to face and distance teaching. Also, the IGNOU provides for a nation wide operation, and a system that incorporates all the developments in this field. Moreover, there was the question of a full-fledged cost study being available for this purpose. This study was done by Pillai and Naidu in 1991. They took following major cost parameters for this study.

- (a) Course design and development (print).
- (b) Course design and development (audio and video).
- (c) Printing and distribution of print & A/V material.
- (d) Student Support Services.
- (e) Institutional Overheads.

They studied Direct Costs, Indirect Costs, Fixed Costs & Variable Costs. The data available for cost per course of an eight credit points is as stated below.

Development of Print Materials (08 credit course)

Cost Heads	Expenditure (Rs.)	%
Organizing Expert Committee Meetings	25,752	12.74
Fees paid to Course Writers	28,000	13.86
Fees paid to Editors	7,384	03.65
Faculty salaries	1,40,978	69.75
Total	2,02,114	100.00

Production of Print Materials (08 credit course)

Heads	Cost (Rs.)	%
Typing charges paid to agencies other than university staff	3,849	03.27
Internal staff salary (for typing, data processing etc.)	30,975	26.28
Charges for illustrations, drawings, etc.	5,504	04.58
Charges for designing of texts	18,750	15.91
Charges for composing of texts	1,17,859	49.96
Total	1,17,859	100.00

Development and production of Audio/Video Materials

The following two points pertaining to the calculation of total cost may be noted before looking into the actual data.

- The cost heads for the entire Communication Division were categorized broadly into five types, viz., staff salary, materials (like cables, connectors, components, etc.), consumables (like tapes, bulbs, etc.), software (used for producing the programmes), and programme production.
- The cost of ten audio programmes was considered equivalent to that of one video programme.

The total cost of the audio and video programmes for the year 1990 is given below.

Heads	Total cost (Rs.)	%
Staff salary	22,47,196	55.84
Materials	39,210	00.97
Consumables	14,87,902	36.97
Programme production	2,21,383	05.50
Software	29,038	00.72
Total	40,24,729	100.00

Annual Recurrent Unit Cost : The sum total of the fixed costs, semi variable costs, variable costs and indirect costs becomes annual recurrent cost. Fixed costs include the total revenue expenditure on the salaries of the staff in all schools of studies, the Distance Education Division, the Communication Division and the Print Production Division. The table given below indicates total fixed costs and the unit fixed cost under the four heads stated in this paragraph.

Fixed costs per student in 1990 ((total number of students = 45,859)

Cost Heads	Total cost (Rs.)	% to total	Unit cost (Rs.)
Schools of Studies	96,33,000	64.95	210.06
Distance Education Division	4,13,000	02.78	09.00
Communication Division	40,25,000	27.14	87.77
Printing and Publication Division	7,61,000	05.13	16.59
Total	1,48,32,000	100.00	323.42

Total and per student annual recurrent costs (total number of students = 45,859)

Cost Heads	Total cost (Rs.)	% to total	Unit cost (Rs.)
Fixed costs (direct)	1,48,32,000	17.67	323.42
Semi – variable costs	1,25,08,000	14.91	272.75
Variable costs	2,73,81,000	32.63	597.07
Indirect costs	2,91,97,000	34.79	636.67
Annual recurrent costs	8,39,18,000	100.00	1829.91

This cost pattern reveals that both the total recurrent cost and the per student recurrent cost were highest in the case of indirect costs, followed by, in rank order, variable costs, fixed direct costs and semi-variable costs. The per student annual recurrent cost for 1990 was Rs.1830. It may be noted here that the salary component accounted for 36 per cent and the non-salary component 64 per cent of the total recurrent cost.

17.3 Glossary

Marginal Productivity : In the process of production, three concepts are involved in the measurement of the output: total product, average product and marginal product. Total product refers to the total units of output produced from the given inputs. Average product/productivity is the units of output per unit of input. Marginal product/productivity of an input refers to the units or output contributed by the last unit i.e., unit at the margin of the input.

Social Benefit : It is the benefit accruing to the society as a whole out of any economic activity. This equals to the sum of private benefits and externalities.

Constant Price : Price expressed relative to the price of a fixed year, called the base year.

Direct Cost : Also termed as price cost or variable cost, this refers to that part of cost, which varies, directly with the level of output.

Indirect Cost : Also termed as fixed cost, it refers to that part of cost that does not vary with the level of output. This can be changed only in the long run.

Real Cost : The incurred cost when expressed in terms of real inputs is termed as real cost.

17.4 Summary

The system of Distance education has to provide economical but good quality education. For this purpose, it is essential to compare the cost of conventional education with that of Distance Education. This comparison would reveal the cost per student, per programme, and per graduate. This unit covered in short the cost analysis in education, Financing in Distance education, Cost function & structure in Distance education and detailed analysis of IGNOU case regarding costs of different nature. The educational costs per student may be calculated at three stages – I) cost per student enrolled, ii) cost per student actually attending school and cost per student successfully completing a given course. Capital expenditure or costs, are one time investments and those are related to teachers salaries, average pupil-teacher ratio at

each level, non salary costs of education and the capital cost for buildings and other equipments. The Direct costs and Indirect costs also play a vital role in determining actual cost per student. The earnings forgone may be termed as indirect cost while rest are direct cost. Opportunity cost is the cost of alternatives foregone. Thus, we see that, Social cost + Private cost + Opportunity Cost becomes total Annual cost per student.

On the basis of the total fixed costs, semi-variable costs, variable costs and indirect costs, the annual recurrent cost per student was calculated, and it came to be Rs. 323. When the various cost heads were taken into consideration, the share of the Schools of Studies was the highest (66%) and that of the Distance Education Division was the lowest (3%). As far as different cost types are concerned the indirect costs accounted for the highest costs (35%) and the lowest share was that of the semi-variable costs (15%).

17.5 Exercises for Practice

Write answers of following questions in about 200 words each.

1. What is unit cost and explain types of costs in distance education ?
2. Explain principles of financial management with reference to efficiency, equity and flexibility in distance education.
3. Explain the factors affecting cost of education programmes in open and distance education.
4. What are the cost parameters involved in calculating cost of distance education in India ? Explain them in detail.

Unit 18 : Networking Among Open Universities

Index

18.1 Introduction

18.2 Content

18.2.1 Priorities for Networking Among Open Universities

18.2.2 Networking Between Open University and NGO's

18.2.3 Networking Benefits to Dual Mode Education System

18.2.4 High Tech Institutes Support to ODL System

18.2.5 Short Term Exchange of Staff

18.3 Glossary

18.4 Summary

18.5 Exercise for Practice

18.1 Introduction

Every Open University has a biggest challenge of generating a two-way communication between the learner and the system. Providing a collective wisdom, to learner for his learning is a big challenge before every Open University. There may be many areas where the learner will enjoy Openness and interact with a good quality learning material. This challenge needs research for innovative strategies of learning. There may be some important areas where networking is essential. These may be as below:

- (1) Need Assessment for new programmes.
- (2) Development of learning materials through various strategies.
- (3) Strengthening of Student Support Services.
- (4) Research in Distance Education.
- (5) Quality Control in Distance Education.
- (6) Training for regular and part time staff.

- (7) Short time placements of regular staff as visiting fellows in other Open Universities.
- (8) Interaction among part time staff through conferences and seminars.
- (9) Providing Openness to learner in media selection.

These and other areas need an urgent attention of the academics, administrators for thinking in the direction of Networking among various open universities in India and Abroad. In this connection it is advisable to be in touch with academics at technological institutes of high repute and think over for the ways for a Networking of ODL systems with these organizations. It will help in developing a good quality learning material by using information communication technology. The open universities and NGO's may jointly start many activities among backward class people for raising an awareness of social, educational, technological and vocational developments etc. This is possible when a strong Networking of NGO's with Open Universities is developed for working together.

After the study of this unit, you will be able to know and understand :

- Priorities for Networking among Open Universities.
- Networking of Open Universities with NGO's.
- Networking of Open Universities with Dual mode system.
- Networking with institutes producing High end technology.
- Need for short time exchange of staff.

18.2 Content

18.2.1 Priorities for Networking among Open Universities

The Open Universities have a priority to assess training needs or learning needs of the people for launching a programme. It decides the success and popularity of a programme among people. Unfortunately, very few Open University has conducted such a survey yet and started many programmes in different fields of study. As a result, many programmes are getting very poor response from the society. The Open Universities may set up task forces having academics of different open universities

for chalking out various strategies for 'Need Assessment Survey' before launching a programme.

The quality of learning material in the beginning is not good with every Open University. However, it needs to be revised under the process of course maintenance and course revision as well as format suitability is to be taken into consideration. Networking with academics of other Open Universities for improvement of the material may be undertaken in the name of Quality improvement. There are many academics that have developed expertise in developing the material in print as well as electronic formats. The web based material developed by all Open Universities where academics try to learn from each other's experience and skills.

Student Support Services is central among all services. Networking of Open Universities may help each other in diagnosing weak points and then strengthening the same by taking help from others. The areas in which these Open Universities would contribute to Networking are as stated below :

- 1. YCMOU, Nashik, Maharashtra, (India) :** Question Banks development is an area with YCMOU. This university has developed a big number of Objective type and Descriptive type questions. Other open universities may use these Question Banks for courses, which are common after due translation and modification. Apart from these, exchange of counsellors and academics, exchange of study material are other various factors in networking among various open universities. All the open universities may contribute in this field. YCMOU has taken a lead in the area of Programme Evaluation and researches related to systemic quality improvement. Also, the task of 'On demand examination' has been in progress. Some specific programmes like Post Graduate and Research programme in Agricultural Communication, Agricultural Extension, Agricultural Development, Distance Education and other courses in Agricultural Sciences. In-service teachers training and continuing education programmes have been found very popular. Training of counsellors through distance mode is as innovative approach. Other open universities may receive these support after little modification and translation.

2. **IGNOU, New Delhi (India)** : This is National Open University having good quality Human resource, financial resources and a good link with other open universities at the global level. It can provide staff training and initiate systemic researches in the field of distance education. It may involve resource persons of other open universities for this purpose. Programmes like PGDDE & MADE are training programmes for distance education. The Material Production Division of this university is potent enough for producing a good quality low cost learning material.

Some programmes are specific programmes, which can be adopted by other open universities after assessing their demand and market value. Exchange of staff with other universities for a shorter period (3 to 6 month) may be an important area for Networking. The Reference material, journals, Bulletins, Newsletters received from COL or other foreign universities may be circulated among other Indian Open Universities. IGNOU may get a separate channel on Doordarshan for educational Telecasting and Broadcasting. Other state open universities through satellite may use this channel after time adjustment.

3. **BRAOU, Hyderabad, Andhra Pradesh, (India)** : The first ever-open university of India has good quality academics, as a regular staff. The services of these resource people in the form of staff exchange for shorter period may be used for material development, training programmes development, as well as for developing guidelines regarding networking. They may start joint researches, with other Open Universities academics. Their services regarding Manual development for coordinators and, Programme guides for students. Study skills and conduct of examination are innovative tasks in which BRAOU may contribute to other Open Universities. Subsidized community based technology and its development is also an area for networking with other open universities. Framing common rules and regulations for all Open Universities by Distance Education Council, may be successfully done with the help of BRAOU academics in consultation with their counterparts from other Open Universities.
4. **KOU, Kota, Rajasthan, (India)** : This Open University has some resource persons with much experience of organizing training, conducting researches,

material development etc. Other open universities under academic exchange programme may utilize their services for a shorter period for quality improvement in the field of Training, Research and Development.

The Distance Education Council may take up an initiative for networking among various universities in the areas stated above. The UGC Scheme of exchange of staff for a shorter period as Visiting fellow and Visiting Professor be also implemented among Open Universities. The academics be given an opportunity to visit other open universities and work with them for a shorter period of 3 to 6 months. This type of networking would help to both open universities in learning from each other's experience. The part time staff is also given an opportunity to interact with academics of other open universities during faculty exchange programme. It will help them in understanding their role with ODL system.

18.2.2 Networking between Open University and NGO's

The Non Government Organizations (NGO's) are very active in India since long. We cannot overlook their contribution for social reform. The Bhoo-Dan Yagna by Sri Vinoba Bhave, and Scheduled Tribes upliftment by Thakkar Baba are some of the remarkable evidence that the NGO's can be instrumental to social change. The Bharatiya Agro Industrial Foundations (BAIF) is very active NGO in Maharashtra working among Tribals. It is a surprise to see that 100% literacy in Mizoram and Kerala is because of NGO's working there even in remote areas. Vivekanand Mission, Ramakrishna Mission and Sharda Mission are very active NGO's in India imparting education to the poor and deprived class called as Scheduled Castes and Scheduled Tribes. The need of the hour is to develop a strong networking between open universities and NGO's for imparting Need based mass education among needy persons. Small short time programmes like, toy making from local raw products, monitoring of Solar energy production and distribution, computer literacy, first aid, preservation of drinking water, improving village life, tailoring, etc may be some of the programmes for them. These may be developed by Open Universities and can be

run by NGO's in local areas. In this respect the governments at Central, State and local levels should provide financial support in the form of fees for these poor people who can't afford to pay.

Thus, a triangle, having three strong rods of co-operations and three angles with commitment to work include Open University, Government and NGO's can achieve the target of mass education in India. In this respect, a memorandum of understanding may be signed among these three angles for co-operation and commitment to achieve the target of Mass Education. The positive factor of this Networking will be mobilization of local people by NGO working with them. Negative Attitude of local people and ignorance of the benefits of education can be very well met by NGO's with the help of local educated and elder people. Varrier Elwin a person from Ireland who settled in India after independence and worked for tribal development in Arunachal Pradesh. His work in the form of book (Tribal Philosophy of NEFA) reveals the history of work done by him and his future plans. He has done pioneering work among First Generation Learners of Arunachal Pradesh.

A word of caution is essential here. The dedication and honesty of NGO's is a matter to be taken into consideration by the open universities and Government. The success of plans depends upon the work to be done by NGO's. Therefore, it is essential to enquire the attitude of NGO's towards work before they are associated with some work.

18.2.3 Networking Benefits to Dual Mode Education System

The dual mode system has a spirit of imparting education through distance mode. But, in India this mode has a very little care of student from Registration to Examination. Their status is as good as those of External students in Conventional Universities. These students are the major source of income but are treated as stepchildren by the University for providing academic support to them. Following may be areas for Networking of dual mode with the single mode for upgrading the services to distance learners.

- (1) Development of Learning Material in Self Instructional Material (SIM) format.
- (2) Training to Counsellors and Tutors regarding the process of counselling.
- (3) Use of Electronic Media for providing learner supports.
- (4) Providing Openness in learning as well as in Examination.
- (5) Credit transfer from one programme to another.
- (6) Interaction between staff of Dual mode and single mode in the form of Training, Workshop and Orientation.

The dual mode institutions has no learning material of its own. They prescribe same material, which is used by conventional learners written in conventional style of course writing. Self-Instructional Material (SIM) is written in a specific style, which takes care of learners level and their difficulties. Whatever queries or questions or confusions come in the mind of the learners, the material provides a solution well in advance. There is a provision of assessing difficult words and explain them by writing Glossaries by giving some examples. The material itself generates a two-way communication with the learner. It is essential to organize Training programmes by open universities for the course writers of dual mode system.

Another important issue is providing a good quality human support to learners at the time of counselling session. The Open Universities may organize training programmes for these counsellors and use distance mode to train them about their role & responsibilities as a counsellor / Tutor. Electronic media plays a vital role in imparting education to distance learners. It is quick and economical too.

Use of Radio, Television and Internet for communication with the learner may provide a better and immediate support to the students. The Open Universities have their Audio Visual centers with a facility to develop and produce Audio / Visual material for learners as well as a live telecast. These facilities may be used by dual mode institution, if an understanding between both modes is made for the same.

Providing openness in learning as well as in examination is a major feature of every Open University. This openness gives freedom to learn at his own rate, pace and time as well as to select courses of his own choice from a variety of courses

prescribed for the programme. Also, to appear in examination at a time of his own choice and mental readiness for the same is essential for distance learner. On demand examination and longer duration of time for programme completion is also essential for distance learner as part and parcel of openness. The Open Universities may help the dual mode for implementing these ideas in the name of Openness.

Credit transfer is another facility, which helps the student to not study same course content twice. For example, if a person has done foundation course in Agriculture during their diploma in fruit production which is again a part of course content for Diploma in Floriculture and Landscape Gardening, the student is not supposed to study same course and appear for examination twice. He has to study once and the marks obtained are credited for second Diploma programme. This provision is already with single mode and can be adopted by dual mode institutions.

From time to time, the staff of dual mode may be called by single mode for providing training, workshops and an orientation regarding various issues related to Distance mode. For example, Question Banks development and their use for developing Question papers is a specific activity with YCMOU, Nashik. The dual mode may learn this activity from YCMOU as part of exam reform work. Also, such meetings will help in understanding the problems of dual mode and their possible solution by single mode.

18.2.4 High Tech Institutes Support to ODL System

The Open University programmes are based on Multimedia support. The role of teacher in a face-to-face situation is reduced by machines which telecast and broadcast as well as project the learning material through Internet. Computer as multimedia has a potential of projecting same learning material in a wide variety of ways, which can be projected through Internet for the society. In this respect, apart from bonafide students, other interested persons may also like to see these programmes and pass their comments about their quality. It is essential to develop a strong networking of Open Universities with Institutions of High technology for seeking support. These

institutions may be ICAR, SAU's, IIT's, Universities of Science and Technology, and Indian Space Research Organization (ISRO). Doordarshan, Bharat Sanchar Nigam Limited (BSNL), All India Radio, Computer software developing agencies etc.

From time to time, training of Open University Academics for using these sophisticated instruments be organized and a strong networking between ODL System and Hi-tech System may make the education to reach the mass quickly and economically. Such efforts have been made by Commonwealth of Learning (COL) Canada through its regional offices for organizing training programmes from time to time in collaboration with Hi-Tech institutes. It will liberate the Open Universities from its conventional tracks and provide new alternatives for openness at each and every stage of learning. Such collaborations are very strong in developed countries like Japan, Russia, United States of America, U.K. and China. It is because of this strong support from Hi-Tech, Japan Open University is called as 'University of Air' and in China it is Central Radio, Television University of China (CRTVU). The print is secondary media while Radio and TV broadcast and Internet are primary media for imparting education.

18.2.5 Short Term Exchange of Staff

Collective wisdom provides a quality to work and many ideas after interaction. This is possible, when schemes like Visiting fellows and Visiting Professors are to be introduced for senior academics being retired after gaining much experience of work in the field of distance education. These academics may be invited to work for short term in Open Universities where unskilled and new persons have joined as academics for various programmes.

Also, such scheme may benefit Open Universities in understanding various activities in practice at other places and may try to incorporate the same if found useful and suitable for them. Material quality, Programme Evaluation, Learner drop out problem, use of Hi-Tech etc may be undertaken easily by Networking among various Open Universities.

18.3 Glossary

Hi-Tech Institutes : These institutes have a provision for teaching & research regarding development and use of High end Technology.

NGO's : These are Non Government Organizations, which work as agents for social change. Their autonomy and commitment to job is basic feature of their philosophy.

Vocational Development : Development of Human Resources for different vocations like computer Hardware and software maintenance, scooter mechanic, T.V. mechanic.

Format Suitability : It indicates towards selection and liking of that Self Instructional format which suits to the learner for learning. It should generate a two way communication with the learner.

Manual : It is a set of rules or code of conduct stated in some order, which can be easily followed, by their users.

NEFA : This is short form of North Eastern Frontier Agency (NEFA) now known as Arunachal Pradesh. It is one of the states situated in North Eastern part of India.

Credit Transfer : This is acceptance of learner performance from one programme to another for some common courses. This may be from One University to another or within same University for different programme.

Training / Workshop / Orientation :

Training : It is correction or modification of behavior by enhancing certain skills in the person. e.g, if a person is unable to discriminate between wheat plants and Barley plants, he may be given some demo and may be asked to identify after that. This demo and self-observation may improve insight of person.

Workshop : It is activity based learning where a person is given demonstration of or some work and then is asked to perform some work, with minimum help form others. It develops confidence among learners for an independent work.

Orientation : This is an effort to remind a person about some old or already established traditions or issues or philosophies or methods which are very useful to the person in performing his duties effectively.

18.4 Summary

The distance education system has many challenges to face. These challenges can not be met by few Open University. A Networking of different services, supports, Human resources etc. may meet these challenges successfully with less efforts. Various areas for Networking may be Need Assessment for New Programmes, Learning material development using WEB Technology, Student Support, Research in Distance Education, Quality Control, Training to regular and part time staff, exchange of staff for a shorter period and openness at each and every stage.

The NGO's have done a wonderful work in India particularly in Tribal areas. These NGO's have brought cent percent Literacy and provided opportunities for Higher Education to even first generation learners from tribal areas. They can be instrumental to change and work as an agent between open universities and people for delivery of programmes as well as Need assessment survey. The work done in Mizoram, Arunachal Pradesh, Kerala etc is an example of meaningful achievement from the collaboration between NGO's in tribal areas. It is an evidence of dedication and hard work by NGO's in bringing these tribal people with main stream of India.

There are many areas in which four well established Open Universities might collaborate and contribute to in the name of Networking. Student support may be strengthened through Networking among various Open Universities. It requires the Distance Education Council to come forward and manage such networking among Open Universities.

The Dual mode of distance education is part and parcel of conventional Universities. This mode takes very little care of students for providing academic support and openness in every activity. The single mode may provide much support to this dual mode if a networking is developed between the two. Training of academics is a major priority before such Networking. Development of Learning Material (both print and non print), conduct of counselling sessions, Question Banks, development and preparing a comprehensive question paper suitable to the circumstances of a distance learner are some of the areas for collaboration between dual and single modes of distance education.

High-Tech institutes may provide wonderful applications of various Electronic devices, which can communicate easily, and economically with the help of satellite technology in the form of Internet. This Networking may train manpower of Open Universities for using High end Technology for meeting learner needs. Short time exchange of staff among Open Universities may provide collective wisdom to various activities as well as opportunity to learn and update from each other's experiences.

18.5 Exercises for Practice

Answers of following questions in about 200 words each.

1. Explain why should all open universities need to be networked for better quality distance education.
2. Why open universities should networked with non-governmental organizations (NGO) in India ?
3. Why dual mode conventional universities should networked with single mode open universities ?
4. Why networking is essential among all the institutions predominantly imparting distance education in India ?

Unit 19 : Staff Development for Distance Education

Index

19.1 Introduction

19.2 Content

19.2.1 Staff Development

19.2.2 Part Time Staff Training Needs

19.2.3 Training of Core Staff for Technology Applications

19.2.4 Future Challenges for Staff Development

19.2.5 Staff Development : Present Scenario

19.3 Glossary

19.4 Summary

19.5 Exercises

19.1 Introduction

Distance education is a critical sector, which needs human resources with specialized skills. There is an acute need for trained human resources and of upgrading existing skills in the work force. Training professionals through the distance mode is full of challenges. There is a wide spectrum of knowledge, skills, attitudes and values that characterize every profession. Development of these invariably requires a variety of learning processes to be activated. Full time, institution based training involving face to face transaction holds possibilities of creating instructional solutions where these learning processes do get activated. To incorporate them into the distance mode is a challenge worth pursuing. New developments in information and communication technologies have made it possible to incorporate a range of alternative learning experiences in the distance education strategies. The full import of these changes is yet to sink in completely among the professional community. The Development is a

profound structural transformation, which was a complex interaction among many different variables in which the cultural background and mindsets of individuals were as important as economic and political factors. Therefore, there is an urgent need of staff training in every sector including the distance education sector.

The system of Distance education is based on multimedia and mix media for meeting learner needs. Development of multimedia and mix media requires a variety of persons. Some of them are full time workers while most of them are part time working on contract basis. They need orientation and training for Upgradation of their skills. A wide variety of technologies have been developed and now are in use for imparting education through distance mode. It is essential that full time and part time workers be given necessary training for use of these technologies. Staff Development is a process covering upliftment of skills essential with various types of workers.

After the study of this unit, you will be able to know and understand :

- Staff development and part time training needs.
- Challenges for staff development.
- Present scenario for staff development

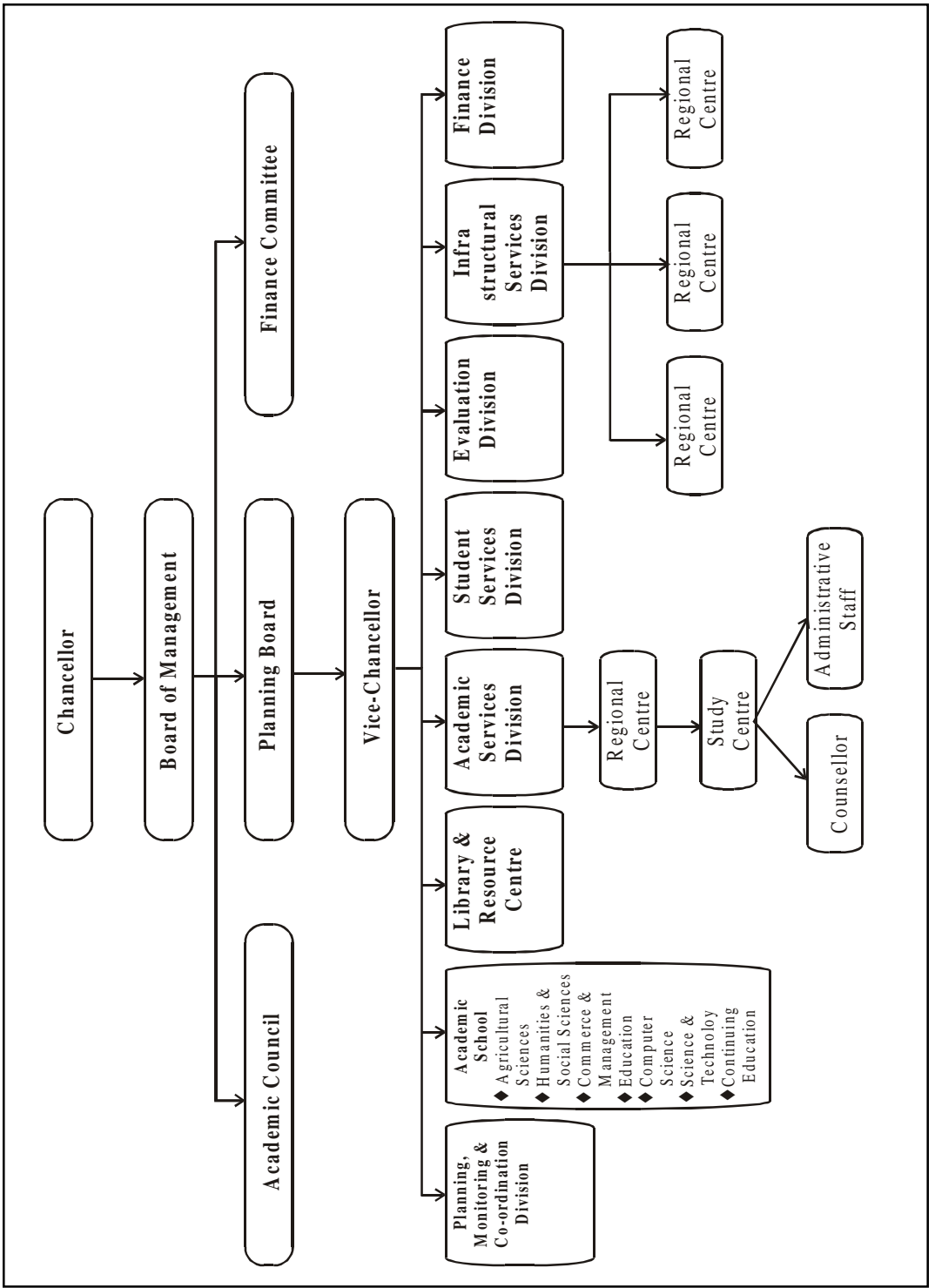
19.2 Content

19.2.1 Staff Development

Every Open University and center for Distance Education of conventional universities has a large number of part time workers and few as full time workers. They are new to this system because the system is new and is recently established in every country. The staff has to face three big challenges responsible for growth and functioning of Open Universities in India. These challenges are :

- (1) Technological Revolution.
- (2) Psychology of Teaching Learning.
- (3) Science of Management.

These three have jointly made it possible to reduce manpower and manage to provide need based mass education in various fields. The configuration of staff in an Open University is almost similar as stated follows :



The need for staff development arises when the person has to do same work by using different technology in his field or he has to perform different role in his job due to technological changes in the field of work. A person using wooden plough and bullocks had to take training of driving tractor in the fields. This is staff development. Same farmer has shifted his role from wooden plough to some new machines driven with the help of a tractor. Similarly, there are many examples of staff development in different fields. The train drivers using coal engine were trained to drive Diesel and Electric engines. A teacher from conventional system is expert enough to deliver a lecture in classroom needs some training for providing counselling to Distance learners of Open Universities. These are some examples of staff development.

We need to strike three different zones when we talk of staff development. These zones are :

- (1) Knowledge.
- (2) Skills.
- (3) Attitudes.

These zones jointly develop competency in a person. A competent person thus must have knowledge of the work to be done, various skills of performing the task and their perception or thoughts about the work. This third factor is very important in deciding competency of a person. A person with knowledge and various skills can not do justice with his work if his attitude towards work is negative. Big companies provide many incentives for workers who undergo for staff development. It keeps their motivational level high during and after training. Also, the benefits of using new technology must be made clear to the trainees. It would automatically keep their attitude positive and by using technology after training, they will mentally accept the technology and will bring it in practice. It requires much support from the controlling officers in the form of monitoring various activities to be done by the worker after staff development training.

19.2.2 Part Time Staff Training Needs

These workers have some common training needs while some training needs are specific. For example knowledge of ODL system, role of technology, characteristics

of distance learners, Quality in Distance Education system, three tier approach to a distance learner etc. are common training needs of all workers. Similarly, specific training needs differ from person to person depending upon the type of work to be done by a person. For example – a counsellor or a tutor needs to understand various communication techniques by using different media, Psychological needs of a distance learner, managerial technique for organizing a counselling session, and, writing a variety of comments on the body of learner assignments etc. Below are some of the training needs of different type of workers.

1. Course Writers and Editors

- (a) Development & Editing of Self-Instrumental Material. (SIM)
- (b) Modular approach for SIM development.
- (c) Assessing learner difficulties in understanding the content.
- (d) Determining validity of course content.
- (e) Language editing.
- (f) Content editing.
- (g) Format editing.

2. Counsellors and Tutors

- (a) Diagnosis of learner difficulties.
- (b) Psychological needs of a distance learner.
- (c) Skills for using various technologies appropriate for counselling.
- (d) Comments Writing.
- (e) Use of Information Communication Technology.
- (f) Managerial Science.
- (g) Knowledge of Androgogical principles.

3. Audio Visual Producers

- (a) How to write an interactive script.
- (b) How to convert an Academic script into a Audio/Video script.
- (c) Recording procedure.

- (d) Editing techniques.
- (e) Multicopying and mass production.

4. Multimedia (Computer Assisted Learning) material producers

- (a) Knowledge of Branching Programming.
- (b) Expertise in Modular approach of content presentation.
- (c) Loading the modules in window based MS. Word software.
- (d) Demo of various modules.

5. Study Center Head and Co-ordinator and other staff

- (a) Characteristics of Distance Learners.
- (b) Need of distance learner.
- (c) Knowledge of Androgogical Principles of learning.
- (d) Knowledge of Open Distance Learning system.
- (e) Role of Multimedia and Mix-media in meeting learner needs.
- (f) Mediatory role between learners and the Open University system.
- (g) Knowledge of different media and their role in imparting education.
- (h) Role as Publicity worker for raising an awareness of ODL system in society.

By using various methods as given below we may provide training.

- (a) Conventional training approach.
 - (b) Multiplier effect.
 - (c) Open and Distance Learning method.
- (a)** The first approach is not practically possible, because the trainees can not attend 30-40 days training by remaining at the Open University Head-Quarters or at any other suitable place away from their place of residence. They cannot get duty leave for such a long period for attending this training programme. Also, it is economically not viable to pay for the stay arrangements and the hospitalities for a long time of 30-40 days. It will be practically impossible to accommodate such a large number of persons at a time or even in batches for such training.
- (b)** The second approach is better and economical than previous one. The multiplier effect deals with multiplication of trained and skilled persons. In this approach,

few persons are trained by calling them from different regions. These persons organize same training programme in their regions by calling persons from different areas of the region. This procedure is repeated till every worker at grass root level is trained. Central Institute of English and Foreign Languages (CIEFL) at Hyderabad adopted this method. They had a target to train English teachers of different schools in India even at village level. Later on, this scheme was withdrawn because the competency level at different stages of training was not found similar. The first batch trained at CIEFL was more skilled than other batches. Ultimately, the CIEFL had to withdraw this scheme of training the English teachers.

- (c) The ‘third approach’ being distance mode has been found effective and economical for staff training and development also. It is potent enough to produce persons with adequate knowledge, required skills and proper attitude towards work. The YCMOU has conducted a research project for staff training and development among counsellors. About 63 counsellors were trained using distance mode. They were supplied print material in SIM format, 2 Audio and 2 Videocassettes were also demonstrated before them. Finally, a two days, personal contact programme was organized by calling these counsellors at Nashik, Dhule and Pune in batches. The pre test and post test difference, for Knowledge, Skills and Attitude towards counselling work was found significant and the multimedia developed for counsellors training was found effective in producing competent persons for the purpose of counselling the distance learners. The cost for training to counsellor was found to be Rs. 438/- per counsellor only. It could have been reduced if a large number of counsellors had to be trained by using same package. Thus, we see that, Distance mode was found economical, effective and viable too for the purpose of staff training and development. It can be effectively used for all type of workers associated with ODL system.

19.2.3 Training of Core Staff for Technology Applications

The regular staff in an ODL system is of variety in nature. Some are purely academic persons in the cadre of Lecture, Reader, and Professor. They have normally

no opportunity to take regular classes but they are supposed to develop learning material in SIM format and monitor this activity among part time course writer. They are supposed to prepare Audio & Video scripts and their recording. They visit the study centres from time to time to take a stock of various activities. Another type of workers is working at Regional Centres in the scale of Lecturer, Reader and Professor. Their job is semi academic. They are supposed to provide training to the study centre staff about their role and monitor various activities related to student support for various programmes.

There are some technical persons responsible for production of print material, Audio & Video Cassettes / CDs and Websites for various programmes. These websites contain every information from Registration to Result declaration and finally issue of migration certificate. These persons need training in following areas:

- (1) Knowledge of computer application in different activities.
- (2) Modular approach to course development.
- (3) Quality in ODL system.
- (4) Development and use of Multimedia and Mix media.
- (5) Local resources generation.
- (6) Research for ODL system.
- (7) Networking with other Distance education organizations.
- (8) Converting Print format to Audio/Video cassettes.
- (9) Organizing tele conferencing sessions for student and counsellors.

The major characteristic of Distance education system is **“word of mouth is word of hand”**. Everything is to be communicated to the student in writing instead of speaking. Therefore, a highly academic person conditioned enough to lecture on various issues, needs training to express his views in writing. It may be print material (Self Instructional Material) format or Electronic format (Audio / Video) or Web / Computer Assisted Learning(CAL) format. It is essential to train these academics for their expression in writing instead of speaking. The learner is at a distance. He may send his queries and question in written form by post or E-mail or Phone or by any device. The academics posted in various schools of ODL system are supposed to answer the same. Thus, a different type of role is to be taken up by the Academicians

posted with ODL system. They require training in different areas.

The Regional Directors and their subordinates have different role of monitoring learner progress and liason between study centres and Headquarters. They have to keep a vigilance and control dropout cases for various programmes. Due to decentralization of various activities, the role of Regional centres will increase and they have to keep a record of admissions, examination and finally result distribution to students through their study centres. These officers require training for performing this new role at the Regional centres.

19.2.4 Future Challenges for Staff Development

The system of Distance education has to meet a challenge of bringing Openness in the system. This Openness means the learning at own pace, rate and time. The other meaning of openness is freedom to select a learning strategy of his/her own choice. This challenge can be met if a wide variety of learning strategies are developed and placed before the learner for making a selection of his own choice. It requires a big training programme as staff development. Every academic must learn and be skilled enough to develop variety of learning strategies for same course content. Also, he has to answer the queries made by students. The Internet will be of much help in this matter. Every student be asked to have his E-Mail address of faculty people. The Question raised by some student and corresponding answer to be given by the tutor / counsellor or by concerned academic posted in the school may be sent to all students immediately. It requires a training to use Internet for all academics posted in various schools or Divisions.

The idea of framing Question banks and their computerization in different ways is essential for every Open University. It will help them for proceeding towards On Line Examination (OLE) and On Demand Examination (ODE), which is a unique feature of every Open Distance Learning (ODL) System. Quality control and Total Quality Management are big challenges before every Open University System which has to, impart quality education in comparison and competition with other Open Universities as well as conventional Universities. The staff posted as full time as well as part time like teacher counsellors, course writers etc, require training for bringing

quality work in the organization. On line courses to be launched by Virtual Universities is a matter of game to be played jointly by computers, satellite technology and Internet. There will be much communication through Internet in the form of E-mail, Voice mail being two way interactive known as Tele Conferencing in the form of two way audio or two way video or one way video and two way audio. This whole show requires not only installment of necessary machines to make the tele conferencing as success. Counsellors are to be trained to use phone and Internet for the purpose of counselling the student. This will help the counsellor to communicate his answer for some question to all students at a time just by clicking the key to send E-Mails to all students. It will help to all students even if they have not raised any question.

19.2.5 Staff Development : Present Scenario

There are two main views regarding staff development for ODL system. The Australian view is in favour of a rigorous training for all type of workers and they train workers from other countries. A team of 5 persons from India had been to Australia for one month training regarding evaluation of Distance learners and application of technology in ODL system. The British view is reverse to such idea. They think that there is no need to provide any specific training to the workers. It is the work environment, which will slowly make workers competent. Drill and practice will make them skilled in due course of time.

Indian views are always in between. There are some areas where training is essential, while in some areas it is not. The following areas need rigorous training.

- (1) Developing Self Instructial Material (SIM).
- (2) Providing counselling to students.
- (3) Developing Question Banks.
- (4) Use of Internet and Satellite communication.
- (5) Writing Audio/Video scripts.

For other area, particularly for administrative work, a person does not require any rigorous training. Accordingly, the system of Distance education is organizing various training programmes for ODL workers. The IGNOU is having **Staff Training Research Institute in Distance Education (STRIDE)**. It is providing training to

the academics for Material Development, Quality control, Student Evaluation, Networking among various open universities like Bhutan, Africa, Bangladesh etc. they come to receive such training at STRIDE, IGNOU, New Delhi or the resource persons from this Institute visit to other countries.

The YCMOU is calling the study centre staff to train them about their role and responsibilities. Also, the Study Centre Heads and Co-ordinators are called every year at the Headquarters for orientation about new things in academic, administration, financial rules and procedures. Counsellor training is an important aspect in Distance Education scenario. They deliver lectures on a topic of their own choice in the name of counselling. As a result, the number of students is decreasing day by day for attending the counselling sessions. Infact, the role of a counsellor is to diagnose the learner difficulties and confusions and accordingly prepare a two hours deliberation in such a way that all the queries and questions are met. This requires some training to counsellors. The YCMOU has developed a multimedia package as stated below:

- (1) Academic Counselling : A Human support.
- (2) Two Audio Cassettes
- (3) Two Video Cassettes

In order to assess the effectiveness of this material, following tests were developed.

- (1) Achievement Test
- (2) Counsellors Performance Test
- (3) Attitude Scale
- (4) Opinion Scale

The pre-test and post test data analysis revealed that the material used for training the counsellors was effective in raising the level of Knowledge, Skills and Attitude towards counselling. The opinion of the counsellors was also positive about the learning package. About 63 counsellors were trained by using distance mode. It was found effective, economical and viable preposition.

YCMOU at Nashik is first among all Indian Open Universities for training the research guides registered to supervise M.Phil & Ph.D. programmes in Subject communication, Educational Communication and Distance Education by using

distance mode. There was also some print material, audio/video cassettes and 3 days a personal contact programme at the university headquarters for their queries/confusions/questions. These two programmes as staff development activity were found very popular and the participants expressed their opinion in favour of the same. This package can be used to train all Post Graduate and Research Guides for raising their level of knowledge, skills and attitude towards researches in communication and Distance Education.

Thus, we see that staff development for ODL system is an urgent need and it can be achieved in an economical, viable and efficient way by using ODL system.

19.3 Glossary

Multimedia : This is a blend of various media for performing a role jointly. If any of these media is absent or not active during role performance, the whole combination fails to work.

Mix Media : It is a setting of different media with different roles. These have independent functions and their joint effect can not be assessed together. The absence of one media does not affect the functioning of the others.

Staff Development : When a person has to learn some new skills for performing his role in a better and different way, the training is called as staff development. For example, a typist typing on typewriter has learned computer for the typing work.

Modular Approach : This is a process of dividing course content into different independent small parts. These parts are well explained one by one by linking each other in a sequence.

Achievement Test : This test is formed to know the level of knowledge gained by a person in some field. Every effort is made to accommodate questions from almost every module for this test.

Personal Contact Programme : This is organized at the study centres by open university system for meeting learner problems/questions/queries which remain even after learning through print material or audio/video material. A face to face interaction takes place in a classroom between the learner and the counsellor.

Opinion Scale : This is drafted to seek opinion of course users about various units/modules, learning devices, learning environment and counsellor's approach to meeting learner queries.

Attitude Scale : This scale seeks the degree of agreement with some activity or person or situation. Normally these scales are developed on a five point scale. The respondents tick any point after reading the statement.

Performance Test : This scale is drafted to examine various skills of a person when he is at work. The pre-decided skills are observed by others and assessed by allotting marks/grades to student.

19.4 Summary

Availability of skilled workers for various activities of distance education system, in the beginning is a problem with every country. The Australian view is in favour of a rigorous training to the workers. But, the U.K. Open University has a different opinion favouring drill and practice for learning skills. The Indian view is in between the two. We think that training is essential for certain activities like course development, counselling work, Audio/Video script writing, managing a fair assessment of learner performance during examination dealing with distance learner and meeting his/her problem.

There are many ways for providing training to workers for staff development. The Conventional approach to training by calling persons at some place for a long period will not be viable, economical and possible in practice due to many constraints. Another method called as 'Multiplier effect' was found not effective because the first generation batch was more competent than rest batches and the degree of competency was found decreasing from one batch to another. This method was adopted by CIEFL, Hyderabad for training English teachers in India. Later on they dropped the idea of using multiplier effect. The third method being open & distance mode for staff development was found effective by various open universities. It was used by Yashwantrao Chavan Maharashtra Open University for counsellor's training as well as training to Ph.D. guides for Communication and Distance Education researches.

The IGNOU has launched PGDDE and MADE programmes of one year each through distance mode. These programmes are of much use for staff development through distance mode for distance education workers.

There are many big challenges for core staff and an urgent need for staff development using open distance mode may be organized for the same. These may be as below :

- (1) Computer application for different activities.
- (2) Modular approach to course development
- (3) Quality in ODL System
- (4) Development and use of multimedia & mix media for various programmes.
- (5) Local resources and their use
- (6) Research for ODL system
- (7) Networking with other ODL systems.
- (8) Converting print format to Audio/Video scripts
- (9) Organising teleconferencing session for students and for counsellors.

The major challenge for staff development will be use of Internet in meeting learners problems in future and conducting on line examination. It requires a massive staff development programme for using computers and Internet by core staff and counsellors.

19.5 Exercises for Practice

Write answers of following questions in about 200 words each.

1. What are the training needs of academic staff working at open university head quarter ?
2. What are the training needs of staff working at regional centres of open university ?
3. What are the training needs of staff working at study centres and work centres ?
4. What are the major areas where staff training and development is prime importance ? Explain it.

Unit 20 : Openness and Flexibility in Open University System

Index

20.1 Introduction

20.2 Content

20.2.1 Openness : Some Challenges to an Open University

20.2.2 Flexibility : A Modular Approach

20.2.3 Openness for Optimum Learning

20.2.4 Demerits of Openness and Flexibility

20.2.5 Openness in Dual Mode Institution

20.3 Glossary

20.4 Summary

20.5 Exercises for Practices

20.1 Introduction

The correspondence education had jumped to a new type of non formal education called as distance education. There were mainly three types of distances observed in the system of distance education.

- (1) Physical distance between teacher and learner.
- (2) Physical distance between learner and learner.
- (3) Measurable distance between learner and the teaching system.

In order to provide education in spite of these distances, the teaching system accepted two revolutionary ideas as (i) Openness and (ii) Use of mix media and multimedia for reducing these distances. These two revolutions have an active support of three major sciences as below :

- (1) Electronics and various gadgets
- (2) Teaching learning techniques
- (3) Science of Management

The learner has an active role to play in learning and these three sciences help in creating a learning environment with the isolated learner. The role of teacher is played by machines in the form of Self Instructional material, Audio/Video support and various techniques for counselling to the learner. These have reduced the distance and inspite of a physical distance, the learner does not feel any isolation during learning. Openness provides freedom to learn at the learner's rate, pace and time. Apart from this, a new meaning of openness has been accepted being 'the learner should have freedom to select a learning strategy of his own choice'. The technological support has helped in bringing distance education out of its traditional track of following two or three tier system. The learner has a freedom to get counselling either by Post or Phone or E-mail or face to face interactions or through group interaction and or any other device. They can learn by using any media or a mix media as per their needs.

But these type of openness are a big challenge to all open universities. Establishing such infrastructure of men and machines requires huge money and training to workers. It will have a long effect in reducing the cost per student, per programme and per course. But, a one time expenditure by open universities in developing countries is a problem. However, to achieve mechanization with the help of financial assistance from Distance Education Council (DEC), New Delhi. Flexibility is also another characteristic which has many dimensions. A student can change a course or a group of courses if he or she feels so. The On-demand examination provides an opportunity to appear in the examination at a time of their own choice. There is no binding about the number of languages to be studied or number of courses to be taken for an examination. The student has every chance to improve his performance (marks or grades) by re appearing in examination many times.

After the study of this unit, you will be able to know and understand :

- Bringing the openness as a big challenge before every open university.
- Meaning and use of Flexibility.
- Meeting optimum learning targets through openness.
- Side effects of openness and flexibility.
- Need of openness in Dual Mode.

20.2 Content

20.2.1 Openness : Some Challenges to an Open University

The concept of openness is easy to describe but difficult to implement because being multi dimensional and much expensive for one time expenditure. The learner is adult learner being in job and has little time to devote for studies. He has to learn at his own rate, pace and time. He/She can complete the studies only when such freedom or openness is given to them. A student may not be in a position to attend counselling sessions in a face to face situation due to being busy with other mandatory assignments. He may prefer to use Phone or E-mail as a media for counselling. The open university has to provide this facility for learning. The university of Air, Japan or the Central Radio and Television University of China (CRTVU) have Radio and Television as primary media and counselling by tutors as secondary media. They can listen to their radio and watch the TV at their home as well as at their work place. It saves much time and learning while working takes place. Thus, we see that openness provides much freedom to the learner in completing his studies as per his suitability.

But, there are many challenges before every open university in providing this openness to the students. The major problem is to set up the infrastructure of the university which has its input as per the requirements described. This input covers five components being Man, Money, Machine, Method and Material. It shows that the manpower should be skilled enough to use machines and new methods of teaching learning. Computer is the master of all technologies and can produce same information in a wide variety of ways. Every person (Academic and Non Academic) has to get mastery over computer operations. The new generation teachers are learning the computer operations while the old teachers are resisting the same. They like Black Board and chalk and they are in favour of chalk and talk method. Using the new technologies is a challenge for them and for which they are not ready to learn. Another challenge is a huge finance being one time expenditure. An Open University of a developing country can not meet such a huge expenditure being one time. The

sophisticated machines are to be purchased and supplied to the headquarters as well as to Regional Centres and Study Centres. The manpower deployed there is not skilled enough to use these machines. Ultimately, this huge one time expenditure may be a wastage of money. The learners, are also not much aware of using these technologies inspite of availability at the Study Centre. Therefore, on line counselling or online examination is still a dream for an open university in India. The counsellors or tutors are delivering lectures on a topic of their own choice in the name of counselling. They need some training for understanding their role as a counsellor.

An un skilled counsellor can not do justice to his/her job. Again, it requires much money to train a number of counsellors for using modern technology for providing counselling to the distance learners. Another major challenge before open universities is to introduce on demand examination for facilitating the learner to appear for examination on a day and time of his/her own choice. It requires a big question bank being error free and computerized in three ways to be used with the help of a software for producing a very big number of Question papers in parallel forms for same course. It may control and reduce scope of copying during examinations. But, this whole phenomenon is still a theory, because of lack of skilled man power, money to purchase technology and handling of the same. The open universities in developing countries are facing these problems in the way of implementing the concept of openness.

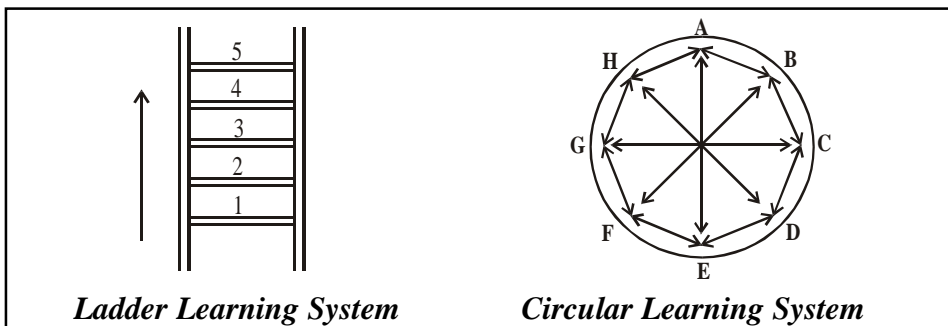
However, it is expected that these open universities will adopt slowly to these challenges and the workers will learn through drill and practice. Thus, we see that open universities in developing countries may require a long time still to implement the idea of openness in their system.

20.2.2 Flexibility : A Modular Approach

Here we discuss the meaning of Flexibility in the context of open university, stages and methods of bringing the flexibility, its benefits to different components of open university and ways and means for implementing the same in the system. The

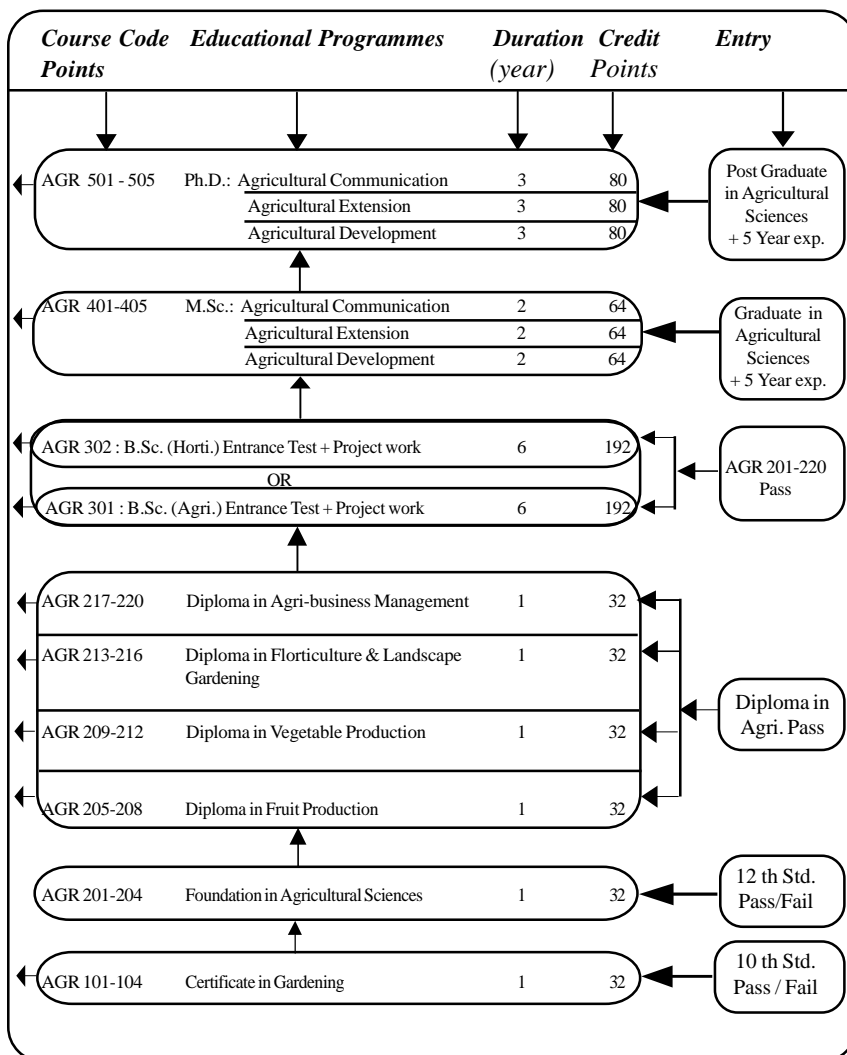
term flexibility indicates to avoid and remove the rigidity in the system. For example, rigidity of rules can not allow a student to improve his performance if he has already completed his degree and taken his certificate also. The open university must have a provision for performance improvement by appearing in examination from time to time. This flexibility may be achieved if, on demand examination is implemented by an open university. Selection of courses and optional groups etc. is a matter of flexibility in the system. Credit transfer from one programme to another programme for some common courses is also a matter of flexibility.

Various stages for observing the flexibility are admission stage, programme completion and examination as well as grades improvement. At the time of admission, a person may join more than one programme and study simultaneously. At the programme completion stage, the student may select courses of his choice and may like to complete any stage first without following the ladder system. He should take his journey as circular which can be started from any point on the circumference of a circle and will end there too.



On demand examination may bring flexibility at the examination stage where every one will have a freedom to appear in courses of his/her choice. The student may appear more than one time for performance improvement, even if he has been declared successful in the programme. A student might have joined more than one programme having some common courses, for example, Word Processing in BA Programme as well as in Certificate in Word Processing. He has to appear for this examination only once and he will be entitled to a credit transfer from one programme to another. There will be no rigidity of appearing in two examinations separately. The student has to appear only once which will be counted for both examinations.

School of Agricultural Sciences
Vertical Mobility to the Programmes in Agricultural Sciences



Multiple entry and multiple exit with vertical mobility model of programmes in Agricultural Sciences in YCMOU. The above model for programmes in Agricultural Sciences ensure the flexibility of admission with multiple entry and multiple exit with vertical growth of learner wherein a secondary school pass/fail learner can scale a height upto Ph.D. level if he/she desire so.

It has much advantage for the students being our customers. They may not be required to study as per directions/rigidity framed by others. They have a chance to take decisions for themselves at each and every stage. Through drill and practice, they may improve their performance during examinations resulting in better marks or grades. The students may also like to appear in examinations as per their own schedule of being free for examination. They may not be in a position to follow university schedule for appearing in examination. Therefore, on demand examination would provide much flexibility in appearing for different examinations. There is a possibility of some examinations being on same dates and student may not be able to appear for all, on the same day and date and time. On demand examination may provide a chance to students to appear in all examinations on days and dates of their own choice. The manpower at the study centre may also get sufficient number of students for counselling, if a comprehensive time table is prepared by them keeping in view the students and their courses for different programmes. Use of various media like Phone, E-mail, Audio and Video Cassettes may be of much utility for students who, due to some reasons, could not come during counselling sessions for meeting their difficulties.

20.2.3 Openness for Optimum Learning

The concept of optimum learning indicates towards the level of learning to which a person may reach. This level differs from person to person depending upon their mental abilities and thirst for learning. The open universities have accepted multimedia for providing instruction to learners. This multimedia and mix media should have potential to meet all learning queries by a student and, generate a learning environment too. It would facilitate for optimum learning. The openness in learning provides a chance to learn at his own speed of learning by every learner. This gives enough time for drill and practice as well as revision too. The weak students are slow learners. They have no chance to learn at slow rate in conventional system because they have to follow a pre fixed and rigid time table for study and appear for examination alongwith other students. But, same slow learner may have his own time table for study and examination. He may go for drill and practice and study as per his desire resulting into optimum learning.

The openness of selecting a media of his own choice by learner is a matter of creating more interest towards study. Some persons like to learn by 'listening' while others may by, viewing while some by doing. This is fact that learning by doing becomes permanent, and a slow learner, through drill and practice may learn more with the help of different media. Thus, use of media helps the learner to learn in different ways and finally optimum learning. This use of media has been favoured by almost every educational psychologist. The Stimulus-Response theory favours for stimulating the learner to learn and in turn a right response from him. The use of multimedia suitable to slow learner stimulates him for learning and finally a right type of response from him. Also, 'the conditioning of mind' theory, favours readiness of the mind to receive the information and finally to retain it for a longer period. The use of various media ignites the mind to receive the information and to retain the same for a longer period. Also, openness supports this process at a rate of learner choice. Thus, we see that in open and distance learning system use of various media and openness provide a chance to every learner for learning at their own speed or rate and finally to achieve the target of optimum learning by the distant learner.

20.2.4 Demerits of Openness and Flexibility

No doubt the openness and flexibility provide every learner a chance to learn at their own rate, pace and time as well as select programmes and courses of their own choice and to reach the level of optimum learning. But, it has certain demerits also. An Open university has to prescribe many optional courses in every programme for openness in selecting the courses of own choice. It will cost more because one time expenditure or fixed cost will be more in developing a large number of optional courses. Conduct of counselling sessions for various courses at a time in different rooms will require many counsellors resulting in more expenditure. Flexibility favours the learner and his desire to take admissions in more than one programme. Manually it is very difficult to keep a record of such students. The computers would be required to store necessary information and generate data for such students. Use of media is a matter of story writing or telling to infants. It's development as per the needs of individuals choice would require much expenditure.

On demand examination is still a theory for open universities in India. The National Institute of Open Schooling has a credit to initiate this activity for a small group of class VIII students. It requires a large number of questions in the Question Banks computerized in three ways and software for question paper generation with the help of computers. It requires trained and skilled manpower and huge one time expenditure as well as maintenance cost.

There are chances that counsellors and other people working with system may feel bore in answering same question to same student. Slowly, they may try to avoid such students and finally discard them. Too much flexibility will create problems for the headquarters in keeping the record of such students. The staff is not much oriented with such activities. The counsellors are not skilled enough for using various media to provide counselling. They are conditioned enough with the chalk and talk method and delivering long lectures on a topic of their own choice. The openness and flexibility are two enemies for such counsellors. They have no consideration for these two factors.

Thus, we see that openness and flexibility are good for students while are problem creators for the teachers associated with the programme. So long as, proper training and media are not made available to distance education workers, it may be very difficult for the system to implement these ideas in practice.

20.2.5 Openness in Dual Mode Institution

The dual mode of distance education is like that person who is in the custody of police while his mind is with the family. He wants to be liberated from the custody of conventional system and work as sister concern with open universities. The openness in dual mode is a myth and beyond even imagination. The admissions syllabus, learning material, examinations, results etc. are at par with conventional learners. There is no freedom to learn at his own rate, pace and time. The material is not in SIM format. There are no optical courses in programmes and the students do not get freedom to join more than one programme at a time.

The dual mode is a money making agency for conventional universities. These centres hardly organise any training programme, workshop or seminars for their

workers who deserve for the same. Openness may be brought to these centres if they are attached to open universities and follow their learning material. The Open universities should accept these dual mode centres as their sister organization and provide necessary academic and administrative support to them.

Openness in selecting media is not a matter of discussion there. It is because, they provide only print material to the students which is same as that used by conventional learners. There is no effect of technological advancements, various teaching – learning theories and science of management in these dual mode systems of distance education.

However, the openness may be brought to these organizations if the open university comes forward and provides academic, administrative and managerial support to them. The Academic and Non academic manpower should be trained to deal properly with distance learners. An orientation of counsellors be done for providing counselling to the students. The money earned by these centres be used for their upgradation by purchasing various electronic gadgets like Computers, VCD, Camera, etc. for use among students. The students be oriented about their role as a distance learner while enjoying openness. Many optional courses be introduced for being opted by the students. The students should have freedom to appear in examination at a time of their convenience and not as per university instructions. The minimum and maximum duration of time for all programmes be fixed and communicated to all students. Thus, we see that dual mode institutions and correspondence courses institutions at present has nothing in the name of openness. However, this target may be achieved, if necessary steps are taken by the conventional universities in collaboration with open universities.

20.3 Glossary

Academic Person : These are the academic employees working with the system of distance education.

Non Academic Person : These are employees other than teachers like assistants, librarians, peons etc. providing necessary support to the students.

Ladder System : This is a rigid system in which steps are fixed and one has to follow them strictly. These steps cannot be changed or altered.

Circular System : This is a round system which can be rotated and a person has a freedom to start from any step either in clock wise or anti clock wise direction.

Sister Concern : when two organizations have similar type of work, they are called as Sister concern. e.g. Philips and Onida company producing Televisions may be termed as sister organizations.

Modular Approach : This approach favours for division of whole into small pieces being independent and self explanatory. These modules are inter related to each other and may be arranged in some sequence.

20.4 Summary

The concept of openness in open and distance education was accepted by International Council of Distance Education (ICDE) at Switzerland in 1968. Openness with distance education was observed in open universities. It advocated for the learner to learn at his own rate, pace and time as well as for media selection by the learner. The role of Hardware technology, Teaching Learning techniques and the Science of Management jointly developed new technology for learning. It made the learner to not feel isolated and the machines played the role of a teacher. These technologies tried to bring successfully open and distance education out of its traditional track and various methods of counselling came into practice, like post, e mail, phone, etc.

This whole phenomenon is in theory in India. It is very difficult to bring it in practice because it requires a training to academic and non academic manpower, much money, hardware and software technology, and mastery to operate the system. Use of computers for every activity from Registration to evaluation makes the process a success.

Flexibility in the system is another gift to the distance learner. He can opt for courses of his choice from among many courses. He may start the programme by taking any combination of courses. He can take admissions in more than one programme at a time. Credit transfer is also a facility which helps the students in early

completion of the programmes without appearing for many times in examination for same courses common to different programmes. Performance improvement is also a part of openness and flexibility. Even a student who has completed the programme may appear for examination till he attains a desired level of performance under Grade improvement Scheme. Flexibility has made the system as circular system in place of ladder system. On demand examination can help in achieving the goals of openness and flexibility. It provides a chance for optimum learning by adopting any media found suitable and interesting among the learners.

However, there are many demerits in the system. These are untrained staff being unable to operate various educational gadgets, lack of financial resources, non availability of various sophisticated electronic device etc. The counsellors are not trained to deal with distance learners and their problems. They may feel bore and uninteresting, if they are asked to examine same assignment for same student many a times. Openness in dual mode is very difficult but challenging. Distance education has to be separated from Conventional Universities and attached to Open Universities at an earliest. Necessary training to persons be given for bringing openness and flexibility in the open and distance education system.

20.5 Exercises for Practice

Write answers of following questions in about 200 words each.

1. What is openness in distance education and explain its relevance for mass education.
2. What is flexibility and mobility in distance education and explain it with YCMOU programmes in Agricultural Sciences.
3. What are the merits and demerits of openness and flexible learning in distance education.
4. Write note on status and prospects of distance education in dual mode conventional universities in India.

Reference Books

01. **Daniel Sir J. (1996)** : *Mass Universities and Knowledge Media*, Kogan Page, London
02. **Holmberg B. (1995)** : *Theory and Practice of Distance Education*, Routledge Publication, London
03. **Lockwood F. and Gooley A (2001)** : *Innovation in Open and Distance Learning*, Kogan Page, London.
04. **Delanty G. (2001)** : *Challenging Knowledge : The University in the Knowledge Society*, Open University Press, London, UK.
05. **Peter Otto (1998)** : *Learning and Teaching in Distance Education*, Kogan Page, London.
06. **Gibbs G. (1995)** : *Assessing Student Confred Courses*, Oxford Brookes University, Oxfor.
07. **Morgan C. and O'Reilly M. (1999)** : *Assessing Open and Distance Learners*, Kogan Page, London.
08. **Lockwood F. (1998)** : *Design and Production of Self Instructional Materials*, Kogan Page, London.
09. **Marland, P. (1997)** : *Towards More Effective Open and Distance Teaching*, Kogan Page, London
10. **Simpson, O. (2000)** : *Supporting Open and Distance Learners*, Kogan Page, London.
11. **Salmon G. K. (2000)** : *E-moderatiing : The Key to Teaching and Learning Online*, Kogan Page, London.
12. **Ryan, S. Scott, B. Freeman, H. and Patel D (2002)** : *The Virtual University : The Internet and Resource Based Learning*, Kogan Page, London.
13. **Rowntree, D. (1994)** : *Preparing Materials for Open, Distance and Flexible Learning*, Kogan Page, London.
14. **Rana Sudarshana (1994)** : *Open Learning in India*, Commonwealth Publisher, New Delhi.
15. **Sharma Shaloo (2002)** : *Modern Methods of Life-Logn Learning and Distance Education*, Sarup and Sons, New Delhi.
16. **Madhukar Indira (2002)** : *Internet Based Distance Learning*, Author Press, New Delhi.
17. **Rai A. N. (2000)** : *Distance Education : Open Learning Vs. Virtual University Concepts*, Author Press, New Delhi.
18. **Kumar, J. P. and Rao D. B. (1998)** : *Effectiveness of Distance Education System*, Discovery Publishing House, New Delhi.

19. **Madhukar Indira (2003)** : *Impact of Globalization on Education : Learning to Live Together*, Author Press, New Delhi.
20. **Chandra, S. S. and Sharma, R. K. (2002)** : *Principles of Education*, Atlantic Publishers and Distributors, Delhi.
21. **Madhukar Indira (2000)** : *Guidance and Counselling*, Author Press, New Delhi.
22. **Sharma, B. M. (2002)** : *Distance Education*, Commonwealth Publisher, New Delhi.
23. **Patil, V. T. (2000)** : *Virtual Education : Dimensions of Educational Resources*, Author Press, New Delhi.
24. **Dubey, S. N. (2001)** : *Education Scenario in India*, Author Press, New Delhi.
25. **Sharma, S. R. (1996)** : *Organisation of Distance Education*, Pointer Publisher, Jaipur.
26. **Ansari, M.M., (1991)** : *Economics of Distance Higher Education*, Concept Publication Co., New Delhi.
27. **Azad, J.L. (1988)** : *Higher Education in India : The Deepening Financial Crises*, Radiant, New Delhi.
28. **Beteille, Andre (1988)** : “*The Pursuit of Equality and the Indian University*”, in Amrik Singh and G.D. Sharma (eds.) *Higher Education in India: The Social Context*, Konark, Delhi.
29. **Bok, Derek (1982)** : *Beyond the Ivory Tower : Social Responsibilities of the Modern University*, Harvard University Press, Cambridge, Massachusetts.
30. **Daniel, S. and Snowden, J. (1979)** : *Learning at a Distance : A World Perspective* Athabasca University Press, Edmonton.
31. **Datt, Rudder, (1988)** : *Distance Education Vs. Traditional Higher Education : A Cost Comparison*, in Koul, B.N. et al. (eds.) *Studies in Distance Education*, New Delhi: AIU and IGNOU.
32. **Duryea, E.D. (1973)** : “*Evolution of University Organisation*”. In James A. Perkins (ed.) *The University as an Organisation*, McGraw Hill, New York.
33. **Five Year Plans** : *Planning commission*, Government of India. G. Parthasarathy Committee Report : Ministry of Education (1970-71)
34. **Gore, M. S. (1988)** : “*The University as a Community*”, in Singh and Sharma, (ed.) *High Education in India: The Social Context*, Konark, New Delhi.
35. **Government of India (1963)** : *Report of the Expert Committee on Correspondence Courses & Evening courses*. Ministry of Education,
36. **Indira Gandhi National Open University (1985)** : *Parliamentary Debates*, 26 August Open University Bill.

37. **Kemmis, S. (1980)** : “*Program Evaluation in Distance Education: Against the Technologisation of Reason*”, Open Campus, number 2, occasional papers published by the centre for Educational Services, Deakin University.
38. **Koul, B.N. and Jenkins, J.** : *Distance Education : A Spectrum of (Eds.)* (1990) Case Studies, Kogan Page London.
39. **Muta, H. (1985)** : The Economics of the University of the Air of Japan, Higher Education, 14, 269-296.
40. **Open Universities in India, Brief Information** - DEC, New Delhi - 110 068.
41. **Perraton, H., (1982)** : *The Cost of Distance Education, Cambridge* : International Extension College.
42. **Perry, Walter, (1987)** : *Open University : A personal Account of the First Vice-Chancellor*, The Open University Press, Milton Keynes.
43. **Readings in Distance Education** - 1, IGNOU, New Delhi, 1992.
44. **Rumble, G. (1986)** : *The Planning and Management of Distance Education*, Croom Helm, London.
45. **Singh, Amrik and G. D. Sharma** : *Higher Education in India : The* (1989) Institutional Context, Konark, New Delhi.
46. **Wagner, Leslie (1973)** : *The Open University and the Cost of Expanding Higher Education*.