

DISTANCE EDUCATION

**MA [Education]
Second Semester
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[ENGLISH EDITION]



**Directorate of Distance Education
TRIPURA UNIVERSITY**

Reviewer

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SYLLABI-BOOK MAPPING TABLE

Distance Education

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INTRODUCTION

With the changing times, the scope of distance education has expanded in the Indian education system. By offering education outside the conventional classroom pattern, distance education attracts a wider range of students every passing year. The reason is that due to paucity of time it sometimes becomes difficult for some learners to pursue academics. Distance education courses offer a solution to such problems, allowing learners to pursue higher education from the comforts of our homes and offices.

Distance learning courses are self-explanatory and interactive. The study material is designed in such a way that all one needs to do is to devote only a part of one's spare time to studying the self-learning material and complete the course. However, this task requires motivation, planning, and the ability to analyse and apply the information being taught on the part of the learner. With the aid of this book the learners will be able to discuss various concepts related to distance education and would be able to evaluate various distance education programmes being offered in different universities.

This book, *Distance Education*, is written in a self-instructional format and is divided into five units. Each unit begins with an Introduction to the topic followed by an outline of the Unit Objectives. The content is then presented in a simple and easy-to-understand manner, and is Self-Instructional Material interspersed with Check Your Progress questions to test the reader's understanding of the topic. A list of Questions and Exercises is also provided at the end of each unit, and includes short-answer as well as long-answer questions. The Summary and Key Terms section are useful tools for students and are meant for effective recapitulation of the text.

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UNIT 1 INTRODUCTION TO DISTANCE EDUCATION

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1.0 INTRODUCTION

Education across the globe, including in India, has always been associated with the notion of a teacher instructing a specific number of students in a classroom setting. The students in an education system are required to attend regular classes and learn what the teacher instructs. While most of the focus in a classroom setting is on learning and teaching from textbooks, teachers often are the guides and mentors taking charge of the entire process of learning and teaching. Education has been recognized as the basic need of populations across the globe. This crucial development

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is one of the primary reasons why education has been made compulsory in various countries. As the educational requirements of the population are growing and the number of learners increasing, countries around the world are falling short of resources to fulfil this need. Thus, it becomes imperative to develop substantial means of ensuring that the educational needs of most learners can be met.

One such prominent medium is the distance education mode. Distance education has been universally accepted as an alternative to a classroom setting to ensure that the learning requirements of all learners are met. Distance education primarily stands for learning at a distance. More specifically, distance education entails geographic separation of the teacher and the student in terms of time and place. In a distance education mode, the learner acquires information from the comfort of his home or office or any place where he or she wants to learn from. The distance learning method of education primarily a student centric method wherein the role of the teacher is reduced to that of a supporter. Distance education as an alternative approach to classroom teaching is fast gaining popularity not only in India but across the globe with a large number of students enrolling in the wide range of courses offered by this mode of education.

1.1 UNIT OBJECTIVES

After going through this unit, you will be able to:

- Define Distance Education
- Discuss the history of distance education
- Explain the principles and theories of distance education
- Classify the types of distance learning
- Analyse different models of distance education
- Describe the objectives and characteristics of distance education
- Understand how a distance learning program is designed
- Know how to choose a distance learning program
- Explain the significance of distance education
- Discuss the status of distance education in India and across the world
- Know about the controlling agencies for distance education

1.2 DISTANCE EDUCATION: INTRODUCTION

The term 'education' has always been associated with a classroom setting where the teacher provides instructions to students. Face-to-face interaction is considered the basic element of a learning system. However, over the years, the concept of distance education has gained immense popularity. Distance education is essentially a form of education or a process of learning wherein time and space separate the student and the teacher. In other words, distance education involves providing

instructions to students who are not geographically present at the same place as the teacher. Distance learning does not require regular classroom participation or face-to-face interaction of the teacher and the student. In essence, the learner becomes responsible for his or her own learning when it comes to distance education.

Distance learning is conventionally defined as, ‘Any educational or learning process or system in which the teacher and instructor are separated geographically or in time from his or her students; or in which students are separated from other students or educational resources.’ Contemporary distance learning is affected through the implementation of computer and electronics technology to connect teacher and student in either real or delayed time or on an as-needed basis. Content delivery may be achieved through a variety of technologies, including satellites, computers, cable television, interactive video, electronic transmissions via telephone lines, and others. Distance learning does not preclude traditional learning processes; frequently it is used in conjunction with in-person classroom or professional training procedures and practices. It is also called distributed learning.

Moore defined distance education as, ‘all arrangements for providing instruction through print or electronic communications media to persons engaged in planned learning in a place or time different from that of the instructor or instructors.’

Distance education makes use of various technologies to facilitate interaction between the teachers and the students whenever required or considered essential. The range of learners in distance education varies and encompasses adults, K-12 learners, the disabled, the homebound and the second language speakers.

Distance education is used synonymously with terms like distance learning, online education, correspondence education, virtual learning, open learning, extension courses, etc. While the basic approach behind all these terms remains the same, i.e., providing instructions to those who are not in the same geographic location as the teacher; however, there are some differences between these terms.

Open learning is essentially a goal or an educational policy. The idea behind open learning is to remove all barriers to learning and provide education to everyone. In other words, no one is denied access to an open learning program.

Distance education is a form of education and not a philosophy. The use of technology is central to distance education where students can learn in their own time, at their own pace and at a place of their choice. Distance education does not necessarily involve face-to-face communication. These courses may however not be open learning courses.

Flexible learning, another term used synchronously to distance education is the provision of learning in a flexible manner which takes into consideration the geographic, social and time constraints of the individual rather than that of the educational institution. Flexible training may include distance education and may even include face-to-face training and education. Flexible learning is characterised by an easy and increased access and this is what differentiates it from distance education.

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Virtual or online learning can be a combination of distance and blended learning, wherein face-to-face communication along with other technologies are used for providing instructions to the learners.

In practice, however, distance education, online learning or open learning is not available in its fundamental forms. No education or teaching system is completely open and only a few students study in complete isolation. Most online courses require face-to-face interaction of the students with the instructors and many courses also supplement their instructions with text books.

The main aim of distance education is to provide alternative means of high quality education or learning to those who do not have access to campus based learning or do not want to opt for the conventional education system.

1.2.1 History of Distance Education

The origin of distance education can be traced back to the mid-19th century in Europe and United States. The pioneers of distance education used the best technology of the time, i.e., the postal system to provide distance education. The postal system was used to provide educational opportunities to people who wanted to learn but were unable to attend conventional schools and classes. People who most benefited from these postal educational courses included the physically disabled, women who were not allowed to enrol into educational institutions since they were open only to men, people who worked during normal school hours and people who lived in remote areas and had no access to schools.

Isaac Pitman is considered to be an early pioneer of distance education. He established a short-hand course in Bath in England in 1840. The students were asked to write short passages from the Bible and were required to submit these for evaluation via the penny post system which was introduced at that time.

In the 19th century, geographic isolation from schools and dispersed religious congregations led to the development of religious correspondence education in the United States. In 1874, Chautauqua Lake Sunday School Assembly in western New York began training Sunday school teachers and church workers. The correspondence program eventually expanded to include the course of directed home reading and correspondence study. The success of these programs led to the founding of such courses in several other schools in the United States owing to the Chautauqua Movement.

The demand by the industry, government and the military in terms of vocational training pushed distance learning to new levels. In Europe, mail order courses were established in the middle of the 19th century. The Society of Modern Languages in Berlin offered correspondence courses in languages like French, German and English. In the United States, Strayer's Business College of Baltimore City which was founded in Maryland in 1892 included mail-order correspondence courses, were opened to serve the needs of business employers, especially in the training of women for secretarial duties.

While religious correspondence courses focused mainly on preaching the Bible, the non-religious correspondence courses emphasized instructions in grammar,

spelling, business letter composition and book-keeping. The University of Chicago at the end of the 19th century emerged as a leader of distance education in American higher education.

The invention of radio in the 1920s and television in the 1940s proved to be vital new forms of communication for use in distance education. These media were used by educators to broadcast several educational programs to millions of learners. The use of these new technologies led to the extension of learning beyond the four walls of educational institutions. The invention of telephones also enabled the educators to reach out to a larger number of students interested in distance education. The role of telephones however became prominent after teleconferencing technologies were introduced in the late 1990s. Teleconferencing enabled teachers to communicate with students in real time, giving new dimensions to distance education.

The invention of computers further enabled the students and teachers to communicate with each other and further led to the development of distance education. The advent of Internet further enabled distance education to reach new heights. The use of Internet enables easy exchange of video, audio and text files among the various parties involved in a distance education course. Real time chats and information exchange was also made possible with the increased use of internet for distance education.

Today, Internet plays a key role in enabling people to access distance education and has given rise to what is known as virtual learning. Thus, distance learning emerged from a mode of education to a whole new concept of disseminating education to those who cannot or do not want to study via conventional teaching methods. Today, most distance education providers take advantage of the Internet to offer a wide range of online courses.

Distance Education in India

India introduced distance education at the tertiary level about four decades back and at the secondary level about 35 years back. In India, with the increased demand of education, many universities did not have enough resources to meet the educational needs of all people. The correspondence education scheme was included in the Third Five Year Plan. An expert committee was established in 1961 to work on the details of the correspondence education scheme. The committee recommended that correspondence courses be provided by one university as this form of education offered more flexibility. In effect, Delhi University was the first to establish the Directorate of Correspondence Education and admitted 1112 students for its Bachelors of Arts degree.

The cause of distance education was further augmented and the committee suggested that more universities offer distance education. The main reason for introducing correspondence courses was cost cutting. The committee was of the view that correspondence courses reduced the capital cost of expanding higher education and the recurrent costs were also lowered. Thus, a few more universities offered correspondence courses and established distance education departments during the 1960s.

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By the 1970s, the number of universities that offered distance education courses increased, as did the number of students who enrolled in such courses. Distance education in India received a major break-through when the Andhra Pradesh Open University and Indira Gandhi National Open University were established. Later, several state level open universities also provided distance education courses. Today, India has around 49 universities that offer distance education making the Indian distance educational system one of the largest in terms of the number of institutions and the number of students involved.

Distance education was also introduced in India at the school level in four different stages. Distance education at school level was also introduced in India in 1965 mainly because of the dismal performance of private candidates in the secondary school examinations.

The idea of introducing distance education in India at the secondary level was put forth in 1964 when the Boards of Secondary Education in India stated the fact that correspondence courses should be introduced to improve the academic standards of private students. As a result the Board of Secondary Education of Madhya Pradesh was the first one to take the initiative to start correspondence courses for private candidates. Several other states also followed suite and introduced correspondence courses based on the syllabus, curriculum and examination pattern prescribed by the state boards.

In 1979, with the establishment of the Open School Project, a major boost was provided to distance education in general and to correspondence courses at school level. The main aim of the Open School Project was to meet the educational needs and demands of students of the age group 14+ and especially for those who were unable to complete their education through the formal system of education. The main goals of the Open School Project included the following:

- To offer a parallel and an alternative system of education to formal schooling especially to those who were out-of-school learners, people from the disadvantaged sections of the society and those who lived in remote areas
- To offer technical, vocational and life-enrichment courses
- To promote open distance education through research, publication and dissemination of information

Consequently, several states also started open schools to provide correspondence education to several students. In 1989, the National Open School was established and was given authority to conduct examinations for certification of correspondence courses. The National Open School distinguished between open learning and distance education. The following are the objectives of distance education programs established by various state open schools.

- To provide educational opportunities to school drop-outs, school leavers, housewives, working adults and those living in remote areas
- To provide education to those who could not complete their education because of socio-cultural or economic reasons

- To offer an alternative method of learning
- To provide a parallel mode of non-formal education
- To reduce the burden of formal schooling system
- To promote an open system learning

Though distance education has developed in India to an extent that it is one of the largest educational systems in the country, yet there are numerous people who still need to be made aware of the benefits of this educational system.

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1.2.2 Distance Education: Basic Assumptions

Distance education evolved as a form of education mainly because of the fact that schools and universities lacked the various resources to meet the increasing educational needs and demands of all those who wanted to learn. Distance education was thus established as a new method to effectively and efficiently reach out to a large number of learners. Distance education is based on the following assumptions:

- Distance education provides education and learning to those who are not served in the traditional settings and enhances learning opportunities for those who are not served by the traditional programs of learning.
- Distance learning should be used as a strategic tool to support individual institutional missions. However, there are several institutions that do not foster and support an environment where distance learning can be easily used.
- Distance education offers unique opportunities for adult education and further aids the expansion of adult education in several ways.
- Distance learning often requires resource sharing and collaboration among the providers. In fact, partnerships are essential for the enhancement of distance education.
- Distance learning incorporates evolving and emerging information technologies.
- Distance learning is the most effective when staff and the learners acquire new knowledge and skills. For this, on-going staff development is essential to the distance learning development process.
- Anytime, any place and any pace is the essence of distance education.
- Distance education plays a key role in developing and maintaining education quality at the global level.

1.2.3 Principles of Distance Education

The principles on which distance education is based assume that the practice of distance learning contributes to the larger social mission of education and training. The following are the principles of distance education provided by the American Council on Education's Guiding Principles for Distance Learning in a Learning Society:

- Learning is a lifelong process integral for successful participation in the social, cultural, civic and economic life of a democratic society.

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- Lifelong learning involves the development of a range of learning skills and behaviours that should be explicit outcomes of learning activities.
- The diversity of learners, learning needs, learning contexts, and modes of learning must be recognized for the learning activities to achieve their goals.
- All members of society have the right to access learning opportunities so that they can actively take part in the society.
- Participation in a learning society involves both rights and responsibilities for learners, providers, and those who manage the process of learning.
- Learning experiences should support interaction and the development of learning communities since learning is a social process.
- The development of a learning society may require significant changes in the roles, responsibilities, and activities of educational institutions and personnel as well as of the learners.

CHECK YOUR PROGRESS

1. Define 'distance learning'.
2. Describe the concept of open learning.
3. When was distance education introduced in India at the secondary level?

1.3 THEORIES OF DISTANCE EDUCATION

Distance education is a learner centred approach. Distance learning has emerged from being an approach to provide learning to the traditional learner to being an approach that makes use of a wide range of instructional and information technologies. Distance education learners are different from traditional learners in the sense that they are separated from the instructor in terms of their geographic location and yet learn in a guided and a planned manner. Distance learning is different from classroom instruction and thus has unique characteristics.

To develop a theory for distance education, Keegan identified three historical approaches or theories. Theories of autonomy and independence were used to reflect upon the fact that the learner is essentially independent. Otto Peter's theory of industrialization was also taken into consideration to view distance learning as an industrialization of teaching and learning. The third approach that Keegan used was the integration of theories of communication and interaction.

Using these three approaches, Keegan studied the development of the discipline of distance education. According to Keegan, 'It is this concept of industrialized, open, non-traditional learning that will change the practice of education.'

Holmberg also developed a theory of distance education and summarizes it by stating that, 'Distance education is a concept that covers the learning-teaching activities in the cognitive and/or psycho-motor and affective domains of an individual

learner and a supporting organization. It is characterized by non-contiguous communication and can be carried out anywhere and at any time, which makes it attractive to adults with professional and social commitments.’

Garrison and Shale include in their essential criteria for formulation of a distance education theory the elements of non-contiguous communication, two-way interactive communication, and the use of technology to mediate the necessary two-way communication.

The following are the various theories of distance education:

- **Transactional Distance:** Moore introduced the concept of transactional distance in distance education. According to Moore, transactional distance encompasses distance that exists in all educational relationships. This distance is determined by the amount of dialogue that takes place between the learner and the instructor. The distance also depends upon the structure that exists in the educational course. The transactional distance is great if there is more structure in the course and less student-teacher dialogue. Considering this concept, education can be less distant where there is less structure and greater interaction to more distant where there is less interaction and more structure. Therefore, distance is not dependent upon the geography of the learner and the teacher but on the structure and interaction in the course. The concept of transactional distance is taken a step further by Saba and Shearer as they propose a system dynamics model to examine the relationship between interaction and structure in transactional distance. According to Saba and Shearer, as the learner control and dialogue increases, the transactional distance decreases.
- **Interaction:** Interaction is another important theoretical concept that has gained a lot of attention where distance education is concerned. According to Moore, there are three types of interactions which are essential in distance education. Learner-instructor interaction is the one that provides feedback, motivation and dialogue between the teacher and the student. Learner-content interaction is the one in which the students obtain intellectual information from the material. Learner-learner interaction about the course takes place between the students in a structured or a non-structured manner. The interaction can take the form of dialogues, exchange of information or ideas. The concept of interaction is very basic to distance education and is known for its effectiveness. A fourth dimension to interaction was added by other experts in the fields. This interaction is the learner-interface interaction, which refers to the interaction between the learner and the technology that delivers instructions to the learner.
- **Control:** This theory relates to the independence of the learner and the learner’s control in distance education. Control in distance education can be categorized into an internal locus of control and an external locus of control. Students who have an internal locus of control are of the opinion that their academic success is a result of their own accomplishments, while those with an external locus of control consider factors such as fate and luck as the

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reason of their accomplishment. Thus, those with an external locus of control usually drop out from the course, which is a concern as far as distance education is concerned. Distance learning educators focus on developing methods and ways which result in successful course completion.

- **Social Context:** This theory revolves around the fact that the social environment in which distance education is offered affects the motivation, attitude, teaching and learning in distance education. While technology is often considered neutral, it is a fact that in the absence of proper social setting, materials and services cannot be properly transferred over the media. Social factors must therefore be taken into consideration when talking about distance education.

CHECK YOUR PROGRESS

4. List the three historical approaches used by Keegan to develop his theory of distance education.
5. Name the various theories of distance education.

1.4 TYPES OF DISTANCE LEARNING

Distance education courses can be categorized as follows:

- **Synchronous distance learning:** Synchronous basically means at the same time. Synchronous distance education courses are the ones where learning is facilitated by chatting, teleconferencing or in a classroom. In other words, synchronous distance education involves live chatting between the instructor and the students. Synchronous distance learning is not flexible as it requires the student to be present whenever the class is taking place. Synchronous distance learning works best for courses which involve a lot of communication and instructions. This type of distance learning is the most common form of distance learning prevalent today.
- **Asynchronous distance learning:** Asynchronous distance learning provides students greater flexibility in the sense that they can work at their own pace. Usually, courses which involve a lot of assignments and project work are delivered through asynchronous distance learning. Students communicate via online notice or bulletin boards and are generally given a week's time to submit an assignment or a project. The only problem with asynchronous distance learning is the fact that the instructions that the students get may not be very clear to them.
- **Hybrid distance learning:** Hybrid distance learning is a blend of synchronous and asynchronous distance education. In this type of distance learning, the students are required to be present in the chat-room or classroom, but at times that are suitable to the students. In other words, hybrid distance learning offers flexible timings for students to attend the class. However, the students

are given assignments and projects on which they can work at their will and submit within the mentioned deadlines.

- **Computer based distance learning:** In this type of distance learning, the students are required to assemble in a lab or a computer room to receive instructions from the teacher or the instructor at a fixed time.
- **Fixed time online courses:** In this type of distance learning, the students are required to log in for online course at a specified time. This type of distance learning is the most popular form of distance learning prevalent these days and makes extensive use of live chats.
- **Open schedule online courses:** These are online courses where the students are provided with fixed schedules but can work at their own pace. Students are given assignments, which they can work on at their own pace taking the schedule into consideration. They are also provided email, internet based textbooks and bulletin boards to complete their assignments.

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1.4.1 Distance Education Programs

The various types of distance education programs offered include:

- **Correspondence courses:** Correspondence courses are distance education programs wherein the students do not have to attend regular classes. The study material curriculum and the degree awarded are however the same as those offered to regular students. The students are provided with teaching material and evaluated response sheets at regular intervals and may even get a personal contact programmer or a remote teaching facility.
- **Online education:** Online education is a form of distance education program that has gained popularity over the last few years. Online education takes the help of electronic media to aid learning. Students and teachers interact using electronic media and technology. Online education may take place synchronously or asynchronously depending upon the type of course chosen.
- **Open universities:** Open universities are government funded institutions that aim to educate people who may not have any educational qualifications. Open universities may be aided by the postal system or electronic media to deliver the teaching material. Sometimes, the students may be required to attend a few course related workshops. However, this is not required for all courses; only a few courses require students to attend such workshops to instruct and teach them in a better manner. These include the distance education courses offered by Open and Correspondence Universities in India.

Distance education is imparted by three kinds of institutions:

1. Departments of Correspondence which are universities and university level institutions
2. Open Universities
3. A large number of private institutions which offer short term vocational courses. There is no territorial restriction for enrolment of students to any of these institutions.

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Correspondence educational institutions provide students with following:

- Printed Course materials
- Personal Contact classes at study centres or through online medium or at university campus
- Conducting of examinations. Most of the universities now provide the facility of ‘examination on demand’. This facility enables a candidate to take an exam on his/her chosen date, either online or in a study centre.

Distance education institutions offer courses at different levels: Diploma, Certificate, PG Diploma, M.Sc, M.A, M Phil and PhD. These courses cover a wide variety of subjects.

CHECK YOUR PROGRESS

6. How are distance education courses categorized?
7. What are open universities?
8. List the three kinds of institutions that impart distance education.

1.5 MODELS OF DISTANCE EDUCATION

Distance education as a form of education encompasses several concepts which have been used to develop the various models for distance education. The following are some of the models of distance education that have been developed over the years:

- **Examination Preparation Model:** The examination model has not been discussed in literature and several experts are also of the opinion that such a model does not exist. However, the model has been applied to distance education and plays an important role. The prerequisite for this model is a university which abstains from teaching but conducts examinations and confers degrees to the students. In the examination model, the students have to teach themselves. The model was institutionalized when the University of London was founded in the middle of the 19th century. The University catered to the needs of those who could not enrol into Oxford or Cambridge University and those who could not attend any university because they lived in British colonies. The university provided information to the students regarding the examinations and associated rules and sometimes even provided reading lists. The students could take the exam and then be conferred the degree. The examination model is presently developed and practiced by the Regents of the University of New York. Students can take the examination and be awarded the ‘The Regents External Degree’.

**Box 1.1: The Regents External Degree Program of The
University of the State of New York**

The Regents External Degree Program of The University of the State of New York offers college degrees to anyone who can qualify. No classroom attendance is required. Since 1972, more than 16,000 people have enrolled in the program and 5,000 have graduated. These external students range - from age 17 to 87 and reside in every state in the nation. Regents External Degrees are available in the arts, sciences, business, and nursing and each degree may be earned entirely by examination. Till now 548 students have already received degrees. Students can also get degrees by taking a combination of tests, study at accredited colleges, and approved courses sponsored by the military, government, and business. The University of the State of New York, created in 1784, is America's oldest continuous educational agency. The University was established not to provide classroom instruction but to govern all education in New York, including elementary and secondary schools, museums, libraries, public and private colleges and universities.

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- **Correspondence Education Model:** This is the oldest and the most widely used model of distance education across the globe. The model encompasses regular teaching of distant students by presenting to them written material or textbooks and assignments. The assignments are assessed and examinations are also conducted for the students to check their progress. The model is so named because of the ad-hoc correspondence that takes place between the students and the teaching institution. In spite of the fact that electronic media and digitization has affected the manner in which distance education is conducted, this model is still extensively used world-wide by a large number of universities.

Box 1.2: Correspondence Course by Bharati Vidyapeeth India

Bharati Vidyapeeth University is an academic institution with a social commitment. It has made high quality education available to a large number of students through its constituent units. The University is aware that almost 90 per cent of the prospective students, belonging to the college going age group, i.e., 18-23 years, do not get opportunities for higher education because of numerous difficulties, such as, residential locations in rural and tribal areas, financial constraints, and other personal time limitations on account of employment or household chores, etc.

The university considers it a responsibility to provide educational opportunities to such deprived students. To do so, the University has established the School of Distance Education. Through this School, the University makes high quality education available to students. The School makes available all the necessary amenities to students enrolled with it to accelerate their self-learning.

Besides providing high quality education to its students, the school has also certain other objectives such as:

- To promote the culture of self-learning, continuing and lifelong learning in the society

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- To accelerate individual development and personal productivity through skill development
- To relieve the students from the constraints of time and place while learning

System of learning

The following facilities are provided at all study centres:

- Subject specific and general academic counselling by the senior academics
- Excellent library facilities
- Assignments, tutorial sessions and seminars and University examinations

The academic programmes are conducted in collaboration with faculties of Bharati Vidyapeeth University institutions where these study centres are located. These Institutions have excellent buildings and infra structural facilities including state of the art learning resources. Through decades of excellent educational inputs and academic ambience, these institutions have emerged as vibrant learning campuses in their areas. Through the academic counselling, seminars and tutorial sessions at local centres, continuous monitoring of the students learning is ensured. This works as an important motivating factor for a learner to learn. The Academic Co-ordination Unit for the Programme concerned is created for monitoring the programme most effectively

The Multiple Media Model: This model of distance education was developed in the 70s. The model made integrated use of radio and televisions along with printed study material to provide instructions to the students. In addition, the model also emphasized the need of study centres to provide the students with the required support. The model provided a base for several universities to establish their distance learning modules and programs. Another important feature of this model was that it initiated and supported the establishment of open learning and open universities. Open universities allow students to access universities and education without formal entrance qualifications and also are open to the adoption of new methods and media of education.

Box 1.3: Nalanda Open University, India

The Nalanda Open University is the only University in the State of Bihar meant for imparting learning exclusively through the system of distance education. The University was established in March, 1987 by an ordinance, promulgated by the Government of Bihar. Later, Nalanda Open University Act, 1995 was passed by the Bihar Legislature, replacing the ordinance, and the University came under the authority and jurisdiction of the new Act automatically. The University is named after the famous Nalanda University of Ancient India. The University has established its camp office at which it houses an examination centre for about 1000 students, a state of the art Library with about 50,000 titles and a computer laboratory of about 300 IBM Pentium-4 computers, apart from administrative offices and other infra-structures.

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The University is recognised by the Distance Education Council (DEC), University Grants Commission, and Ministry of HRD, Government of India for imparting education through distance mode. The aims of the university include:

- To provide educational opportunities to those who are unable to take up formal education and are still desirous to upgrade their educational qualifications and acquire knowledge in various fields of learning through the print medium (correspondence course), contact programmes, study centres and mass media
- To provide flexibility in matters of eligibility for enrolment for higher education, age of entry, choice of course, methods of learning, conduct of examination and operation of programmes
- To offer degree and diploma courses and to make provision for research for advancement and dissemination of knowledge
- To provide special facilities to groups like, elderly people, in-service personnel, housewives, people living in remote areas, socially disadvantaged people of the society and all others who wish to upgrade their skill and acquire higher academic qualification through distance education
- To lay emphasis on vocational, as well as, conventional courses, leading to award of degrees and certificates
- To create awareness for self-sufficiency and equip people with knowledge and higher qualification to enable them to become suitable for new job opportunities
- To provide course for rural, agricultural, industrial and commercial needs of people and design learning material for improving socio-economic condition of the masses
- To bring awareness in women, children and down-trodden of their social rights, duties and legal status in society

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The Group Distance Education Model: This model of distance education encompasses distance education of a group of students. In this model, radio and television are used as permanent mediums of instructions. The instructions are received by a group of students who attend obligatory classes wherein they follow the instructions of the teacher and discuss what they have watched or heard and learnt. The students are required to do their assignments and also take tests as and when stated by the instructor. The model rarely makes use of printed notes and study material.

Box 1.4: Indian Institute of Remote Sensing- EDUSAT Based Distance Learning Program

EDUSAT based outreach programme (distance learning programme) of the Institute is the first of its kind in the country in the field of 'Earth Observation and Geo-information Techniques.' The programme started in the year 2007 with a modest beginning, networking 12 universities, and has grown since then with the present strength of 64 universities across the country participating in this programme. The Institute has successfully conducted seven courses on "Basics of Remote Sensing, Geographic Information System and Global Positioning

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System” and ”Advances in GIS” benefitting about 5600 students at graduate and postgraduate level. Importantly, with the present networking, nearly 1000 students attend the programme at a time. The program caters to a group of students who receive the same instructions at the same time. The students are required to do the tasks by following the instructions provided and thus learning is facilitated in a practical manner.

The programme is very popular among the universities as it supplements their own education system and requires a very low-cost infrastructure (existing network of computers with a small antenna) for receiving the programme and live interaction between the classroom and the teaching end. Continued efforts are on to upgrade the content delivery systems and to strengthen the network with Indian universities.

- **The Autonomous Learner Model:** The autonomous learner model is based on the concept of developing an independent learner and learning environment. In this model, the learner has to organize learning, decide the content, manage the curricular tasks and choose the media and the strategies that need to be adopted to learn. The students also have to decide the measurement tools that must be used to check their progress. The role of the teachers or the professors is that of facilitators who guide and help the students when the students meet them once in a month to discuss their problems and progress.
- **The Network Based Distance Learning Model:** The model is emerging because of the digitization taking place. The network based distance learning model is perhaps the most convenient learning model wherein the students have access to the remotest teaching programs and information databases. The students can work online or offline. They are required to take part in workshops, virtual seminars, online meetings or tuitions, etc. The students develop new ways of learning and explore a lot of information. The students are required to find, evaluate, judge, use, manage, store and retrieve information as and when required by them.

Box 1.5: Symbiosis Centre for Distance Learning, India

Symbiosis Centre for Distance Learning (SCDL) has, since its inception in 2001, has made rapid strides in providing quality education to thousands of students in India and abroad. The student enrolment has grown exponentially during the past five years.

Today, the total active student strength of SCDL is more than a lakh across 48 countries including India, US, UK, Middle East, Russia, Germany, Singapore, Japan and many more; making it one of the few large and most sought after distance learning institutes of India.

SCDL has uses network based distance education model including concepts like:

- Introduction of a 'Blended Learning' methodology for all our programs, combining all the three forms of learning, namely, Published / Printed Self-Learning Material / Books, Digital e-learning, and faculty interaction (chat sessions and virtual classroom facility).

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- Introduction of highly interactive e-learning content as a supplementary learning methodology to improve the understanding of concepts through case studies and practical examples, thereby bridging the gap between the book and the classroom. Online assignment system to provide students the flexibility and convenience to submit assignments at any time and receive immediate results and feedback
- The Virtual Classroom facility with the faculties has removed the distance barrier between the teacher and the taught. This facility provided by SCDL is an additional student support service to interact with faculty members online and live. Students can ask questions, have peer interaction and even replay an archived lecture. Virtual Classroom sessions are conducted for all courses throughout the year.
- Online Faculty Chat Sessions allow students to interact with faculty by typing their questions and receiving immediate answers in an online environment.
- Online and On-demand examinations are conducted across India and abroad, to provide students the ultimate convenience of booking a date, time and place of their choice to appear for the examinations.
- An e-communication centre which handles all student queries promptly and effectively.

- **The Technology Extended Classroom Teaching Model:** This model of distance education has been developed in the USA. In this an instructor teaches a class and the same instructions are transmitted to two or more classes by means of cable or satellite television or a video conferencing system. This model therefore is live and a synchronous form of distance education. There are many experts who do not consider this model as a distance education model because they believe that it is not an efficient method of delivering instructions and does not differ from the conventional teaching methodology. In addition, the extended classroom students often feel left out of the main class and thus may not pay much attention to what is being taught. Further, the number of classes and the number of students that can be connected is limited.

Taylor's Model of Distance Education

Taylor suggested that technological development has affected the way distance education has emerged and evolved over the last several years. He proposed five generations of distance education as follows:

- **First Generation Model:** The first generation model is like the correspondence education model. It uses a single technology and does not involve much student-teacher interaction. The students learn through textbooks and are in touch with a correspondent tutor. The students also take examinations from accredited institutions and get valid degrees.
- **Second Generation Model:** The second generation distance education makes use of an integrated multiple media approach. The learning materials are specially designed for distance education and the model also makes two-way communication possible. The second generation model makes use of specially

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designed study material, standard textbooks and also radio or TV based learning to provide the required learning content and instructions to the students.

- **Third Generation Mode:** The third generation distance learning model tries to replicate classroom environment and teaching as closely as possible. It depends on technologies like video-conferencing and also relies on lectures by the professors and questions by the teachers as well as the students.
- **Fourth Generation Model:** The fourth generation model is the one that depends on synchronous communication and technologies like the internet for providing instructions to the students. This model is more like an online learning model providing greater flexibility and greater interaction. The model emphasizes on the need of learner control in terms of distance education.
- **Fifth Generation Model:** The fifth generation model is experimental. The model makes use of Web 2.0 tools and allows the learners to access and control learning through special software, virtual tools and multimedia tools. The model has still not been adapted by many universities and is in an experimental stage but the advantages of this model are many and soon it will become a popular model for distance education.

CHECK YOUR PROGRESS

9. List the various models of distance education.
10. How many generations of distance education did Taylor propose?

1.6 OBJECTIVES OF DISTANCE LEARNING

The following are the main objectives of providing distance learning courses:

- **To provide an alternative path to wider opportunities in education and higher education:** Distance learning aims to meet different education needs of different types of learners. There are some learners who have never been to a higher educational institution while there are others who just need additional knowledge in a specific discipline. There are still other learners who need assistance to cope up with the latest development taking place in their field of study. Distance education aims to meet the needs of all such learners.
- **To provide efficient and less expensive education:** Providing universal education is not possible for every country because of the increased demand for education and limited resources. Expansion of traditional schools is a very expensive and a costly venture and distance education is the only cost-effective alternative available.
- **To provide education to all willing and qualified people:** Distance education aims at providing education to all such people who are qualified and are willing to learn but are unable to attend universities because of several

reasons. Distance education offers such people an alternative method of learning.

- **To help educated people to improve their standards of knowledge:** There are many people who are unable to continue their studies in universities for several reasons including employment. Distance education is a form of education that enables such people to continue learning and to improve their standards of knowledge.
- **To provide education to those who consider education a lifelong activity:** Some people consider education to be a life-long activity and always want to keep learning about new areas and fields. For such people, distance education is the best approach available. Distance education enables people to learn about different subjects in a cost-effective manner and in an informal manner as opposed to the traditional education format.

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1.7 CHARACTERISTICS OF DISTANCE EDUCATION

Distance education is made up of two different phenomenon- distance learning which includes the student's activities and distance teaching which includes the teacher's activities. Distance learning on the part of the students involves learning via the textbooks or printed material provided, completing the assignments and projects and also attending workshops as and when required. Most distance education courses also require the students to appear for examinations so that they can be conferred the degrees. Distance teaching on the part of the teachers requires the teachers to provide the required study material to the students, act as facilitators and help students when they need help and guidance. The teachers also need to assess the students and inform the students of their progress.

The following are the characteristics of distance education:

- Distance education is carried out through various institutions. Distance education as opposed to what many believe is not self-study or learning in a non-academic environment. Distance education courses are offered by accredited universities and institutions. The institutions may not offer classroom based and face-to-face teaching but distance education cannot take place in a non-academic environment.
- Geographic separation is inherent in distance education. In other words, teachers and students are geographically separated in case of distance education. Distance education is a convenient mode of education and also accessible in the sense that people who cannot attend regular institutions are able to learn using this form of education.
- Distance education in most cases relies on interactive communication between the teachers and the students. The various forms of communication that may be used in distance education include electronic media like emails and even traditional communication methods like the postal system.

- Like any other education system, distance education also establishes a learning community or a learning group. The learning community in distance education is composed of teachers, students and also instructional resources.

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1.8 DESIGNING A DISTANCE EDUCATION PROGRAM

Distance education has evolved from being a form of education offered via printed material to online learning. Though distance education has become widely popular and is also accepted as an alternative and cost-effective means of education, there are still some problems that cannot be overlooked. Some of these include:

- Lack of interaction
- Poor student mentorship
- Lack of motivation
- Inability to promote motor skill development
- Inefficient in promoting good attitudes
- Absent student - teacher bonding
- Failure in developing oral skills
- Inefficient feedback system

It is therefore essential to develop and design a quality distance education program so that these problems can be overcome. A quality distance education is not easy to design and there are several factors that need to be considered when designing a good quality distance education program. These factors include:

- **Course Design:** The course design is one of the main factors that need to be considered during the design of a distance education program. A good course design must be based on the following principles:
 1. **Equitable Use:** The distance education program must be so designed that it makes the course to be accessed and used by all users and learners in an equitable fashion. In other words, the ethics of design do not allow bias in terms of use of the distance education course.
 2. **Flexible:** The distance education course design must be flexible in the sense that it must be available in several formats and the learner must be able to use it anywhere and at any time.
 3. **Simple and Intuitive:** The course design must be simple and intuitive in the sense that the course layout must be same and simple across various courses so that the students find it easy to make use of the course using the same means. The course design also needs to be simple because distance education entails the concepts of self-learning and self-study as well.
 4. **Perceptible Information:** Perceptible information refers to information that can be presented in different ways and using different methods. In

other words, distance education course design must be such that the students with different modalities are able to access it easily by different methods.

5. **Tolerance for Error:** This simply means that distance education course must be so designed that the students can easily track and correct errors as and when needed.
 6. **Low Physical and Technical Effort:** The distance education course must be so designed that the students need to put in low physical and technical efforts and can focus more on the cognitive aspect of the course. In other words, the distance education course must be designed so that the students can make use of their intellectual abilities rather than focusing on for example how to download a specific course content etc.
 7. **Community of Learners and Support:** Distance education course design must be such that it allows for group learning and formation of learning community so that interactions can take place in an easy manner.
- **Instructional Climate:** This principle simply states that the course design for distance education must allow the students to be engaged in a meaningful manner.

Distance education course design must be such that it allows for evaluation of the students on a regular basis. When a distance education course is designed on the basis of the above stated principles, the distance education program is bound to be successful.

- **Course Content:** The course content in a distance education program is vital for its success and quality. A quality distance education program will have course content that is relevant and up-to-date. The course content must be designed in a manner that it is simple and reusable. A good quality distance education program has course content which is unambiguous and clear and focuses on the objectives of the subject for which it has been developed.
- **Course Instructor:** While most people believe that distance education is a self-study concept and does not need an instructor but the truth is that an instructor is vital for the development of a good quality distance education program. Instructors have an impact on the student involvement in the distance education course and also its success. It is essential that a good quality distance education course be taught by an instructor who is passionate about his or her subject, is approachable and encourages student involvement in the best manner possible. It is also essential that universities offering distance education courses train the instructors in the necessary manner so that they are able to indulge the students and help them as and when essential.
- **Support Systems:** A good quality distance education program requires a good support system for its implementation. Support systems are required in terms of academic support, administrative support and technical support. According to McClary, 'Academic support involves instructors providing substantive engagement and feedback for course activities. Administrative

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support involves things such as financial aid, advising, registrar services etc. For schools using technical systems to deliver education, it is not a matter of whether a student will have problems; it is a matter of when they will have problems. Academic, administrative, and technical support services should be evaluated regularly as a part of the course evaluation. In addition, evaluation data should be made available to the appropriate stakeholders to ensure accountability and on-going improvement.' When effective support systems are not available for the distance education programs, the distance education programs are not successful and may fail to achieve their objectives and aims.

Steps to be followed to design a distance education program

Developing and designing a distance education program often requires a series of steps to be followed in a sequential manner so that the program can be developed in an efficient and an effective manner.

The following are the steps to be followed to design a distance education program:

- Identify the target learner or target learner groups and their characteristics such as learning styles, motivational factors, prior knowledge, etc.
- Establish the program goals and objectives based on the learning outcomes so that the goals and objectives that are developed are realistic and measurable so that the objectives can be achieved
- Determining the intake, enrolment and testing procedures so that those eligible for the distance education program can be identified
- Providing learner orientation so that the distance education learners know what the course has to offer and what the objectives of the course are. This enables the learners also to set their learning targets and objectives
- Defining the instructor selection, training, orientation and support. This is essential because distance education instructors need to be trained in a special manner to ensure that they are able to deliver the instructions properly
- Identifying and designing the instruction strategies and materials in accordance with the course
- Developing the structured support activities for the distance education course to be implemented in an effective manner
- Pilot test the distance education course materials and modify these in the required manner
- Identify the mode of delivery of the instructional content for the distance education program. This also involves the identification of the available teaching tools so that the new ones can be developed.
- Identify the methods available for interaction with the students in the distance learning program. This will help to know the level of interaction that can be made possible in the distance learning program.

- Design and develop a self-evaluation and testing evaluation system. This would also involve the development of a feedback system that would help to know whether the distance education program is effective or not.
- Modifying the distance learning program if required. This would require learning experience feedback from the students as well as the instructors so that the problems with the program can be identified and the reasons for modification are known

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1.9 CHOOSING A DISTANCE LEARNING PROGRAM

The range of distance education courses available can be overwhelming and one often gets confused as to which course to opt for. The following are factors that must be considered when opting for a distance education course:

- **Accreditation:** It is essential that one opts for a distance education course that is accredited from a university. This is because only accredited courses are eligible for valid degrees from universities. The distance education program must be accredited by an accreditation agency. This agency ensures that the different subjects are combined and integrated in a manner that ensures academic standards. The course must be practically relevant as well.
- **Flexibility:** The reason why many people opt for distance education programs is that they offer flexibility which traditional teaching does not offer. Therefore, when opting for a distance education program, it is essential to ensure that it offer flexibility. The distance education programs vary in their flexibility as well and so one must first identify his or her needs and expectations from a distance learning program before choosing one.
- **Tuition fees:** When choosing a distance education program, one must make sure that one gets value for money. Most distance education programs are less expensive as compared to the various traditional educational programs. Distance education programs are demanding in terms of time and for people who are employed this would also require reducing the working hours which can affect the income. Therefore, one must take several factors into consideration when considering the tuition fee for a distance education program.
- **Personal support and service:** The personal support and service offered by a distance learning program often decides the success or failure of the program. One must choose a distance education program that offers on-going support to the students so that they can find it easier to understand the instructions and solve their problems.
- **Study material and learning environment:** When opting for a distance education program, one must choose a program that offers good quality study material and learning environment. The learning environment must be such that it motivates and encourages the students to learn and develop a sense of self- learning.

1.10 ADVANTAGES AND DISADVANTAGES OF DISTANCE EDUCATION

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The following are the advantages of opting for a distance education course:

- **Flexibility:** The main advantage of distance education is that it offers a lot of flexibility. Distance education can be implemented from anywhere. Students can learn from the convenience of their homes or just about anywhere and can schedule their classes as per their time convenience. Distance education is one of the most convenient forms of education that can be used by those who are employed and want to learn as well. In addition, students can study and complete their assignments at their own pace and do not need to follow very strict deadlines.
- **No commuting:** Distance learning programs do not require the students to attend college every day. In fact, most distance education programs require the students can complete their learning and assignments from their homes only and this therefore cuts the cost of commuting.
- **Many choices of schools:** There are several options when it comes to distance education programs. There are a large number of colleges and universities that offer such programs and thus one can choose the school or the college that one feels is the best or offers the required course. This is as opposed to the number of schools that are available to offer education in a traditional education setting.
- **Low costs:** Distance education programs offer low cost programs. Distance education courses are offered at a lower cost as opposed to the traditional educational schools. Distance education is one of the most cost effective means of offering education to a lot of people who cannot afford to attend regular classes in colleges and universities.
- **On-going learning:** Distance education programs offer on-going learning for those who want to continue the learning process even while working. Distance education is also a good option for those who are in their middle age but want to learn and complete their higher education and get the associated degrees.

Though distance education has gained a lot of popularity and is accepted across the globe by a lot of people, there are some limitations of this form of education that cannot be ignored. These include:

1. **Limited interaction:** Conventional teaching has the advantage of face-to-face interaction between the teacher and the student which is lacking when it comes to distance education. The interaction in distance education courses is limited to electronic tools, emails, chat rooms or bulletin boards. This limited interaction may sometimes affect the effectiveness of learning.
2. **Format is not ideal for all learners:** Distance education does not suit every type of learner. In other words, not every person is eligible for distance

education mainly because everyone may not be motivated enough to pursue learning in this manner.

3. **Distance education degrees are not accepted by everyone:** Most employers recognize and accept distance education degrees. But there are some employers who do not recognize and accept distance learning degrees as valid.
4. **New technologies need to be adapted:** Distance education requires the use of new technologies and those who need to learn using this form of education need to be technology savvy and must know how to make use of computers and the internet. There are many people who may not be able to make use of such technologies and therefore may not be able to make use of this form of education.
5. **Extra support:** Distance education implementation may require additional support from the instructors since distance education encompasses the concept of self-learning and self-study as well.

Distance education as a form of education is suitable for a lot of people. However, students may sometimes feel isolated because of limited interaction and may miss out on learning from peers as well mainly because distance education takes place at an individual level.

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1.11 IMPLEMENTATION OF DISTANCE EDUCATION PROGRAMS

The implementation of a distance learning program requires proper planning. The following are the phases of implementation of distance education program:

- **Conducting need assessment:** The needs assessment phase is further subdivided into the following phases:
 1. **Course analysis:** Course analysis mainly focuses on the content of the course that needs to be developed and enhanced. There are several types of courses that can be delivered using distance education like courses that have a high demand, but few instructors; courses that are needed in geographically diverse locations; courses that would benefit from remote experts; and courses that could address special needs, such as homebound students.
 2. **Audience analysis:** This deals with the identification of people for whom the distance education courses are suitable. Distance education is not a practical and feasible option for everyone and so audience analysis is very important.
 3. **Instructor analysis:** With distance learning, facilitators and technical support teams are also necessary. Instructor analysis deals with identifying the right instructors for the course.
 4. **Technology analysis:** Technology analysis deals with identifying the right type of technology that can be used to deliver the distance education

course module to the learners. Selecting the most appropriate technology depends on the content area, the learning styles of the students, and the existing hardware and software.

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- **Outline instructional goals and objectives:** Instructional goals must be the most important part of a good distance education program. Once the instructional objectives have been set, the instruction materials can be designed and developed. The technology to be used must be as invisible as possible and teachers must make use of this technology to provide instructions to the students.
- **Provide training to instructors:** Distance education does not make use of the same techniques that are used in classroom teaching. Therefore, instructors for distance education must be trained in a special manner to provide instructions and teaching in an effective manner when it comes to distance education

Most instructors and facilitators associated with distance education need help and training in the following:

- Effective strategies for implementing small group activities and individual practice
- Techniques for maximizing teacher/student and student/student interactions
- Successful approaches for integrating technology into the teaching/learning process
- Tactics for motivating students at a distance
- **Implementation of the program:** Once the training has been completed and the required instructions have been developed and tested to be effective, the distance education program can be implemented. Timelines, deadlines and feedback must be a part of the distance education program so that the effectiveness of the program can be checked.

Distance learning is that mode of education which is learner centric and provides the learner with the power to learn and control the pace of his or her learning. Like a conventional system, the distance learning mode also consists of students and teachers. While the students play a more active role in distance education by managing and organizing their way of learning, the role of the teacher is that of providing support to the students so that the learning can be made more effective. As opposed to conventional education, the teacher in distance learning does not instruct the students to do something. In fact the teacher is contacted only when the student of a distance education program needs support or help in solving a specific problem.

The role of a teacher in distance education can be summarized as under:

- The teacher in distance education program promotes the autonomy of the learners and is also aware of the fact that every distance learner is different from the other.

- The teacher makes use of relevant and current information to provide knowledge to the students.
- The teachers in distance education constantly research on the curriculum so that the self-learning material developed is not out of date or obsolete.
- The teacher encourages students to participate in research, evaluation and discussion.
- Teacher in distance education knows how a learner can learn and must also identify what the learner already knows. This helps the teacher build new knowledge.
- The teacher initiates an interaction with the distance learner and possesses the necessary communication and technological skills so as to make learning effective.
- The teacher provides the environment, study materials, counselling and other services as may be needed by the distance learners.
- The teacher provides prompt and accurate feedback to the distance learners to keep them motivated to learn and perform well.

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The role of the students in a distance education program can be summarized as follows:

- The distance learners make use of technology to interact and collaborate with other learners as well as the teachers.
- The distance learners make use of the feedback to improve learning and improve their skills and knowledge.
- The distance learners are responsible for their own learning.
- The students solve the problems by means of attempting assignments, answering questions, performing activities and undertaking projects.
- The students identify the communication barriers and also their causes and try to overcome these for effective interaction as well as effective learning.
- The students know how to make use of the information for learning and how to access the information.

Application of distance education in K-12 education

Although distance learning in K-12 education is not as prevalent as it is in the adult world, there are many forms of distance learning that are becoming increasingly common in schools throughout the world.

The K-12 applications for distance learning include:

- **Instruction for home-schooled students:** Distance learning technologies offer a variety of options for the students who cannot attend school because of several reasons and factors.
- **Virtual high schools:** Students do not have to be homebound or home-schooled to benefit from distance learning technologies. Some high schools are offering credit courses for students who are home schooled, those who

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have previously dropped out of high school, those in juvenile detention institutions, and those who need the flexibility to ‘attend’ school at times other than 7:00 am to 3:00 pm. Virtual high schools can offer the flexibility that appeals to certain students in specific circumstances, while maintaining high standards for education.

- **Instruction for distributed classes:** A number of school districts, particularly in less-populated areas, are using distance learning technologies to share teachers among several schools. For example, if only a few students in each school need a course, they can comprise a single class large enough to justify the cost of a teacher.
- **Interactions with outside experts:** Technologies such as videoconferences and podcasts allow teachers to bring into the classroom a guest who would normally be unable to visit. Long distances, difficult travel conditions, or busy schedules make it impractical for many individuals to visit school classrooms as guest speakers. Prominent persons are usually more willing to take 15 minutes to talk with a class by telephone or videoconference than they are to spend a couple of hours travelling to and from the school. In addition, there are numerous websites that offer access to experts.
- **Mentoring and tutoring of distant students:** Some school systems have implemented distance learning technologies to provide students access to tutors during the early evening hours or on weekends. Depending on the system, the tutors can work at their own homes or at a central location, such as the school, to mentor the remote students. Cross-age mentoring is also possible with older students helping younger students by means of distance learning.
- **Collaborative projects:** Distance learning can also be used to enhance collaboration between students in remote classrooms. There are many projects on the Web that promote problem solving, multicultural education, and community involvement. In most cases, one teacher or organization serves as facilitator for a project. As the data is collected from the remote schools, the facilitator compiles it and disseminates or posts the results.
- **Access to Remote Resources:** K-12 schools are often isolated from other learning environments, such as universities, museums, and libraries. Through distance learning technologies, these resources can become available for students in both urban and rural areas.
- **Staff development programs:** At the end of long days in the classroom, it is difficult for teachers to drive to a university or other facility for in-service credit or to pursue an advanced degree. Through distance learning technologies, the staff development programs can be delivered to the teachers’ school or home.

1.12 TYPES OF DISTANCE EDUCATION SYSTEMS IN INDIA

Distance learning systems in India can broadly be divided into the following types:

- 1. Open Universities:** They were originally set up to only offer programmes of study through distance education mode. Examples of open universities in India include the Indira Gandhi National Open University (IGNOU), Dr. B.R. Ambedkar Open University (BRAOU), Yashwantrao Chavan Maharashtra Open University, Nashik etc. The Dr. B.R. Ambedkar Open University was the first Open University to be set up in India in 1982. Now we have one national Open University (IGNOU) and 13 state open universities in India.
- 2. Dual Mode Universities:** These universities offer regular campus-based programs as well as distance learning programs like the University of Delhi (DU) and University of Mumbai. After DU introduced correspondence courses in 1962, other conventional universities began to offer various programmes through correspondence courses and thus set up Distance Education Institutions (DEI) and/or Correspondence Courses Institutes (CCI). These dual mode universities serve the educational needs of more than 1.5 million students in India. The total enrolments in correspondence/distance education in the dual mode universities are much larger than enrolment in the open universities. Other examples of such dual mode universities include Annamalai University (DDE), Acharya Nagarjuna University (CDE) and the ICFAI University Sikkim.
- 3. Mixed Mode Universities:** Such universities offer a wide variety of modes of study to the learners - regular campus programmes, distance education through traditional methods like printed material and contact classes, and now the increasingly popular technology-based online degrees. Amity University and Lovely Professional University (LPU) are examples of mixed mode universities.

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1.13 PRESENT STATUS OF DISTANCE EDUCATION

Distance education today has emerged as the best alternative approach to traditional teaching. Distance education has experienced international acceptance as well as popularity because of the following reasons:

- Distance education has wider access, outreach and cost-effectiveness.
- Distance education has the potential for democratisation of educational opportunities by catering to the educational needs of the working people, housewives, economically backward sections of society, drop-outs, handicapped persons and people living in remote and inaccessible areas,

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- It offers opportunities for life long and continuing education for adults, professionals and the community at large.
- Distance education offers relaxed entry qualifications and provision for learning at one's own pace and convenience.
- It entails well planned and carefully prepared self- instructional course materials.
- Distance education includes multi-media teaching-learning system which makes learning more interesting and effective for the learner.
- It also offers student support services which include a widespread network of regional and study centres with facilities for :
 - o Counselling/tutoring
 - o Evaluation of students' assignments
 - o Play-back of audio and video cassettes, T.V. and Radio
 - o Personal contact programmes
 - o Library and reading room
 - o Interdisciplinary studies
- Mobility of students from one distance education institute or open university to another within the country as well as across national boundaries.

Distance education originated in different forms and at different times to meet the needs of different countries and to meet a variety of needs at different levels of education. Distance education has experienced unprecedented growth over the last several years. Distance education has had the support of information industry leaders as well as that of emerging technologies and has evolved as e-learning industry.

Distance education since 1990 has moved from periphery of practice to mainstream education at K-12 as well as higher education level across the world. Australia and New Zealand have been providing primary and secondary education through correspondence since the early part of this century. The radio schools of Latin America are good examples of primary level adult education at a distance. The Air and Correspondence High School (ACHS) in South Korea, the Schools of the Air in Australia, Telsesecundaria in Mexico, and the National Extension College in U.K. are known examples of Secondary Level Education at a distance. The National Open School in India and the National Correspondence College in Tanzania offer secondary level courses for students who are not able to go to secondary schools.

At the tertiary level, Australia and the Russia have a fairly long tradition of distance education. Five of the nineteen universities in Australia offer distance teaching facilities. In the former Soviet Union, distance education through correspondence has been in existence for over 60 years offering to a large number of people, particularly the workers, opportunities to receive higher education. In 1979, the enrolment in the distance teaching universities in the Soviet Union was about 50% of the total enrolment in the conventional educational institutions.

The establishment of the Open University of UK in 1969 gave distance education a new legitimacy and a new level of technical expertise. Since then several other open universities and distance education colleges have come up.

Distance education despite its growth and popularity also has to face a few challenges. One of the main challenges that distance education today faces is that of increasing cost of education. The increased use of technology has also led to an increase in the cost of distance education while the educational structure remains the same. This leads to stagnation of education.

Another challenge is the fact that it is assumed that distance educators work in an environment different from that of other regular teachers and facilitators and so their work cultures are considered incompatible. Therefore, their effective collaboration is not possible which leads to problems in implementing distance education programs.

Distance educators today need to address the following challenges:

- Respond to individual student needs
- Provide differential starting and ending points for all students depending upon the ability of the student
- Develop economies of scale through differential staffing for each course
- Offer solutions to problems faced by distance education learners

Distance education is delivered using the following support tools:

- Traditional tools: videotape (S-VHS), cable/public television, tele-conferencing, hardcopy textbook.
- Recent tools: CD-ROM titles, Web browser, whiteboard, chat room, Real player, video broadcasting, satellite video conferencing, broadband video conferencing, audio conferencing, student assessment tool, and administration system.

There are three venues for distance education programs:

- Regular and continuing education programs in traditional universities
- Distance or e-learning portals
- Virtual universities

In a traditional university, most courses taught in the classroom are feasible for distance learning, except those that require lab experiments and physical presence. Virtual universities allow students to take advantage of the flexibility in time and location. Software systems and student evaluation methods in virtual universities are similar to those used in traditional universities. E-learning portals are another venue for distance learning. E-learning portals help small to medium size companies to offer employee training or customer service on the Internet.

1.13.1 Controlling Agencies for Distance Education

Distance education is popular in all parts of the world and therefore there are several international and national agencies that regulate and control distance

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education and its various aspects. The international distance education controlling agencies include:

- The International Council for Open and Distance Education or the ICDE is the leading global membership community for open and distance learning institutions. The ICDE is an NGO and has consultative relations with UNSECO. The ICDE also works on the principles of UNESCO- education for all. The ICDE is also responsible for developing and using new and emerging technologies in distance education. ICDE was founded in Canada in 1938 as the International Council for Correspondence Education and today has members from over 50 countries worldwide. ICDE conducts world conferences on open and distance education.
- The International E-Learning Association (IELA) works to promote the practice of e-learning in classrooms and workplaces. IELA is a diverse community of researchers, e-learners, professionals and students. IELA has members from across the globe.
- Asian Association of Open Universities (AAOU) is a non-profit organization. The aim of the organization is to promote distance education at higher level of education. The AAOU was founded by several open universities in Asia in the year 1987. The aim of these open universities was to promote education for all.
- The Commonwealth of Learning (COL) is an intergovernmental organization. The aim of the organization is to facilitate sharing of open learning and distance education resources, content and technology. The COL helps the developing nations to improve the quality of distance education offered to students. The COL works to expand the scope and also the scale of distance education courses across the globe by using new approaches and technologies in distance education. The COL also provided theoretical and conceptual models for the development of distance education programs that can enable distance learners learn in an effective manner.

National agencies for controlling distance education and learning

In a county like India where the educational needs of a majority of population cannot be met by the present system of education and the infrastructure, distance education can play a vital role in meeting the educational demands and also improve the quality of life of people by making the technology mediated material accessible to even the remotest of the locations in India. The popularity of distance education has grown by leaps and bounds over the last several years. The following are the national agencies that have been established to maintain the quality of distance education in India:

- The Distance Education Council or DEC was established as an apex body under the Indira Gandhi National Open University Act of 1985. The Distance Education Council is responsible for promoting and coordinating the various open and distance education universities in India and also maintaining their standards. The DEC encourages the establishment of open and distance

learning centres and also meets the challenges faced by distance education in India. The DEC was established to encourage the promotion and setting up of open and distance universities in the various states and to create a network of these. The DEC also provides grants and financial aid for setting up of such universities. As an organization to manage distance education in India, the DEC is also responsible for setting up admission, evaluation and examination standards for all open and distance education universities in India. The DEC also facilitates sharing of self-learning materials and enables the open and distance learning institutes to establish study centres. The DEC also encourages the open and distance learning institutes to make use of technology and ICT.

The DEC also promotes research in online and distance learning and facilitates training of the staff as well as the students who pursue distance learning and education. The council is also responsible for collecting and disseminating all information related to distance education programs in India. It also carried out review of the various distance education institutions and grants them recognition.

- University Grants Commission or UGC was formally established in November 1956 as a statutory body of the Government of India through an Act of Parliament for the coordination, determination and maintenance of standards of university education in India. Over the last several years, the quality of higher education in India has been compromised for various reasons. The universities offering higher education courses either through conventional education methods or by distance learning methods have faced several quality issues with respect to the quality of the material provided as well as the quality of the instruction and support services. The UGC has taken in its stride the task of maintaining the quality of higher education in universities in India.
- National Commission for Higher Education and Research is a consortium of around 13 bodies that undertake the promotion, coordination and quality maintenance task of distance education in India. The move to setup an independent NCHER is based on the recommendations of a panel setup by the government to review the functioning of the UGC, established in 1956, and the AICTE, which came into existence in 1987. A draft cabinet note for the creation of an overarching regulatory body in the higher education section has been prepared and circulated across ministries for consultations, on September 10, 2009. The process of replacing the University Grants Commission (UGC), All India Council for Technical Education (AICTE) and National Council for Teacher Education (NCTE) by the proposed National Commission for Higher Education and Research (NCHER) has commenced. The distance education universities also come under the jurisdiction of NCHER.

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Box 1.6: List of Universities offering Distance Education in India

- Distance Education in Alagappa University
- Distance Education in Andhra University
- Distance Education in Anna University
- Distance Education in Annamalai University
- Distance Education in Bangalore University
- Distance Education in Bharathiar University
- Distance Education in Bharathidasan University
- Distance Education in Dravidian University
- Distance Education in ICFAI University
- Distance Education in Kakatiya University
- Distance Education in Kamaraj University
- Distance Education in Kuvempu University
- Distance Education in Madras University
- Distance Education in Manipal University
- Distance Education in MDU Rohtak
- Distance Education in Mumbai University
- Distance Education in Nagarjuna University
- Distance Education in Osmania University
- Distance Education in Periyar University
- Distance Education in RVD University
- Distance Education in Symbiosis
- Distance Education in Vinayaka Mission

Open Universities in India

- Ambedkar Open University
- Babasaheb Ambedkar Open University
- IGNOU Courses
- MP Bhoj Open University
- Nalanda Open University
- Netaji Open University
- Tamil Nadu Open University
- Karnataka Open University
- Rajarshi Tandon Open University
- Kota Open University
- Yashwantrao Chavan Open University

1.13.2 Challenges Faced by Distance Education in India

Although various agencies have been established in India to control distance education in India, there have been challenges and discriminations that have been rampant because of the lack of demarcation in the powers of these agencies. The following are some problems and challenges that have been faced and experienced in distance education in India:

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- **B.Ed and M.Ed Courses:** In conventional B.Ed and M.Ed courses, the minimum requirement is 50 % marks for a one year course. In distance education, however, the eligibility requirement is 55% marks and 2 years teaching experience for a 2 year course. A student who can complete a degree in say nine months in conventional learning completes the same degree in 2 years in distance education making it a cause of concern and requiring the structure of the course to be reframed.
- **M.Phil and PHD Courses:** Several universities had been offering M.Phil and PHD courses through the distance mode of education. However, by a notification of the UGC, the universities stopped offering these courses in distance education mode. This has resulted in a large number of students from being denied the opportunity to learn. The problem here is that it is not clear whether the universities have to go by the word of the UGC or the DEC. If the universities have stopped offering these courses by an order of the UGC then what is the DEC present for? There is no demarcation of powers and rules and regulations that need to be followed by the universities.
- **Discrimination in employment:** There have been a large number of instances where the students who completed the distance education course have been denied employment and those who completed the same course via the conventional methods of teaching were given employment preference. This has made distance education an unreliable mode of education and has raised several questions about it.
- **Negligible participation of distance educators in academic framework:** In India, the role of distance educators is not clear. The distance educators have a role of acting as support staff to help distance learners solve their problems and have no role in developing the academic material for distance learners. The distance educators are usually not involved in the development of distance learning material as this task is also done by educators who have no experience of distance education. As such, distance education learners usually get learning material which is not of good quality.
- **Role of DEC not clear:** The DEC is just an appendage to the IGNOU and has not been recognized by the Government of India. It is ruled and regulated by the acts and ordinances of the IGNOU. The DEC has almost no say in regulating and maintaining distance education in India.
- **Separate rules for IGNOU:** In India, there are separate rules for implementing distance education. There are separate rules for IGNOU and separate rules for other distance learning institutions. There are no standard rules and regulations that are followed for providing distance education in India which puts distance education in jeopardy. Unless there is a standard framework and implementation policies for distance education, the quality of distance education in India cannot be maintained.
- **Neglecting of distance education:** In India, the conventional system of education is the dominant system and so all policies, rules and acts are framed keeping this conventional system in mind. There are no rules and policies

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which are framed for distance education by the national bodies and agencies which neglect the distance education mode. Thus, distance education has become a second rated method of education.

- **Not a clear concept:** Distance education in itself is a concept of education and knowledge but is considered and accepted as a separate and full-fledged concept. In fact, no policies and rules are framed for distance education and most experts in the field are not consulted when taking important policy and implementation decisions related to distance education.

1.13.3 New Policy in Distance Education in Higher Education Sector in India

The new policy on distance education in higher education sector was drafted by the Ministry of Human Resource and Development. Some of the highlights of this policy are:

The Indira Gandhi National Open University Act was passed in 1985 for distance mode in higher education with the following aims:

- to provide opportunities for higher education to a large segment of population, especially disadvantaged groups living in remote and rural areas, adults, housewives and working people
- to encourage Open University and Distance Education Systems in the educational pattern of the country and to coordinate and determine the standards in such systems.

The policy states that the history of distance learning or education in India goes way back when the universities started offering education through distance mode in the name of Correspondence Courses through their Directorate/School of Correspondence Education. In those days correspondence courses in humanities and/or commerce were offered. These were taken up by those who due to several reasons could not pursue their higher education in regular courses.

The policy states that the demand for higher education has increased over the last several years because of the increased awareness about the significance of higher education. However, the higher education institutions in India have not been able to meet this demand.

To meet the higher education demand and needs of the students, according to the policy, several institutions including deemed universities, private universities, public universities and even other institutions, which are not empowered to award degrees, have started offering distance education programmes in a large number of disciplines like humanities, engineering, management etc. These institutions offer certificate, under graduate and post graduate degrees to students who enrol in these courses.

According to the policy, since there are so many institutions offering courses in distance education, there is every possibility that the institutions will become 'degree mills'. In other words, these institutions may resort to offering sub-standard or low degree education which will consequently erode the credibility of the degree awarded by these institutions through distance learning mode. To prevent this, a higher degree

of coordination is required among the concerned statutory authorities, primarily, UGC, AICTE and IGNOU and its authority – the Distance Education Council (DEC).

According to the policy, distance mode of education play an important role for:

- (i) providing opportunity of learning to those, who do not have direct access to face to face teaching, working persons, house wives etc.
- (ii) providing opportunity to working professionals to update their knowledge, enabling them to switchover to new disciplines and professions and enhancing their qualifications for career advancement.
- (iii) exploiting the potential of Information and Communication Technology (ICT) in the teaching and learning process; and
- (iv) achieving the target of 15% of GER by the end of 11th Plan and 20% by the end of 12th five year Plan

The policy lays down the following to maintain high standards of higher education by fostering coordination among the various statutory regulatory authorities and also to promote open and distance learning education system in the country to meet the aspirations for higher education of all types of people:

- (a) In order to ensure proper coordination in regulation of standards of higher education in different disciplines through various modes [i.e. face to face and distance] as also to ensure credibility of degrees/diploma and certificates awarded by Indian Universities and other Education Institutes, an apex body, namely, National Commission for Higher Education and Research shall be established in line with the recommendations of Prof. Yash Pal Committee/ National Knowledge Commission. A Standing Committee on Open and Distance Education of the said Commission shall undertake the job of coordination, determination and maintenance of standards of education through the distance mode.

Pending establishment of this body:

- Only those courses that do not require extensive practical course work are permissible through the distance mode of education.
- Universities and institutions are required to frame ordinances, rules and regulations by outlining the program that is to be offered through distance education mode. The outline must specify the number of required credits, list of courses with assigned credits, reading references in addition to self-learning material, hours of study, contact classes at study centres, assignments, examination and evaluation process, grading etc.
- DEC of IGNOU shall only assess the competence of university/institute in respect of conducting distance education programmes by a team of experts, whose report shall be placed before the Council of DEC for consideration.
- The approval to the program will be granted only by the Council of DE and not the chairperson of the DEC.
- AICTE under section 20 (1) of AICTE Act 1987 has to ensure accreditation of the programmes in Computer Sciences, Information Technology and

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Management purposed to be offered by an institute/university through the distance mode, by National Board of Accreditation (NBA).

- UGC and AICTE under section 20 (1) of their respective Acts are required to frame detailed regulations prescribing standards for various programmes or courses, under their mandate, offered through the distance mode.
 - No university or institute, except the universities established by or under an Act of Parliament or State Legislature before 1985, is allowed to offer any programme through the distance mode without approval from DEC and accreditation by NBA. This does not hold for universities or institutions offering courses in Humanities, Commerce, Social Sciences, Computer Sciences and Information Technology and Management. These institutions however need to obtain fresh approval from DEC and accreditation from NBA within one year to continue providing distance mode of education in these courses. If the institution fails to do so, it will be held entirely responsible for the financial as well as career loss of the students enrolled in these courses.
 - In light of observation of Apex Court, ex post facto approval granted by any authority for distance education shall not be honoured and granted henceforth. However, the universities established by or under an Act of Parliament or State Legislature before the year 1985 and offering distance education programmes in the streams of Humanities/Commerce/Social Sciences before the year 1991 shall be excluded from this policy.
 - Students who have been awarded degrees by universities or institutions in distance mode of education but have not been approved by the DEC are given one chance to appear for the examinations of the subjects within one year. However, for this they need to fulfil requirements that have been stated by the UGC or AICTE. If the students qualify in these examinations, they will be awarded the certificate by the concerned university. The degree and certificate will then be considered valid for use for seeking employment and will also be recognized by other institutions. The policy initiatives spelt out in succeeding paragraphs shall be equally applicable to institutions offering distance education/intending to offer distance education.
- (b) All universities and institutions that offer distance learning programs need to seek approval and accreditation from a competent authority for offering distance education programs. This is a mandatory requirement. If any university does not do so and violates the norms then it shall be liable for penalty. Any university or institution offering distance education courses found involved in cheating the students by disseminating wrong information or by withholding any information shall be liable for penalty as per the provisions of the law.
- (c) Every university offering distance education will have its own study centre for face to face counselling and for helping students solve their problems and difficulties. These study centres will also offer academic and administrative assistance. A university or an institution offering distance education is not allowed franchising.

- (d) A university can offer only such programs through distance education mode which are offered on their campus through conventional education methods. Open universities offering distance education need to necessarily have required departments set up before they can offer the course through distance education mode.
- (e) For all universities and institutions offering distance mode of education, it is mandatory to make use of Information and Communication Technology (ICT) in delivery of their programmes, management of the student and university affairs through a web portal or any other such platform. The web portal or the platform is required to display all information related to approval and accreditation along with all necessary information about the distance education program. The web portal may be linked to a national database and must be accessible by all stakeholders.
- (f) E-learning contents must be optimally used by all universities and institutions that offer distance education programs. E-learning shall be used as a means of offering the course or the program. The universities may also be required to make use of e-surveillance technology to conduct fair, clean and transparent examinations.
- (g) The focus of distance education is to provide opportunity of education to people who are educationally disadvantaged. Distance education must focus on providing education to people living in remote and rural areas, adults with no or limited access to education of their choice etc.
- (h) In order to promote flexible and need based learning, choice based credit system shall be promoted and all ODE institutions shall be encouraged to adopt this system and evolve a mechanism for acceptance and transfer of credits of the courses successfully completed by students in face to face or distance mode. For the purpose, establishment of a credit bank may be considered. Similarly, conventional universities, offering face to face mode programmes shall be encouraged to accept the credits earned by the students through distance mode. A switch over from annual to semester system shall be essential.
- (i) Convergence of the face to face mode teaching departments of conventional universities with their distance education directorates/correspondence course wings as also with open universities/institutions offering distance education, shall be impressed upon to bridge the gap in distance and conventional face to face mode of education.
- (j) Reputed and well established foreign educator providers that have been recognized and accredited by a competent authority and willing to offer their educational programs in India shall be permitted to do so only if they meet the legal requirements.
- (k) A National Information and Communication Technology infrastructure for networking of ODE institutions shall be created under National Mission on Education through Information and Communication Technology.

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- (l) Efforts would be made to create favourable environment for research in Open and Distance Education (ODE) system by setting up infrastructure like e libraries, digital data base, online journals, holding regular workshops, seminars etc.
- (m) Training and orientation programs shall be conducted for educators and administrators of distance education courses which will focus on the use of ICT and self-learning practice and skills.
- (n) The distance education institutions and universities are encouraged to take care of the educational needs of the senior citizens as well as that of the disabled.
- (o) An official notification clarifying the issue of recognition of academic qualification, earned through distance mode, for the purpose of employment, shall be issued.
- (p) A mechanism shall be set up for evaluation of degrees of foreign universities for the purpose of academic pursuit as well as for employment under the Central Government. This may include the assessment of the credentials of the university concerned as also to test the competence of the degree holder, if needed.

1.13.4 Status of Distance Education in India at School Level

The Boards of Secondary Education which offer correspondence courses to students of class 10th to 12th follow the same courses as are prescribed for these classes in the formal schools and hold common examinations for all the students. The National Open School, however, provides need based flexible curriculum in English and Hindi to out of school students above the age of 14. All these institutes organise personal contact programmes. Some institutes provide facilities for science students to conduct practicals at selected laboratories.

Currently the National Open School has a cumulative active enrolment of approximately 200,000 from every State and Union Territory of the country. Most of the students are young adults between 18-24 years of age. Nearly 41% of students enrolled in NOS are women and 17% belong to the Scheduled Castes (SC) and Scheduled Tribes (ST). These categories, as well as ex-servicemen and handicapped students, are provided fee exemptions. Roughly 80% of students of NOS study through the medium of Hindi and the remaining through English. The National Open School also offers a few vocational and community education courses.

The National Open School has decentralised academic and administrative responsibilities relating to admissions, student support services and evaluation to 302 accredited institutions throughout the country which serve as Study Centres.

1.13.5 Status of Distance Education in India at Tertiary Level

In India, presently there are 45 institutes of correspondence or distance education which are affiliated to formal universities as well as deemed universities. There are 6 open universities including IGNOU. Karnataka and Gujarat are in the process of

establishing Open Universities. These institutions offer certificate, diploma, first degree and post-graduate degree programmes of both conventional and non-conventional types. The institutes of correspondence education adopt the same curriculum, examination pattern and eligibility criteria as do the conventional universities.

The instructional system followed by the institutes of correspondence education consists mainly of printed lessons and materials. On the basis of their learning, students are required to submit feedback but in most cases, the feedback is minimal. The students may contact the colleges or universities through special sessions.

IGNOU and the state open universities are autonomous institutions. These have come up with several non-conventional courses keeping in mind the job requirements and needs of the community. In most cases and courses, the qualifications and eligibility criteria have been relaxed by the university. One of main advantages of these universities is that they offer flexibility in choice of courses as well as the duration for the students take up the course. To impart the basic knowledge of the subjects, these institutions make use of modern communication technologies such as radio, TV, audio and video cassettes. Opportunities for face to face contact between students and teacher are provided at the study centres and through extended contact programmes. IGNOU has so far established 16 Regional Centres and 220 Study Centres in all States and Union Territories in the country.

The IGNOU which launched its academic programmes in 1987 has made significant progress. The University presently offers Bachelor's degree programmes in 13 disciplines, a Master's degree in Business Administration, and several diploma and certificate programmes. The annual enrolment has increased over the past decade. The three State Open Universities, namely, Dr. B.R. Ambedkar Open University in Andhra Pradesh (BRAOU), the Kota Open University (KOU) and the Yashwantrao Chavan Maharashtra Open University in Maharashtra (YCMOU) together have almost 1.2 lakh students enrolled in different courses of distance education.

1.13.6 Open and Distance Education in North East India

Open and distance education system has emerged as an important alternative to formal education in the modern world. Due to its easy accessibility, cost-effectiveness and flexibility, the system has been able to reach people living in far flung and isolated areas. Mizoram, one of the states in the North East corner of India, too has witnessed a significant growth in open and distance learning system both at the tertiary and at the school level since the late eighties. There is a rapid expansion in the number of study centres, diversification of courses and in enrolment of learners. A study was conducted to examine various aspects of the status and development of open and distance education in Mizoram. The study showed that open and distance education plays a crucial role in providing access to diverse educational programme to a large number of learners who lived in isolated places and who cannot afford regular conventional education due to poverty and full time engagement in other activities.

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1.13.7 The Past and Present of Distance Education in India

Distance education has grown in different dimensions to become the chosen route for higher education. The larger section of the student community in India, aspiring for higher studies, seeks distance learning for its convenience, flexibility, affordability and accessibility. The eligibility aspect of distance learning attracts even the adult segment to pursue higher education. As per the 2011 statistics, during the last decade (2001-2011) distance education has grown from 20% to 26% of the student populace in India. This growth is further catalyzed by the increasing demand for better competencies for a particular job. Add to that, the technology boom has bolstered the distance education space, through better reach, promising to deliver a bright future. Distance education in India has come of age, with innovative pedagogy, technology-driven learning interfaces, remote access, quality output and employability, as its focal point. As India sports 1.29 crore people in the 10+2 category, distance learning holds immense prospects for the future of the country both in the economic and social planes.

1.13.8 International Commission on Distance Education

International Commission on Distance Education is a non-profit organization established in Geneva, Switzerland, in 1997 to promote and develop distance education programmes. International Commission on Distance Education is a global membership organization for open, distance and online education. Membership is open to institutions offering post-secondary and/or adult education, research institutions, educational authorities and individuals. These are some of the key areas:

- Leadership for change - how can institutions adapt to an increasingly open and online world?
- Supporting teaching and faculty in open and distance learning techniques
- Quality review service for institutions
- Scholarly articles on research and innovation in open, distance and flexible education
- Partnership and networking

Among the main objectives of the organization are the promotion of distance education programmes in emerging countries and the creation of a scholarship fund for students with demonstrable low levels of income in underdeveloped countries. Each member institution of CODE and all institutions that join the quality assessment scheme are required to offer two scholarships annually for each course audited. These scholarships are to be offered to students in emerging and undeveloped countries.

CODE is established in five regional centres across the five continents. It is represented in all the offices of United Nations through delegates who inform the Economic and Social Council of the concerns of the sector and keep track of programmes designed to enhance education levels and to reduce the technological deficit of the least favoured countries.

CHECK YOUR PROGRESS

11. What are the factors that need to be considered when designing a good distance education course?
12. Why is an instructor vital for the development of a good distance education course?
13. What are some of the international distance education controlling agencies?

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1.14 SUMMARY

- Distance education has emerged as an alternative form of education. Distance education simply means that the learner and the teacher are not together at one place and therefore classroom teaching cannot take place. In distance education, the learner or the student is the one who organizes, controls and manages the manner in which learning is done.
- Therefore, as opposed to a conventional learning system, the focus in distance education is more on learning rather than on teaching. Distance education learners acquire knowledge at a pace and a place that suits them. There are no fixed hours of classroom teaching or instructions in distance education, which also makes this form of education a flexible one. Apart from this, the distance education system makes learning possible for every type of person.
- Distance education learners may come from various backgrounds and so distance education needs to deal with a heterogeneous mix of students. Distance learners may be students, working professionals, mothers, women or even managers of companies.
- Distance learning is fast gaining popularity mainly because of the fact that it is flexible and does not involve regular classes. Therefore, for people like working managers and mothers, this form of education is one of the best means using which they can pursue their educational interests.

1.15 KEY TERMS

- **Accessibility:** The extent to which the distance education course is available to the distance learners. A distance learning course is said to be accessible when all the distance learners can take part in all the activities.
- **Accreditation:** Recognition or certification of a distance learning institution. Accreditation is the process by which one higher education institution gains authority to award a degree or a certificate to the distance learners.
- **Admission:** The process of or system that allows qualified applicants to pursue studies in higher education and achieve the educational goals.

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- **Blended learning:** A mix of e-learning and traditional teaching and learning practices. Blended learning makes use of face-to-face interaction as well as online learning.
- **Certification:** A valued credential awarded to either the students or the institutions offering distance education.
- **Classroom training:** Training conducted where the students and facilitator interact in a real, physical classroom.
- **Collaborative learning:** Learning that involves the exchange and sharing of information and opinions among a peer group. Collaborative learning makes use of computers to facilitate learning and also share information.
- **Content:** Any information which is provided to distance learners in any form-text, audio, video, animations, simulation and even print materials.
- **Course:** A well-defined module of study. It is generally a part of a program that is composed of several courses.
- **Course design:** Setting learning objectives, choosing media applications, planning evaluation and preparing instructional strategies so as to develop learning materials that meet the educational needs of the learners.
- **Curriculum:** Academic and subject requirements and the processes for organising and managing teaching and learning.
- **Digital libraries:** Libraries that have collections of electronic materials such as e-journals, online databases, e-books. Digital libraries are used by distance education students to supplement their learning which is carried out by using self-learning materials.
- **Distance education:** A form of education in which the students and instructors not in the same location. Media support is mandatory in distance education to deliver the learning material as well as provide interaction between the learners and the teachers.
- **Distance learning:** A mode of study in which a student is allowed to study without having to attend regular classes.
- **E-learning:** A learning facilitated through the use of information and communication technologies. E-learning makes use of several elements like hardware, software, digital resources and also online communication facilities.
- **Evaluation:** A systematic appraisal of the effectiveness of a teaching or learning in distance education.
- **Facilitator:** A facilitator is an instructor who assists, directs and stimulates learning of a distance learner to make learning effective.
- **Feedback:** An advice or suggestion given by the teacher about the progress of the distance learner. Feedback can be positive or negative.
- **Open Educational Resources (OER):** Educational materials with an open licence, i.e., materials used to support education that may be freely accessed, reused, modified and shared by anyone.
- **Open university:** A university that is open to people without formal academic qualifications and there are no entry requirements for the learners.

1.16 ANSWERS TO 'CHECK YOUR PROGRESS'

1. Distance learning is conventionally defined as, 'Any educational or learning process or system in which the teacher and instructor are separated geographically or in time from his or her students; or in which students are separated from other students or educational resources.'
2. Open learning is essentially a goal or an educational policy. The idea behind open learning is to remove all barriers to learning and provide education to everyone. In other words, no one is denied access to an open learning program.
3. The idea of introducing distance education in India at the secondary level was put forth in 1964.
4. The three historical approaches are theories of autonomy and independence, Otto Peter's theory of industrialization and integration of theories of communication and interaction.
5. Transactional distance, interaction, control and, social context are the theories of distance education.
6. Synchronous distance learning, asynchronous distance learning, hybrid distance learning, computer based distance learning, fixed time online courses and open schedule online courses.
7. Open universities are government funded institutions that aim to educate people who may not have any educational qualifications.
8. Distance education is imparted by three kinds of institutions: (i) Departments of Correspondence which are universities and university level institutions (ii) Open Universities (iii) A large number of private institutions which offer short term vocational courses.
9. The various models of distance education include examination preparation model, correspondence education model, multiple media model, group distance education model, autonomous learner model, network based distance learning model, technology extended classroom teaching model, Taylor's Model of Distance Education.
10. Taylor proposed five generations of distance education.
11. Course design, course content, course instructor and support systems.
12. Instructors have an impact on the student involvement in the distance education course and also its success. It is essential that a good quality distance education course be taught by an instructor who is passionate about his or her subject, is approachable and encourages student involvement in the best manner possible.
13. The International Council for Open and Distance Education, The International E-Learning Association, Asian Association of Open Universities, The Commonwealth of Learning.
14. The Distance Education Council or DEC was established as an apex body under the Indira Gandhi National Open University Act of 1985.

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1.17 QUESTIONS AND EXERCISES

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Short-Answer Questions

1. When was the National Open School established?
2. What are the basic assumptions of distance education?
3. List the aims and objectives of distance education.
4. What are the factors that are considered when designing a quality distance education program?
5. What factors must a distance education learner consider when selecting a distance education program?
6. What are the basic assumptions of distance education?
7. On what principles is distance education based?
8. list the aims and objectives of distance education.
9. List the reasons for popularity of distance education.
10. What are the disadvantages of distance education?

Long-Answer Questions

1. Write a note on history of distance education.
2. Write about the genesis and present status of distance education in India.
3. Explain the various theories of distance education.
4. Write about the various typed of distance education.
5. Write in detail about the various models of distance education.
6. Write about Taylor's model of distance education.
7. Explain the various characteristics of distance education.
8. Explain the process of designing a distance education program.
9. What factors must a distance education learner consider when selecting a distance education program?
10. Explain the process of implementing distance education program.
11. Explain the role of teachers and students in distance education.
12. Write about the present status of distance education.
13. Enlist and explain the functions of international and national agencies in promoting distance education.

1.18 FURTHER READING

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UNIT 2 DESIGNING AND PREPARING SELF- LEARNING MATERIALS (SLM)

*Designing and Preparing
Self-Learning Materials
(SLM)*

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Structure

- 2.0 Introduction
- 2.1 Unit Objectives
- 2.2 Self Learning Materials
 - 2.2.1 Theories of Self-Learning Materials
 - 2.2.2 Characteristics of Self-Learning Materials
 - 2.2.3 Printed Materials
 - 2.2.4 Roles of Self-Learning Materials
- 2.3 Process of Designing Self-Learning Materials
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 - 2.3.2 Course Development Team
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 - 2.3.4 Developing a Unit
 - 2.3.5 Types of Self-Learning Materials
- 2.4 Oral Materials
 - 2.4.1 Development of Oral Materials
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- 2.5 Role of Electronic Media in Distance Education
 - 2.5.1 Types of Electronic Media Used in Distance Education
 - 2.5.2 WebQuests as Electronic Media for Distance Learning
 - 2.5.3 Selecting Electronic Media for Distance Education
 - 2.5.4 Electronic Media Production Centre
 - 2.5.5 Using Interactive Video in Distance Education
 - 2.5.6 Use of Electronic Media in Distance Education
- 2.6 ICT and its Application in Distance Education
 - 2.6.1 The Significance of ICT in Education
 - 2.6.2 Objectives of Using ICT in Distance Education
 - 2.6.3 Inclusion of ICT in Distance Learning
 - 2.6.4 ICT Infrastructure for Distance Education
 - 2.6.5 EDUSAT and E-Learning
- 2.7 Summary
- 2.8 Key Terms
- 2.9 Answers to ‘Check Your Progress’
- 2.10 Questions and Exercises
- 2.11 Further Reading

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2.0 INTRODUCTION

Distance education is a form of education in which the student or the learner plays an important role. Distance learning is said to be learner centric as it focusses on the how the learner acquires knowledge by himself or herself with little or no support from the teacher. In distance learning, the distance learners choose the course of their interest and then decide on what to learn and how. In other words, it is the learner who decides what to learn, how to learn and when to learn. This also implies that the role of the teacher is limited in distance learning.

Distance learning makes use of self-learning materials, which are education materials available in print or through other media. These self-learning materials are designed in such a manner that they make learning effective for the distance learner. The self-learning materials are designed in an easy format with built-in assessments so that distance learners can keep a track of their progress.

Distance learning is a mode of education in which the learner and the teacher are geographically separated and there is no or little interaction between the two. Distance education therefore needs to make use of several tools and technologies so that the learning material can be made available to the distance learners. Information and communication technology are therefore integral to distance education. Distance education in fact relies on interactive technology for enabling communication between the students and the teachers.

2.1 UNIT OBJECTIVES

After going through this unit, you will be able to:

- Discuss the concept of self-learning materials
- Analyse the theories and characteristics of self-learning materials
- Learn about printed materials
- Understand the role of self-learning materials
- Explain the process of designing self-learning materials
- Elaborate on oral materials for self-learning
- Identify the role of electronic media in distance education
- Understand ICT and its application in distance education
- Explain the concepts of EDUSAT and e-learning in distance education

2.2 SELF LEARNING MATERIALS

In a classroom or conventional teaching, the teacher has various roles to perform. The teacher functions as the fundamental resource and makes use of other resources like textbooks, audio aids, etc., to instruct and teach the students. The teacher is in

fact the central component in conventional teaching wherein he or she plays a vital role in making the students learn and guiding them to learn effectively. The teacher in a classroom environment usually has various functions including, defining what is to be learnt, providing information, giving examples to explain a topic, questioning the learner's to check their knowledge, setting learning tasks, both for individuals and groups, answering queries, testing the learners, providing feedback on learners on their progress, providing additional learning resources and providing personal and academic advice.

In distance education, however, there is no teacher. The teacher is replaced by a combination of learning materials and various tutors. However, when it comes to distance education, the tutors are not available for the students at all times. In fact, in many distance education programs, the tutors play the role of a facilitator and do not interact much with the students. Therefore, distance education material must be such that it performs all the functions that a teacher performs in a traditional classroom. It is the study or the instruction material used in distance education that functions as the ultimate information source and guide for the students.

Distance education is inherently self-study or self-learning which makes it even more important for the instruction material to perform the above stated tasks. Distance education is directed towards the teaching of an individual rather than a group of students making it a form of education that promotes and encourages self-learning. Self-study or self-learning however does not mean that a student learns in isolation from others. It simply means that the individual student takes up the responsibility of his or her learning independent of the teacher.

As a form of education that encourages self-learning, the features of distance education can be summarized as follows:

- The learner takes the responsibility for his or her learning.
- The emphasis is on learning rather than teaching.
- The role of the teacher is that of a facilitator or a guide.
- The instructions are typically learner controlled and may vary from simple to complex.
- The instruction material promotes orderly and controlled development of the skills of the individual.
- The role of the student is greater in the learning activity as compared to that of the teacher.
- The emphasis is on recognizing individual differences and developing material to suit the needs of various people.
- The focus is on learning at one's own pace.
- Feedback and evaluation are vital.

Self-learning is considered more advantageous than classroom teaching because self-learning allows individuals to learn at their own pace and therefore learn more effectively. As opposed to classroom teaching where one student can be

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active and another passive, self-learning in distance education requires an individual to actively participate in the learning process because that is the only learning option available. In addition, self-learning promotes discipline and makes learning more enjoyable, exciting and rewarding.

In distance education, various types of learning materials are used in various forms like print, audio, video, multimedia, web, etc. The learning material in case of distance education is so designed that it facilitates self-learning. The learning material for distance education is designed to enable the individuals to learn at their own pace and in their own time. Therefore, the learning material is termed as self-learning material.

Self-learning materials are designed in a way such that the role of the teacher is eliminated to facilitate the learning process. In other words, the self-learning material is so designed that it makes learning on one's own, without any teacher, easier and more effective.

Self-learning material must be designed with care since it is used independently by the learner. Thus, the quality of the learning material becomes imperative to the success and effectiveness of a distance education program. Self-learning materials are usually designed by experts to ensure that a distance education learner can have all the experiences of classroom teaching. It is also essential to maintain high quality academic standards when self-learning materials are developed. Revision of self-learning material is also important in order to keep the material updated and to further improve the material to make it more course relevant, learner friendly and academically rich.

2.2.1 Theories of Self-Learning Materials

The design and use of self-learning materials is based on several theories of learning. The following are the theories on which self-learning materials are based:

- **Behavioural theory:** According to this theory, the aim of developing self-learning materials is to create particular conditions in particular type of learning. According to the behavioural theory, self-learning materials are applied to rote memorizing, training people to do routine tasks, learning arbitrary information, learning rule systems, learning procedures where variation is not acceptable, etc. The steps taken to develop self-learning materials wherein the materials prescribe what is to be learnt in the behavioural theory include the following:
 - o Stating the learning objectives
 - o Breaking down the tasks into smaller steps wherein each task has right or wrong answers
 - o Assessing the learners against the stated learning objectives
- **Cognitive theory:** According to the cognitive theory, the development of self-learning materials must take into consideration the characteristics of the individual learners. Cognitive theory states that self-learning materials must be applied to concepts like classifying, concept-learning, problem solving, procedures, reasoning and rules.

To develop self-learning material using the cognitive theory, the learning objectives are first stated. A wide variety of tasks within the scope of the stated learning objectives are defined and stated and the material is broken down into small chunks or manageable units. The learners take the assistance of the organizers to go through the structure of the material and to learn what has been prescribed. The learners are then assessed with respect to the stated learning objectives.

- **Constructive theory:** The constructive theory focusses on designing self-learning materials that emphasize on the self-learning approach of the learner. In other words, the self-learning material is designed to facilitate a learner to perform activities that help him or her learn. The self-learning material based on the constructive theory makes use of case studies, complex situations and real world problems. To learn and develop self-learning materials using the constructive theory, the task is chosen as per the learner's choice. Usually the tasks or situations chosen are real world case studies that enable the learner to understand the complexity of real world situations. The self-learning material in this case is open-ended and facilitates the learning of new concepts. The learners get an opportunity to learn by observing others and are not assessed against the learning objectives. In this case, self-evaluation plays a vital role.

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2.2.2 Characteristics of Self-Learning Materials

The self-learning materials so developed should have the following distinct characteristics:

- **Self-motivating:** Self-learning materials are like teachers and therefore must motivate and encourage students to learn. The materials should be able to arouse the curiosity of the students, should encourage them to raise problems and relate situations with the knowledge they have gained. The self-learning material must make the learning process meaningful for the learners.
- **Self-learning:** Self-learning materials must be true to their nature and facilitate self-learning. These materials must offer features like directions, hints, references, etc., so that the students can learn in an independent manner. The learning material must be supported by examples, explanations, illustrations as well as activities.
- **Self-explanatory:** Self-learning material must be self-explanatory, in the sense that the learner must be able to go through the material and comprehend it without any external support. The self-learning material must be conceptually clear and must also be consistent. It is therefore essential to analyse the content logically before it is developed.
- **Self-contained:** Self-learning material must be sufficient in itself so that minimum external support is required. There are many students who cannot access external support when they are distance education learners because of their remote locations. It is therefore essential that the self-learning material is designed in a manner that content can be visualized in an easy and effective manner.

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- **Self-directed:** The material must provide support and guidance to the learners at each stage of learning. The material must be self-directed and must be in the form of easy explanations, sequential development, illustrations, learning activities, etc. Like a teacher, the material must direct the learners at every step of learning.
- **Self-evaluating:** When using self-learning materials, learners must be ensured that they are on the right track and learning in the right manner. Therefore, self-learning material must include evaluation mechanisms like self-check questions, activities and exercises. Self-learning materials must provide learners with the necessary feedback about their progress so that they can be motivated and encouraged to continue and reinforce their learning.

2.2.3 Printed Materials

Printed material is the most commonly used self-learning material in distance education. Self-learning printed material generally includes:

- Specially written correspondence texts or lessons.
- Textbooks which have been specially written or already published.
- Supplementary items which include notes on broadcasts, assignments, instructions, drawings, photographs, maps, charts, journals, newspapers, periodicals, reading guides, bibliographies, etc.

However, the printed materials used for distance education is not the same as normal textbooks used in a conventional teaching environment. The following are the differences between the two:

- In textbooks, the layout is denser whereas in self-learning materials, the layout is more open with wide margins.
- In case of text-books, the learning objectives are written from the perspective of the teachers while in case of self-learning materials, the objectives are stated from the perspective of the learners and state what the learners would be able to do at the end of the unit.
- Textbooks are written in an impersonal style whereas self-learning materials are written using a personal tone and style.
- In textbooks, there is little or almost no emphasis on self-evaluation and self-assessment whereas self-learning materials focus on self-assessments.
- Textbooks assume that the learners will be interested in what is being taught whereas self-learning materials create interest of the learners and motivate them to learn.
- Textbooks are designed and developed for a wide market whereas self-learning materials target a specific group of learners.
- Most textbooks are packed with content focussing less on activities and exercises whereas most self-learning materials focus more on case studies, examples, illustrations, etc.

2.2.4 Roles of Self-Learning Materials

Self-learning materials should serve the following functions:

- **Elicit response:** Self-learning materials must elicit an active response from the learners. They must motivate the learner to think, write and do. The various units of self-learning materials must be learner active and motivate the learner to be attentive and engage in various types of academic activities such as jotting down points, explaining the concepts, collecting material, applying what has just been learnt to a new situation, completing self-check exercises, writing assignment responses and similar exercises.
- **Pedagogical functions:** Self-learning materials must be able to impart facts, develop skills of the learners, provide a link between the students and the tutors and clearly state how the learning material needs to be organized.
- **Motivational functions:** Self-learning materials must enable the students to learn at their own pace. These must motivate the learners and enable them to reinforce their skills and knowledge using self-assessment and evaluation.

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CHECK YOUR PROGRESS

1. Why is self-learning considered more advantageous than classroom teaching?
2. What is the behavioural theory of self-learning materials?
3. What do self-learning printed materials comprise?

2.3 PROCESS OF DESIGNING SELF-LEARNING MATERIALS

Self-learning material is designed by individuals or a team of experts who are a part of an educational institution that offers distance education. The design and the development of a self-learning material is therefore the responsibility of the institution, and the various academic bodies associated with the institution delivering the distance education course. Self-learning material is designed in a modular format so that it can facilitate self-learning, especially for students who have minimum interaction with the teachers and their peers. The following are the various stages of design of self-learning materials used in distance education:

- **Pre-planning stage:** In the pre-planning stage, the need to develop self-learning material is identified. The stage typically begins with designing a rough syllabus of the material. The prepared rough syllabus is then discussed with the curriculum committee and in workshops so that it can be finalised. Once the syllabus has been finalised, it is to be approved by the academic council. The pre-planning stage also includes conducting workshops for writers and editors to select the ones who can develop the required material. In this

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stage a model of modules that are to be included in the course material is also designed.

- **Planning stage:** The planning stage deals with developing the self-learning material. During the development of the material, the following points need to be considered:
 - o The subject matter and content of the course
 - o The aims and objectives of the material
 - o Time needed by the students to complete the course material
 - o The target audience and their levels of education
 - o The other resources that will supplement the self-learning material
 - o The assessment and evaluation methods of the course
- **Authoring stage:** The authoring stage deals with preparing the content of the self-learning material. This includes writing the content, editing the content or the course material and obtaining the copyright permission for the self-learning material.
- **Production stage:** The production stage includes proof-reading the material and making the necessary changes. Once the material has been checked and proof-read, it is printed.

2.3.1 Model for the Design and Development

Designing and developing self-learning material is based on the integration of the role of educational technologies, media producers and editors as well as unit authors as they polish drafts of the course materials. Developing self-learning material requires subject specialists to discuss and compile the content to be covered and prepare some outline of the exposition. They should then hand over the material to media experts, whether in print, oral (radio, tape) or visual (TV, wall charts etc.) medium that would transform the content into suitable material. The development of self-learning material makes use of a full time academic staff as well as an external academic consultants and writers. External writers need to be chosen carefully. It is not wise to approach the most senior or renewed experts. Senior academics are at times less flexible, resist changes to their material and are often too busy to meet deadlines or too removed from teaching to adapt to this very different mode of instruction and the student audience. In general, it is better to choose good teachers rather than research oriented specialists, unless it is required to build a good academic reputation through eminent authors.

External writers and academic staff perform the following activities in the design and development of self-learning material:

- Drawing a course curricula
- Devising a system of course design
- Briefing and if necessary, training writers
- Drawing comprehensive contracts with penalty clauses for late or unsuitable material

- Advising and coordinating writers and their outputs (the different elements of all courses they are producing)
- Assessing and critically reviewing the course material
- Ensuring that the syllabus is adhered to
- Updating the course as per requirement

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Box 2.1: Self Learning Material at LPU, India

Study material available in Self Learning format, is one of the best features of LPU Distance Education. It is known that in a distance education environment, the student is not in close proximity with the teacher and so the material meant to impart distance learning must be such that it plays the role of the teacher. The material must also provide the required knowledge and information. The study material developed by LPU is self-explanatory, self-contained, self-directed, self-motivating, self-evaluating, and hence is called Self-learning Material (SLM).

LPU provides SLMs for certain courses through LPU e-Connect (Online Learning Management System) and LPU DE website www.lpude.in. This allows students to study wherever and whenever they want offering the student flexibility to learn. The SLMs also give a feeling of virtual classroom to the students. However, if a student wants to take printed Study Material, then he/ she is required to pay prescribed fee separately at the time of taking delivery of the study material.

The SLM developed by LPU makes use of several tools like Caution, Notes, Tasks, Did you know?, Pictures, Graphics, Exercises, Case Studies, Examples, etc.. All these make it easy for the students to study on their own. Self-Assessment Questions and Review Questions are also provided in the SLMs. These enable students to evaluate themselves on the topics they have learned. These assessment modules also keep the students engaged in learning and studying. Other features like Summary, Keywords, Glossary and Further Readings make the SLM comprehensive and stimulating for the students enabling them to understand better.

2.3.2 Course Development Team

The development of self-learning materials requires team work and cannot be achieved in isolation. In other words, a single person cannot work for the development of self-learning materials. The following are the various team members involved in the development team of self-learning materials:

- **Coordinator:** The coordinator is responsible for carrying out the following activities.
 - o The coordinator prepares a course blueprint and communicates it to the others involved.
 - o The coordinator prepares the schedule for course development and manages the teamwork.
 - o The coordinator is responsible for planning the course budget and costing and ensuring that the course is designed within the prescribed budget.
 - o The coordinator manages the work of the team and calls for and arranges team meetings as and when required.

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- o The coordinator monitors the progress of the development of the course material.
- o The coordinator coordinates with all the authors and editors.
- o The coordinator prepares progress reports and communicates it to all members involved.
- **Author:** The author is essentially the one who uses his or her expertise to write the course content. The following are the roles an author plays in the development of self-learning materials:
 - o The author prepares new manuscripts for the various courses offered by distance education.
 - o The author defines the objectives and goals of the course or the unit.
 - o The author ensures that the course is written as per the learning styles of the learners.
 - o The author also writes the assigned modules of the course.
 - o The author reviews the course content.
 - o The author rewrites the manuscripts for courses already offered by the distance education mode.
 - o The author proofreads the material.
 - o The author also prepares art briefs for the illustrators.
 - o The author designs the assessment questions for the course.
- **Instructional designer:** The following are the responsibilities of an instructional designer:
 - o The instructional designer advises the author on the structure of the content and the presentation of the content as well as the activities that need to be included.
 - o The instructional designer advises the author on the methodologies to be followed for the development of the content.
 - o The instructional designer advises the author on how to apply the principles of distance education to the course being developed.
 - o The instructional designer ensures that the content of the course is consistent with the learning outcomes and goals.
 - o The instructional designer also helps in selecting the appropriate course materials.
 - o The instructional designer researches and defines the learner needs.
 - o The instructional designer coordinates the flow of the development of the course.
 - o The instructional designer also checks the quantity and quality of the resource materials.
- **Content valuator or referee:** The following are the main responsibilities of the content valuator or the referee:
 - o The referee checks the content for accuracy, relevance and consistency.
 - o The referee evaluates the resource materials.

- o The referee ensures that the unit or course developed is in-line with the learning requirements.
- o The referee offers academic and critical support to the writer.
- o The referee provides feedback to the author regarding the course developed.
- **Graphic artist:** The following are the main roles of the graphic artist:
 - o The graphic artist defines the visual design of the course.
 - o The graphic artist creates and arranges illustrations and graphics for the course.
 - o The graphic artist defines a design strategy.
 - o The graphic artist ensures that the visual presentation is effective.
 - o The graphic artist prepares the cover design of the course content.
- **Media specialists:** They ensure that the audio-video content of the course is supplementary to the printed material being developed. Media specialists have to ensure that the course is presented in an effective manner visually as well as the audio format for making learning easier.
- **Editor:** The editor makes sure that the course developed is student-friendly and is free from errors so that learning can be effective. The following are the responsibilities of the editor:
 - o The editor checks the activities prescribed in the course to ensure that they are related to the course content.
 - o The editor checks for accuracy of the content.
 - o The editor checks for spelling errors as well as grammatical errors to ensure that the final manuscript is free from errors.
 - o The editor advises the writers on how to improve communication and presentation to facilitate maximum learning.
 - o The editor checks the tables, diagrams and illustrations and ensures that these are placed at the right positions in context of the text.
 - o The editor ensures that the technical aspect of the course is consistent with the needs of the content users.

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2.3.3 Access Devices Used in Self-Learning Materials

SA distance education program consists of several courses wherein each course is systematically divided into several blocks. Each block is usually a booklet of 60-80 pages which contains all the essential learning material. Each booklet of the course talks about a specific theme. The booklet is divided into several units. The unit of a block explains and talks about one topic at any given time. The unit is further divided into sections and sub-sections so that the learner can easily use the illustrations, information and the concepts to learn what the course is intended for.

All the units of a block are logically connected to provide a flow to the learner. Every unit constitutes associated access devices that are used by the learner to make learning easy and effective. The following are the access devices used in units of self-learning materials:

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- The cover page must be designed in such a manner that it provides the learner a broader view of the course.
- The title of a unit must tell the learner what the learner is going to learn about.
- The structure of the unit must be clearly defined. The unit must be divided into sections and sub-sections and the content of each of these must be clear to facilitate better learning.
- The objectives of the unit must be clearly defined so that the learner knows the outcomes of learning the unit.
- The content must be divided into sections and sub-sections with each of these sections and sub-sections boldly marked.
- The content must be supported with illustrations, diagrams, charts and tables to make learning easy.
- Glossaries must be provided at the end of the unit so that the learners can understand the various technical terms used in the unit easily.
- Each unit must be preceded by instructions as to how the learner must proceed with learning from the unit.

2.3.4 Developing a Unit

Since distance education is a self-learning mode of education, the units of the course must be designed to facilitate easy learning. The units of the self-learning material must therefore be developed one by one so that they connect logically together to form the entire course. The unit created by the development team consists of three parts: the beginning of the unit, the main body of the unit and the ending of the unit.

The beginning of the unit is aimed at providing decisive orientation to the learners so that the learners know what they are going to learn from the unit. Each unit must have a structure which clearly and logically defines the arrangement of the contents in the unit. The structure helps the learners to locate the content within the unit easily and also helps to make the self-learning material more learner-friendly.

Each unit must have an introduction which helps the learners to know what the unit is about. The introduction to the unit must guide the learners about the content they can find in the unit. The introduction must informally talk about the unit briefly. The objectives of a unit must also be defined so that the learner understands the outcome of the unit. The objectives basically define the level of understanding that the learners must be able to achieve after they have studied the unit.

The main body of the unit is usually divided into sections and sub-sections. Usually, every section and sub-section introduces the learner to a new idea or a concept. When writing the main body of the unit, the writer must ensure that he or she takes into consideration the fact that students learn through different concepts. Therefore, writers must take into consideration the following:

- The content must be divided into small and manageable steps and activities. This enables the learner to move from one unit to another easily and facilitates more effective learning.

- The content of the units must be logically arranged so that learners can move from one section to another in an easy manner. Logical arrangement of the content also facilitates continuity and consistency in the course material.
- The content must be ordered in a proper manner and all the concepts—general, specific and abstract must be explained in a manner that makes self-learning easy and more effective. Every concept must be accompanied by diagrams, charts or illustrations so that the learner can grasp the concept easily.
- The writer must write the content in a personalized style making the content learner-friendly.

Within the main body of the unit, a writer must also include self-assessment questions. These questions help the learners to evaluate themselves on the basis of what they have learnt and their progress. The units must incorporate in them activities, exercises and assignments that enable the learners to work on their own what has been learnt. This also makes learning easy, enjoyable and purposeful.

The ending of the unit must contain a summary section that gives an idea about what the unit contained and what the learner has learned. The summary aims at reinforcing the concepts that the learner has gone through in the unit. The ending of the unit may also contain a glossary section of the key terms or the difficult words used in the unit.

2.3.5 Types of Self-Learning Materials

There are various types of self-learning materials that are used in distance education to impart education to the students:

- **Tutorial in-print:** These self-learning materials are also known as tell and test type materials. These materials are conversational in nature and the makes use of print material. This material is based on the conventional teaching format wherein the tutor teaches the student using printed books and other printed materials. The lessons in such materials usually specify the learning objectives and predict the level of learning that the students can achieve. The units are full of self-assessment questions and in-text questions which make learning easier and more engaging for the students. These materials also provide feedback to the students about their progress and achievements.
- **Reflective action guide:** These are self-learning materials that facilitate learning through reflective action based activities that the student is required to indulge in to learn about the various concepts included in the course material. Such materials allow the learners to critically think and evaluate about a concept and perform the related activities, so that the concept is clearer to the student, especially in terms of the knowledge associated with the concept. The activities are designed to be learner centric and may take up a lot of time and effort of the learner.
- **Dialogic:** Dialogic self-learning materials are based on the premise of a lot of conversational exchange between the student and the teacher. Such

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materials are presented in a manner that the learners can critically analyse and question the concepts that are presented to them. Such materials also facilitate a real form of communication with commentaries from the authors of the materials. The dialogic material is based on conversation that deals with the why and how of a concept, conversation on how to learn the topic and also how learning can improve the knowledge and enhance the skills of the learner.

Box 2.2: Self-Learning Material Developed by Salt Lake College of Management, Kolkata

The self-learning material developed by the university allows the students to reflect, introspect and think critically about what they are learning. The self-learning material used by the university is printed material and is delivered to the doorstep of the students. The following are the characteristics of the self-learning material developed:

- The material clearly defines the objectives and the learning outcomes.
- The content of the material is divided into several sections and sub-sections each of which meets the learning objectives.
- The material has self-check exercises and assessment questions so that students can evaluate their progress and performance.
- Each unit has been given a structure which is clearly and concisely defined.
- The content or the course material is supported with a lot of illustrations, examples, charts, tables etc. to make learning easier and effective.
- Each unit at the end of it has a summary and glossary of the terms used within the unit.

CHECK YOUR PROGRESS

4. Who designs self-learning materials?
5. List the functions of external writers in designing self-learning materials.
6. Name the access devices used in self-learning materials.

2.4 ORAL MATERIALS

While most distance education courses rely on the use of printed material to facilitate self-learning, there are a few limitations of printed materials. Printed materials can teach most of the subjects but there are a few subjects where printed materials are not effective. In fact, in some cases it is almost impossible for printed materials to facilitate learning of certain subjects. For example, subjects which involve music and dance cannot be taught using printed materials. Some other disadvantages of the printed materials include the following:

- Print material is a one way medium.
- Print materials do not offer opportunities for interaction and dialog.
- Print material tends to be impersonal.
- Students may find it difficult to adjust to the print materials and learn.
- Sometimes, it is not possible to update the printed material and so the course remains out-dated.

In these cases, oral materials offer a more effective manner to impart learning to the students. Oral materials are generally in the form of lectures or lessons that are either offered face-to-face to the students by the teachers or by means of audio media like cds and radio.

2.4.1 Development of Oral Materials

The development of oral materials to be used in distance education must be done in a planned manner. The following are the different stages of development of oral materials:

- **Identify the target audience or learners:** The first step in developing oral study materials is to identify the learners and the level of knowledge already possessed by them. It is also essential to know about the study skills of the learners and their attitudes to learning using different types of media. It is also important to know the language of preference of the learners and the expectations of the students. This helps to outline the learning objectives and outcomes. It is significant to know whether the oral materials are to be used for an individual or for a group of students.
- **Defining the aims and objectives:** It is essential to define the aims and objectives of the use of oral materials. It is essential to know whether the oral materials are to be used for direct teaching or for supplementing teaching using printed materials. The aims and objectives for using oral materials must be realistic and clearly stated. One of the most important considerations when developing oral materials is that these must be evaluable in the sense that it must be confirmed as to whether the objectives can be achieved or not.
- **Defining the content and structure:** The content and the structure of the course of the oral materials must also be defined. It is important to know what subject matter and topics will be covered by the oral materials. When designing the oral materials, it is also essential to know whether there will be any relation of the oral material with face-to-face teaching or not. The oral material content can be developed independently or as supplementary material to printed content.
- **Specifying the form and format:** It is essential to decide whether the oral materials will be recorded or presented in a broadcast manner to the students. The oral material may be recorded in cassettes or CDs for the students to use. Alternatively, oral material can be delivered to the students by means of lectures or by broadcasting through different programs. The developer must

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take into consideration the effectiveness of both ways of delivering oral content before finalizing a form of the material. The oral material can be presented in various formats like scripted material, unscripted interviews, discussions, commentaries, music or simulations. The format of the oral material chosen, depends on the target learners and the subject which is being taught to the students.

- **Specifying support materials and activities:** When using oral materials, it is also essential to specify whether it will be supported by other learning materials as well or not. In many cases only oral material may not be sufficient to get the idea across to the students and so supplementary materials may be needed by the learners. As with printed material, oral material must also provide activities for the students so that they can check their progress.
- **Monitoring and evaluation:** Once the oral material has been delivered, it is essential to evaluate its effectiveness to know whether it has been able to meet the learning objectives or not. This requires the material to be monitored and evaluated on several basis in order to provide room for improvement.

2.4.2 Characteristics of Oral Materials

The oral materials for distance education must be designed and developed by several specialists and experts so as they can deliver the stated course in an effective manner. Just like for printed material, specialists must coordinate with one another to develop effective oral course content. The oral material developed for distance education must have the following characteristics:

- It must be informative.
- The oral material must be persuasive.
- The oral material must be integrative and instructive.

If the oral material has the above stated qualities, it would be able to help the learners acquire knowledge in an effective manner.

CHECK YOUR PROGRESS

7. Why is it essential to specify whether oral material will be supported by other learning materials?
8. Enlist the characteristics of oral material developed for distance education.

2.5 ROLE OF ELECTRONIC MEDIA IN DISTANCE EDUCATION

Distance education has already been stated as a mode of education wherein the students and teachers are geographically separated. Distance education requires the use of media, which can be most effective in imparting education and learning to

the various students. The media used in distance education for facilitating learning should play the role that a teacher plays in the class to educate a student. Since the student-teacher interaction is limited in distance education, it is essential that the educational material provided by various media must be effectively delivered to encourage self-learning and indulgence in the course.

The course material in distance education is delivered through what is known as media mix. There are several media involved in distance education through which the students learn. Distance education today does not rely only on the use of printed materials but also makes use of electronic and innovative technology including radio, television, audio and video cassettes, compact disks, internet, tele-conferencing, etc.

The need of electronic media was felt because printed material cannot always help students learn all types of subjects and lessons. Print material often needs to be supplemented with other media and resources so that learning can be made more effective. One of the main advantages of using electronic media is that there is a wide choice available for the learner and so the best and the most effective media can be chosen. Also, electronic media facilitates better individual learning by making the material available in every possible format to the learner. Electronic media also promotes participator learning and makes it possible for the students to interact with the teachers as well as with other students. This helps the students develop other skills as well apart from learning academic content. Electronic media motivates the learners to perform activities in an interactive manner, thereby facilitating better learning.

2.5.1 Types of Electronic Media Used in Distance Education

Electronic media that can be used for delivering course material in distance education include the following:

- **Audio book:** An audio book is a medium in which the course is provided to the students of the distance education course with books that are vocalized radio-phonically. This means that the students can learn on their own and listen to the instructions and the course material whenever they want. The narration in the audio book emphasizes on important sentences in the topic so that the students can focus on the important points of the course and remember them in addition to the other content.
- **Audio card:** An audio card is a traditional medium that has been used and is still being used in several distance education courses. An audio card is a magnetic medium. It enables the learner to listen to words and repeat them at the same time when the word is read in print. The learner can record his or her voice and then compare this with what was actually spoken for errors and corrections. This is one of the best electronic mediums that can be used for learning languages.
- **Audio cassettes:** Audio cassettes are a traditional medium of imparting instructions in distance education. These are still used by many universities as an effective method to deliver distance education content to the students. The teachers can simply record their lectures about a topic in audio cassettes.

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Audio cassettes are very effective in helping students grasp the concept and further give a feeling to students as if they were being instructed by the teacher in a classroom.

- **Audio compact disc:** This is another electronic media that is used to record a lecture or a lesson in a digital format so that the students can hear what is being taught and learn the concept. Usually, the recording is very clear and the sound from an audio compact disc can be heard by the students loud and in a high pitch.
- **Compact disc:** A CD or a compact disc is an electronic media that can be used to record a lot of audio as well as visual information about a wide range of topics. CDs are being effectively used to deliver distance education courses by almost all colleges and universities because these have a high capacity and information can be accessed rapidly. CDs are also considered to be the most cost effective media used for delivering distance education courses. CDs can be used for effective learning of practically any subject.
- **Telephone:** Telephone is the electronic media that offers maximum amount of interaction when it comes to distance education. Telephone is the most useful media that can be used for home-bound students and those located in remote areas and have no access to other technologies. Cell-phones or mobile phones are very effective in delivering instructions and lectures to students. Telephones, especially mobile phones because of their mobility and flexibility are one of the most effective media to deliver course material to distance education learners.
- **Audio text:** Audio text is a technology in which course materials in form of text containing audio and visuals is delivered to students using computers and telecommunication networks.
- **Radio:** Radio is used as one of the main electronic media for delivering course material to distance education learners. Using radios, lectures and discussions can be easily made available for students. The students who are at their specific locations can record the material and then learn at their own pace. Literature, history, philosophy, language and linguistics can be easily taught through radios. Radios have proved to be the most cost effective and the most efficient means of providing course content to learners who acquire knowledge through distance learning. Reading skills of the students can also be developed by delivering the required content by radios.
- **Television and satellite:** Television is an electronic media that enables the distance education learners to interact with teachers and other students. A television presents the course material in a visual format along with an audio to make the lessons easy to grasp for the students. In other words, students can see and hear a lecture simultaneously, which enables them to develop cognitive skills, as students can manipulate what they see and hear. Using television, the distance education course material can be delivered and presented in two formats—long range transmission which is carried out through satellites and short range transmission which is carried out through cables.

The course delivered over a television can be in the form of a one-way video communication or it can take the form of interactive communication via the telephone. Satellite is the most cost effective and efficient means of transmitting learning courses over long distances. Satellites can be used to transmit and present any information including video, audio, and voice data for students to facilitate learning. Direct broadcast satellite is the electronic media in which learning materials are transmitted directly to the receivers from the satellites. The receivers of the course material need to have a satellite dish so that they can receive the material on their computers which stores all the necessary information and material. Cable transmission makes use of coaxial cables to transmit data over short distances. Cable television facilitates one-way as well as two-way learning for distance education learners. With the use of the televisions, homes have now become classrooms for students as they receive all the necessary material for effective learning.

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- **Podcast and vodcast:** Podcasts and vodcasts refer to electronic media using which audio, video, text and files of various other formats can be easily downloaded and played on computers. These files remain on the computers of the students and therefore facilitate self-paced learning. These media have become the most effective means of assimilating and accessing audio and video course material.
- **Teleconferencing:** Teleconferencing is the integration of the telecommunication system and computer for the purpose of interactive learning. Teleconferencing can be used in two forms for providing course material to the distance education learners. These include video conferencing and computer conferencing. Video conferencing generally involves interactive learning, where the students and the teacher carry out discussions and meetings. Classes are conducted over long distances making use of television camera, television equipment as well as a microphone. Video conferencing is more like classroom teaching for most students. However, students and teachers may not be present in the same geographic location when video conferencing is used. Video conferencing is the most practical and effective approach for group based distance education courses.
- **Teletex and videotex:** Computers have become the most popular electronic media using which teachers impart education and training to students in distance education courses. Teletex and videotext are two systems which are used in computers to transmit electronic messages in text and graphics form. The transmission of electronic messages can be one-way or two-way allowing interaction as well.
- **Electronic books and electronic library:** Electronic books are open textbooks, which means that these are books which are available in digitized formats in several electric libraries of universities and colleges that offer distance education courses. These textbooks can be accessed by a large number of distance learners and prove to be quite effective in helping students learn.

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- **Internet:** The Internet has these days become the most popular media for conducting distance education courses. The Internet offers tools like emails, chats, audio and video conferencing and several other tools that can be used by teachers to enable students to access distance education courses and also learn the same. According to Poling, email is the most effective teaching tool in distance education to address issues like, 'answering directed questions of students, counselling, giving class assignments, making general class announcements, giving occasional quizzes, establishing direct communication with a particular student; posting grades, giving helpful hints about homework or upcoming quizzes, introducing texts, and out ruling excuses for missing class.' Chat rooms act as virtual classes, where the teacher and the student can interact and discuss about the course content.

2.5.2 WebQuests as Electronic Media for Distance Learning

WebQuest is an inquiry-oriented activity that provides an excellent example of how the various resources on the Internet can be effectively integrated for a classroom project. The aim of using this activity is to enable the learners to conduct research about a specific activity and then incorporate the results of this research into a project that will help the learner to evaluate what has been learnt.

WebQuests are great tools for conducting distance education programs as these provide a structure as well as guidance to the students as well as the teachers on how the course must be conducted and learnt. The six components which are essential for implementing WebQuests include:

- **Introduction:** It is the information about the activity that the learner needs to conduct.
- **Task:** This is the task that addresses the main research question. The task also provides information about the end product or the result of the research activity.
- **Process:** This specifies the steps that need to be carried out to complete the task.
- **Resources:** The resources are the various websites where a learner may find information relevant to the task being performed.
- **Evaluation:** These include guidelines on how the learner as well as the teacher can evaluate the research activity carried out.
- **Conclusion:** The conclusion provides information on whether improvements need to be made or not.

The following table lists the various electronic media with their relative advantages and disadvantages in distance learning:

Table 2.1 Advantages and Disadvantages in Distance Learning

Technology	Advantages	Disadvantages
Audio files/CD	These are inexpensive, accessible easily and can be easily duplicated or stored for use and re-use.	No visual cues No interaction
Audio-conference	This is an inexpensive electronic media which is fairly easy to carry out	No visual cues No interaction Requires hardware
E-mail	Email is flexible, convenient and very easy to use as well as it is interactive.	Requires hardware
Online Chat	Online chat facilitates real time interaction and instant feedbacks about the learners.	Requires hardware as well as software It has to be scheduled
Web-based Education		
Videotape/DVD	This is easily accessible, inexpensive and can be easily used for audio as well as video learning.	Does not allow interaction Requires hardware
Satellite Videoconference	It offers interaction.	Expensive hardware is required Must be scheduled
Internet Videoconference	It is inexpensive and offers interaction.	Must be scheduled
Cable/Broadcast Television	It can be easy to use and can offer access to audio as well as visual materials.	Requires hardware Does not allow interaction

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2.5.3 Selecting Electronic Media for Distance Education

To select electronic media for distance education, the following factors must be taken into account:

- **Accessibility:** The electronic media to be selected must be easily accessible by a large number of distance education learners.

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- **Cost:** The electronic media selected must be cost-effective in the sense that it must be able to deliver the course content within the budget that has been decided upon.
- **Speed:** It must offer high speed delivery of the course content.
- **User–friendliness:** The electronic media for distance education must be carefully selected so that it is easy for the users and the learners to use it for a variety of purposes.

2.5.4 Electronic Media Production Centre

The Electronic Media Production Centre is a hub for the use of electronic media for distance education. The centre serves as a Nodal Resource Centre and is placed in New Delhi. The centre is responsible for production, dissemination and transmission of educational software across the country. A wide range of communication media is used to transmit the course content to various colleges and universities in India. The centre deals with the production and dissemination of educational audio and video programs. These audio video programs are curriculum based and supplement the course material of the IGNOU. The materials are developed by expert in-house staff. The centre makes use of broadcast as well as non-broadcast modes of delivery of the course content.

Box 2.3: Gyan Darshan

Gyan Darshan is an educational TV channel that offers informative and interesting programs for students of all ages as well as to the youth selling career advice. These programmes are contributed by major educational institutions including IGNOU, UGC/CEC, NCERT/CIET, Directorate of Adult Education, IITs, TTTIs and other educational and developmental organisations. The channel is received across the country without any problems and is available throughout the year.

Gyan Darshan 2 is the channel dedicated to interactive distance education. Gyan Darshan 2 is a one way interactive system that allows for teleconferencing. The learners can easily interact with teachers and experts during an on-going program and clarify their doubts and discuss issues or topics of their interest.

2.5.5 Using Interactive Video in Distance Education

For several years, two-way video programs were not used by a large number of distance education institutions because the technology was by far too expensive to implement in distance education. However, the development of technology and innovations in telecommunications has made it possible for most of the institutions to make use of two-way videos for imparting distance education courses.

With lowered transmission costs and easy setup, today interactive video is one of the most effective methods of delivering distance education to students in remote areas. Using interactive videos, it is possible to conduct two-way video and audio communication across multiple locations at the same time. Usually, compressed videos are transmitted over a data network which reduces the bandwidth required for transmission as well as the cost of the transmission.

Using interactive videos, a distance education course material is transmitted over dedicated T-1 phone lines. The interactive video technology makes use of computer technology to enable communication across different locations. The codec is the main equipment which sends and receives video signals. It is through codec that students and teachers are able to see videos.

The following are the advantages of using interactive video:

- It enables students at remote locations to establish communication with teachers.
- It is a suitable technology for students who cannot attend university and students with special needs.
- The interactive video can be used to teach several students at the same time.
- It ensures that students and teachers remain involved in the class, making learning effective.
- Interactive video can be used to create a classroom for teaching students.

Disadvantages of using interactive video include:

- The interactive video technology is expensive at least in the initial stage.
- Since the instructions are provided by teachers in real time, the teachers may focus on the development of instructions rather than on effective teaching.
- There may be problems in transmission and the quality of the signals may be poor sometimes.
- The use of interactive video for delivering course content needs to be planned in an extensive manner which may be difficult and exhausting for the teachers.

2.5.6 Use of Electronic Media in Distance Education

Distance education is an open learning system which attracts students from diverse cultural backgrounds and of all ages. A distance education course may enroll an eighteen year old student from a remote area who cannot attend a university or a middle aged housewife who wants to continue her higher education. The main idea of offering distance education courses is to ensure that the learners do not feel isolated from learning and also to ensure that learners overcome their time constraints and learn. A wide range of technologies are used in distance education. Off late, electronic media is used as the most effective mode of delivering distance education courses. Electronic media encompasses radio, television, computers and the internet. An interesting fact about distance education is that learners choose the media that best suits their needs. Learners always choose the media they are most comfortable using and to which they have easy access. Therefore, the technological trends among distance learners are varied across the globe.

Survey by the International Journal of Instructional Technology and Distance Learning

Ashwini Kumar and Ramesh C. Sharma conducted a survey for the International Journal of Instructional Technology and Distance Learning to know about the media

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accessibility and usage by distance learners, the helpfulness of the electronic media and the issues that students faced when making use of electronic media for learning in a distance education course.

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To conduct the study, a questionnaire was sent by mail to distance learners enrolled in different courses in different universities. Questionnaires were collected from about 650 students to conduct the study.

The following table shows the media which was available to the students who were pursuing different distance education courses:

Media/Tech	Available at home or work place	%	Not available	%
Telephone	423	64	242	36
Computer	235	35	430	65
Internet	135	20	530	80
Gyan darshan	225	34	440	66
Gyan vani	130	20	535	80
Cable TV	385	58	280	42
Audio cassettes/CDs	306	46	359	54
Video cassettes/CDs	164	25	501	75
Fax	76	11	589	89
Television	413	62	252	38
Teleconference	52	8	613	92

The study showed that 60 per cent of the students learnt their distance education course via telephone, television or cable television. Teleconferencing was not available to almost 90 per cent of the students. The study also suggested that open universities equip their study centres with the necessary media so that students are able to learn in an effective manner.

As far as the media usage patterns were involved, it was found out from the study that 81 per cent of the student community made use of telephones for their academic activities. Other media was not used more than 50 per cent by the students because of issues like accessibility and attitudes of the learners.

The following table gives the numbers for media used by the distance learners:

Media/Tech	Consolidated		Area-Wise					
	Freq.	%	Rural	%	R-T-U*	%	Urban	%
Telephone	540	81	43	49	17	52	480	88
Computer	288	43	9	10	12	36	267	49
Internet	187	28	5	6	0	0	182	33
Gyan darshan	140	21	16	18	6	18	118	22
Gyan vani	49	7	5	6	4	12	40	7
Cable TV	121	18	0	0	9	27	112	21
Audio cassettes/CDs	134	20	5	6	9	27	120	22
Video cassettes/CDs	122	18	12	14	9	27	101	19
Fax	43	7	0	0	0	0	43	8
Television	72	11	0	0	0	0	72	13
Teleconference	42	6	5	6	0	0	37	7

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As far as the helpfulness of media was concerned, the study showed that more than three-fourth of the student community considered help provided by the media as poor, 12 per cent of the students considered the support of media as average and about 10 per cent learners considered that media helped them immensely.

The following table shows the media support in the understanding of a subject:

Media/Tech	High	%	Average	%	Poor	%	Total
Telephone	61	9	134	20	470	71	665
Computer	212	32	118	18	335	50	665
Internet	147	22	96	14	422	64	665
Gyan darshan	59	9	139	21	467	70	665
Gyan vani	32	5	89	13	544	82	665
Cable TV	45	7	59	9	561	84	665
Audio cassettes/CDs	61	9	64	10	540	81	665
Video cassettes/CDs	71	11	88	13	506	76	665
Fax	17	3	29	4	619	93	665
Television	54	8	72	11	539	81	665
Teleconference	39	6	42	6	584	88	665
Total	991		1199		7785		9975
Percentage	10		12		78		

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Computers were considered to be helpful by 32 per cent of the students who were learning through distance education. Internet was viewed as highly helpful by 22 per cent of the population while average by almost 14 per cent of the students. Gyan Darshan was considered helpful by almost 30 per cent of the students. Fax, television, teleconferencing, CDs were rated poor by most of the students as to their helpfulness.

The following were the results of the study related to various issues in the usage of electronic media:

- Almost 55 per cent distance learners could follow the instructions provided by the electronic media.
- 69.1 per cent students considered the use of electronic media to distance learning courses as irrelevant. 11 per cent students however felt that the use of electronic media was very relevant to the delivery of distance education.
- About 63 per cent students felt that the language used in distance education courses was easy and the students could easily follow and use these courses for effective learning.
- As far as the time allotted for the use of media was concerned, most students felt that the time allotted was not adequate and did not allow the students to learn even a single lesson in a day.
- Almost 48 per cent students said that they found learning through audio visual aids was more interesting as compared to print media.
- Most of the students also agreed that the use of electronic media was helping them improve their learning abilities.
- The students also reported that most of the electronic media was not available for use when required.
- The students also reported that most study centres did not provide access to the internet for accessing learning materials.

Box 2.4: Identification and Frequency of Use of Electronic Media in Universities offering Distance Education Courses

A study was conducted to identify the various electronic media available for distance education in India. It also threw light on the frequency of use of the electronic media and also the level of competence of use of the media. The study also aimed to find out the problems that students faced in the use of electronic media.

To conduct the study, 150 students were chosen from a university across different departments pursuing distance education courses. Questionnaires were sent to the students to get their responses. The study revealed that the university provided access to media like video recordings, posters, charts, electronic databases, and email, while students make personal provision of audio recordings, pictures, radio, television, multimedia projectors, e-documents, CD-ROMs, computers, telephones, printers, and digital cameras. The study also revealed that most students made use of audio-visual as well as electronic resources on

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a regular basis. These resources were used for completing assignments and had no other purpose. The study therefore suggested that the university make efforts and encourage students to make use of the electronic media for other purposes as well.

The study also showed that the main problems faced by the students in accessing various electronic resources included poor power supply, lack of poor infrastructure, high cost, lack of adequate skills to use the resources and also unavailability of various resources.

The study showed that students who could easily use various electronic media, showed positive improvements in learning the distance education course. The study also showed that easy accessibility of the electronic media had a positive impact on distance education learning. The ease of use and accessibility of electronic media makes distance learning effective and efficient.

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CHECK YOUR PROGRESS

9. Define an audio book.
10. What are podcasts and vodcasts?
11. What is the Electronic Media Production Centre?

2.6 ICT AND ITS APPLICATION IN DISTANCE EDUCATION

ICT or Information and Communications Technology as it is generally called, is a term used to describe any communication device and its use or application. ICT in simpler terms encompasses radio, television, computers and computer networks, cellular phones and all applications and areas associated with these. The use of ICT has greatly increased over the last few years in various sectors like health care, libraries and education. In education, ICT plays a significant role in enabling underserved populations to have greater access to information.

2.6.1 The Significance of ICT in Education

The use of ICT in education has made it possible for students and teachers and other key players of the education field to have greater access to information worldwide. The use of ICT thus enables learning to become a lifelong activity. The significance of ICT in education is described hereunder:

- **It provides access to a variety of learning resources:** ICT enables the teachers as well as the students to access a wide array of education resources which enhances the learning abilities of the students and also enables teachers to improve their teaching skills. With the help of ICT, it is possible to teach using audio-visual aids and tools. Through ICT, students and teachers are able to make use of multimedia for every aspect of their lesson.

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- **It provides immediate information:** ICT has brought about what is called immediacy of information. The pace of impacting knowledge has increased and today one can be taught anywhere and at any time. ICT has brought about a revolution in learning by facilitating anytime learning.
- **ICT makes collaborative learning possible:** With the help of ICT, it has become very easy to teach students in groups or clusters. The various media and computer based technology has made it possible to use and access information anytime and anywhere. Using audio visual aids, a large cluster of students can be instructed or taught about a specific concept in an easy and effective manner.
- **ICT facilitates a multimedia approach to education:** ICT has made audio-visual education possible. This also brings about effective learning as more and more learning takes place through perception. Using multimedia and audio visuals, students can learn using more than one modality of learning instead of just focussing on academic or intellectual perspective of education.

Information and Communications Technology plays a vital role in distance education to meet the varied needs of learners. ICT uses several tools and technologies that can meet the needs of the learners on a large scale and at each level of education. ICT can help students in the various phases of the learning cycle in distance education. In distance education, the learners cannot attend the institution because of several reasons. Further, it is difficult for distance learning institutions to meet the learning needs at every stage of the learning cycle of the large number of students enrolled in different courses because of limited human resources. The use of ICT helps to overcome such limitations. With the help of ICT, support services are provided to distance learners at all stages of the learning cycle. ICT makes face-to-face communication possible in distance learning and makes information sharing and learning more effective.

The Internet and the World Wide Web make a large pool of information resources available to distance learners. This offers an opportunity for self-development to teachers as well as students. The use of ICT also reduces isolation of students because of the use of technologies like e-mail wherein the students are provided feedback about everything they learn.

The use of ICT makes available enhanced graphics, visualizations and animation that make learning more effective. With ICT, the cost of telecommunication and bandwidth is lowered, which also makes it possible for learners to make use of a wide range of technologies like wireless and satellite systems for learning.

2.6.2 Objectives of Using ICT in Distance Education

The following are the objectives of using ICT in distance education:

- **Reaching learners in remote communities:** One of the main objectives of using information and communications technology in distance education is to reach out to learners who are present at remote locations. ICT can be applied to offer formal as well as informal education to students at all levels in

remote areas. Students in remote areas are often not enrolled in schools, colleges or universities. ICT based distance education makes use of audio and video materials and assessment so that students in remote communities can be taught. An example of the same is The National Open School in India. The NOS makes use of print, audio, and ICT-based assessment and testing system on-call to provide education to remote villages throughout India. Students up to grade 12 have access to this distance education system.

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- **Providing learning opportunities to disabled individuals:** The use of ICT in distance education is one of the best ways to provide education to individuals with disabilities or those who are mentally or physically challenged. ICT offers tools like voice control software, audio to visual conversions for the hearing impaired, electronic text, and digital audio that can meet the learning needs of those who have a disability in some form or the other.
- **Providing education to out of school youth:** The use of ICT helps to create self-learning and flexible learning environments for students who are school drop-outs. With the help of ICT, several multimedia products can be created for students for higher education as well as vocational training.
- **Creating open and virtual learning environments:** The use of ICT makes it possible to create smart schools, virtual universities and online education in distance education. These technologies can be used to deliver course content to distance learners.
- **Improving the quality of learning:** The main objective of using ICT for distance education is to put learning in the hands of the user or the learner. ICT promotes active and individualized learning. The use of ICT enables the learners to set the pace for learning and access up to date learning material which makes learning more effective.
- **Offer flexibility in learning:** The use of ICT in distance education has provided flexibility in learning. Learning can be done anywhere and at any time using ICT technologies. Virtual education is possible in distance education because of the use of the various ICT tools and techniques.
- **Enhancing teacher-learner contact:** The use of ICT in distance education has made it possible for teachers and students to interact. This enables the teachers to provide immediate feedback to the students. The use of ICT also promotes active learning and facilitates peer learning. The learners can learn in different styles rather than adhering to the conventional learning methods.
- **Improving resource sharing:** The use of ICT enables information resources to be shared easily among the learners as well as between the institution and the learner. Using ICT technologies like the internet, instantaneous sharing of resources and learning materials is made possible.

2.6.3 Inclusion of ICT in Distance Learning

The use and integration of ICT in distance education is a process that requires proper and strategic planning. When planning the integration of ICT in distance education, the following need to be decided:

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- **The technologies that will be used:** ICT has a wide range of technologies that can be applied. These include e-mail, internet, video conferencing, presentation software, satellite broadcasting and multimedia. The technology which offers the widest coverage and makes learning effective must be chosen for delivering distance education materials.
- **The manner in which the ICT technologies will be used:** The ICT technologies in distance education are used by teachers as well as learners for making learning more effective. The technologies can be used as teaching as well as learning tools.
- **The content acquisition method:** The basic aim of ICT is to make distance learning content available to the learners. It has to be decided in what form the material has to be made available to the users using ICT and how the material has to be developed to make it compatible with the ICT technology being made use of.

The use of ICT in distance education depends on the following factors:

- **Geographical size:** In large countries where there are many institutions that offer distance learning courses to a large number of learners across different geographic and remote areas, the institutions may want to make use of ICT technologies to reach out to such learners more effectively.
- **Policy on telecommunications:** A country's policy on telecommunications also plays a vital role in the use or application of ICT in distance education. The privatization and liberalization of the internet and telecommunications makes it easy for institutions to make use of ICT technologies for providing distance learning courses and materials to the learners. A strict policy however makes the use of ICT in distance education a bit difficult.
- **Means available:** The use of ICT in distance education is largely influenced by the means available for delivering the distance education materials to learners. For institutions with limited means in terms of human resource and finance, it is difficult to incorporate ICT in distance education.
- **Population:** The use of ICT in distance education is also influenced by the size of the population that the program is serving. If the number of distance learners is very small, the use of ICT may not result in economies of scale and may prove to be an expensive affair.
- **Perceived educational needs:** Educational and developmental needs also affect the use of ICT in distance education. The use of ICT in distance education is considered vital as most students need the help of multimedia or ICT technologies for effective learning. For distance learners who rely on print media, ICT may not serve the educational needs.

Use of ICT in IGNOU

The Indira Gandhi National Open University or IGNOU makes extensive use of ICT to reach out to the distance education learners. The university offers multi-channel and multimedia instruction and teaching packages for the students. The

various ICT technologies used for learning and teaching include, teleconferencing, video conferencing, interactive multimedia, internet, and mobile phones. The university makes use of EduSat as well as the internet to create web based platforms and interactive multimedia content for the learners to make use of.

2.6.4 ICT Infrastructure for Distance Education

As has already been stated, ICT encompasses several technologies and therefore requires a robust infrastructure for its implementation. The ICT infrastructure for distance education must be set up in a manner which allows course content and other support services to be delivered effectively to the learner. From the learner's point of view, the ICT infrastructure must allow him or her to access the course material and use the support services in an easy manner. The ICT infrastructure consists of the following:

- **Network infrastructure:** Any distance education institution operates through its various nodes which may consist of the head office, regional offices and study centres. It is essential that each of these nodes operate using a structured network and that all these nodes are interconnected with the help of dedicated networks so that students can be allowed to access the services in an easy and an effective manner. The network components like routers, network cables, etc., which are used in these networks must be of good quality and robust so that anytime and anywhere learning can be facilitated.
- **Computing infrastructure:** A computing infrastructure consisting of host servers also forms an important part of the ICT infrastructure. Database servers, backup and recovery servers, web servers and application servers must be available so that various learning and support services can be hosted. Personal computers also form a part of the computing infrastructure. These allow students to access learning and support services.
- **System and application software:** System and application software helps in the development of learning as well as support software that is required by the students in distance education at various stages of the learning cycle. These software help in the development of web based software and also learning management systems which cover all phases of the learning cycle in an effective manner.
- **Internet service provider and internet bandwidth:** Of all the ICT technologies, the most important to the implementation of ICT is the Internet. Internet bandwidth is required to access the web based software which offers learning and support services to the distance education learners. Internet bandwidth determines the number of users that can access the services at any given time. The internet bandwidth is provided by internet service provider.
- **Security infrastructure:** Security infrastructure is typically required in distance education to provide security of the software, systems and the data which is being accessed by the learners. Institutions offering distance education courses have to install security infrastructure so that their systems are secured against security attacks and unauthorized attacks. Several security devices

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are used in the application and system software to prevent unauthenticated access to the data.

However, setting up an ICT infrastructure for distance education is not an easy task. There are several issues that need to be addressed and taken into consideration when setting up ICT infrastructure for distance education. One main consideration is the fact that technology keeps changing and every new technology has flexible and new features that must be incorporated in the distance learning program. However, it is not always easy to find an application and system software which is compatible with the technology. To overcome this problem, it is best to install a platform independent application and system software.

Scalability issues also need to be handled when it comes to distance learning education. Since a large number of users in distance education are handled remotely, it often becomes difficult for the ICT infrastructure to maintain scalable resources, especially in terms of memory to handle the large number of users and their demands. The best way to handle this issue is to plan the required resources for a long term, about five to seven years so that frequent upgrades are not required.

Ensuring data compatibility is also very important to ensure that the distance education ICT infrastructure functions in a proper manner. Since the database technology keeps changing, it is essential that the data used is compatible with the new technology. If the data is not compatible with the new technology, it will be rendered useless and will not be used and accessed by the distance learners. ICT infrastructure must allow for data migration so that data is always compatible with the new technology and can be accessed at any time required.

Another issue with ICT infrastructure is the available bandwidth. In most cases, enough bandwidth is not available which limits the number of users and also creates accessibility problems. Dynamic allocation of bandwidth must be made possible when it comes to ICT infrastructure so that the resources are available at all times.

Another issue in ICT infrastructure for distance education is that a dedicated network connection cannot be always established between the various operational nodes. This happens because of the non-availability of technical manpower. The issue can be addressed by ensuring that the necessary technical manpower is always available and that a dedicated network connection is always maintained between the various operational nodes.

Support services may not always be updated in ICT infrastructure because of changing technology. It is essential to address this issue by ensuring that the required manpower and personnel are available at all times so that the services are always available to the learners.

Security policies must be framed for the implementation of ICT infrastructure for distance education. This is essential to ensure that the data and information as well as the services are not compromised in any manner and are not accessed by unauthenticated users at any time. Security must be implemented at all times and levels of the ICT infrastructure. The security policies must be implemented at the

user level, system level, network level as well as database level to maintain the security of the overall infrastructure.

Box 2.5: ICT used in SCDL

SCDL is an institution that offers post graduate distance learning programs to students in India and across the globe. SCDL makes use of innovative ICT technologies to offer distance learning education to the students enrolled in its various courses. ICT is used by SCDL to improve the quality, accessibility and delivery of the distance education course to the several learners.

The objectives of SCDL for making use of ICT include:

- Providing self-paced and self-learning environment to the distance learners
- Providing flexible and convenient education and assessment materials
- Providing affordable and friendly student care services
- Creating innovative and value-added learning opportunities for the learners
- Updating the content regularly and providing learning material as per the new market trends and demands of the learners
- Creating virtual campus in order to build a learning community
- Effectively managing the exponential growth in student enrolment
- Achieving academic as well as operational excellence

ICT has been used by SCDL to improve the students support services. This has been done by setting up a dedicated call centre wherein students clarify their doubts and also inquire about the various services and courses. The SCDL also set up an e-communication centre which handles email queries of the various learners with a guaranteed response within one business day. The student information system has also been started by SCDL to maintain all the necessary information about the students. This system can be accessed by the students as well as the staff. The system allows for tracking of demographic data, communication data, dispatch details, fee payment details, call and grievance history, academic performance data, etc. SCDL also has a web portal which allows students to access several online services, e-learning courses and other online learning courses made available by SCDL. The web portal also makes available to the students learning aids like chat rooms, faculty chat sessions, interactive e-learning courses, etc.

The use of ICT has also enabled SCDL to develop learning aids. With the help of ICT facilities and technical experts, SCDL has been able to develop pre-recorded DVDs and also e-learning courseware for the distance education learners. These have been used to supplement the printed learning materials provided by SCDL. SCDL has developed over 80 e-learning courses with the help of ICT tools and technologies. These e-learning courses are made available on the web portal and also on CDs by SCDL and act as great learning supplements for the learners.

With the help of ICT, SCDL has also developed a learning management system. The Moodle Learning Management System of the SCDL is implemented by the SCDL web portal. This system allows the students to upload project reports and assignments. The students also get a feedback and grade for the assignment or the project submitted. The system also allows the students at SCDL to interact with the faculty and other students at any time thereby making learning interactive.

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SCDL has also been able to offer online assignments and on demand examinations to the students using ICT. Students can take the examinations online on the date and time which suits them. Online assignments can also be attempted by the students wherein the students need to answer multiple choice questions and are provided the feedback almost instantaneously.

The use of ICT at SCDL has resulted in the following benefits:

- Improved the student satisfaction
- Lowered the number of drop outs enrolled in distance education
- Created dynamism and robustness in distance learning program
- Enhanced learning experiences of the students
- Provided real time access to data, information as well as services
- Created flexible and convenient learning environment
- Created a virtual community of students
- Improved interaction between the students and the faculty
- Lowered administration and overhead costs
- Improved quality and delivery of education

Provided better and quicker student support services

2.6.5 EDUSAT and E-Learning

EDUSAT or education satellite was launched by the Government of India in 2004 to serve the education sectors that offer distance education to a large number of students. EDUSAT was originally developed to allow interactive and satellite based distance education. The satellite has been programmed specially for an audio-visual medium. The satellite makes use of a digital interactive classroom and a multimedia multi-centric system for delivering the education lecture or course.

EDUSAT has one-way and two-way audio facilities. It transfers data from the teaching end to the remote classroom. The data may be in the form of lectures, notes, presentation or exercises. The EDUSAT network which facilitates distance education has three elements—the teaching ends, the remote classroom and the spacecraft.

The teaching end is the end from where the teaching can be initiated. It consists of a small studio and an uplink earth station. In the studio, live or recorded lectures are created. These are then linked to the uplink earth station. The lectures are usually in the form of visual images and audio signals. These are then transmitted to the satellite, which then beams these back to the earth usually covering a large geographic area.

The receiving end or the remote classroom is where the lectures are received. The classrooms can be interactive or non-interactive. In an interactive classroom, the students can interact with the expert or the lecturer using a voice link via the satellite. The response of the expert can be heard in all classrooms. In the non-interactive classrooms, the students can only receive the lecture. The students are allowed to interact with the lecturer only using mobiles or the internet and not via the satellite.

The spacecraft is the EDUSAT, which is used for providing distance education to learners. The main purpose of the satellite is to make available interactive multimedia systems for education purposes and reaching out to learners in remotest of the areas.

Smart classrooms

The use of ICT based EDUSAT has enabled in the creation of smart classrooms. Smart classrooms are classrooms in which lesson are learnt by using multimedia systems that use technologies like internet, power point, DVD, CD and other multimedia technologies. Smart classrooms enable students as well as faculties to make use of several ICT enables resources at the click of a button using computers. Smart classrooms are usually equipped with the following ICT technologies:

- LCD projector
- Projector screen
- Laptop
- DVD
- VCR
- Sound system
- Video camera
- Touch screen control system
- Phone, wireless radio, mouse, microphone and keyboard

Smart classrooms are like virtual classrooms wherein the students and teachers can interact in a manner similar to that of a classroom. Smart classes make it possible for distance learners to receive instructions online, use instant messaging, chat and video conferencing, thus making learning easier and effective.

Advantages of ICT Based EDUSAT

ICT based EDUSAT has the following advantages with respect to distance education:

- It covers a large geographical area within the country.
- EDUSAT can provide cost effective and interactive education to distance learners.
- The information provided by EDUSAT is consistent and up to date.
- It can be used for implementing virtual classrooms in remote and rural areas.
- EDUSAT offers audio-visual and multimedia learning to distance learners.
- It can provide live lectures and sessions from the best experts.
- EDUSAT makes equality of education possible.
- EDUSAT can help enhance the learning abilities of students.

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The following are the benefits of EDUSAT from the point of view of the teachers involved in distance education:

- It enables experiential learning.
- It can be used to provide instructions to two or three classes at the same time requiring less effort on the part of the teachers.
- It makes the course interesting for the learners.
- It helps in improving student attendance and student participation in the learning process.
- It enhances the quality of learning.

The concept and components of e-learning

The concept of e-learning is not limited to learning by using a computer. E-learning primarily involves any form of training that is conducted using a computer network. E-learning can be used for course delivery and also interaction in learning experiences. E-learning plays a major role in distance education where the learners are located at remote location, and cannot attend regular classes. When it comes to distance education, e-learning has several advantages. E-learning makes use of several ICT technologies for instructing students. E-learning can help to provide education to students who are disabled as well, because ICT technologies are so designed that these can be used by all types of people. E-learning complements the classroom learning module in the best possible manner, making it easy for the students to learn in an interactive manner. The main advantage of e-learning in distance education is that e-learning can facilitate learning across long distances. This is helpful for institutions that have a large number of distance learners enrolled in various courses. E-Learning can make learning self-paced and the content can be repeated till the learner understands the concept.

E-learning is essentially multimedia based learning. It makes use of various types of media to deliver audio, visual and textual information to learners in distance education. E-learning makes use of ICT technologies like satellite TV, CDs, computers as well as internet to facilitate learning of distance learners.

E-learning encompasses several learning and training technologies for distance education including:

- Technology Enhanced Learning
- Computer Based Instruction
- Computer Assisted Instruction
- Computer Based Training
- Web Based Training
- Internet Based Education and Training
- Online Education
- Virtual Education

- Virtual Learning Environment
- Digital Education

E-learning in distance education makes learning flexible for distance education learners. The distance learners using ICT based e-learning can:

- Access virtual classrooms from anywhere
- Interact with trained and professional instructors
- Opt for diverse courses in several disciplines
- Access accredited programs to complete college degrees
- Access technical programs for real time training
- Develop several skills
- Apply classroom materials and instructions in real time to real life problems
- Use interactive technologies with more ease and effectiveness

The following are the components of e-learning as used in distance education:

- **Virtual classrooms:** Virtual classrooms make use of modules that are highly interactive and developed using several multimedia technologies. Virtual classrooms use the latest information and communication technology to delivery course content to distance learners. Virtual classrooms facilitate anywhere and anytime learning in distance education and make the learning experience more effective and enjoyable for the learners. Virtual classrooms enable discussion and teaching in real time in distance education, thus enabling high level of interaction between the students and the teachers.
- **Discussion forums:** Discussion forums are basically interactive websites that allow various learners to discuss about a specific topic by reading articles, replying to articles and also posting new articles. This enables an interaction between students and teachers as well as the distance education institution.

National Program on Technology Enhanced Learning, India

The National Program of Technology Enhanced Learning was first conceived in 1999 to provide multimedia and web enhanced learning in basic science and engineering concepts. The program is a collaborative effort of the seven IIMs and IISc. The program offered a new technology and system for learning and also enabled expert faculties from across the world to share their knowledge and expertise. The program offers 129 web courses for students. The program also consists of 110 video lectures for the students and each video lecture uses tools like graphics, animation, images and texts.

The Birla Institute of Technology and Sciences has established a virtual university in India which caters to the educational and learning needs of the several distance education learners across India.

E-learning based distance education module developed by IIRS

The Indian Institute of Remote Sensing has introduced an e-learning based certificate course for distance education learners. The course caters to the needs of professionals,

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fresh graduates as well as researchers. The contents of the e-learning based course are flexible enough to facilitate anytime anywhere learning. The e-learning program is both comprehensive as well as interactive and keeps in mind the various needs of the distance learners. The course is delivered using online delivery models. The program is easy to understand and also learn and also provides practical training to the students so that the students can use their skills and potential to the full level. The course content of this programme includes Image Statistics, Basics of Remote Sensing, Photogrammetry and Cartography, Digital Image Processing, Geographical Information System, Global Positioning System, Customization of Geospatial tools and Applications of Geospatial Technologies. Learning is facilitated using 2D and 3D animations, graphics, audios and videos to make it more effective and easy. The assignments are learner-centric.

CHECK YOUR PROGRESS

12. Define ICT.
13. How has ICT improved resource sharing?
14. When and why was EDUSAT launched?

2.7 SUMMARY

- As an emerging method of education, distance education is fast gaining popularity because of the flexibility it offers to the distance learners. Distance education is learner-centric and gives the learner great autonomy wherein a learner can decide on what, when and how to learn.
- This mode of education best suits people who cannot attend regular schools, universities and colleges because of several problems. Such students can learn at their own pace from a place of comfort, using self-learning material provided by the institution to which the learners are associated.
- Distance learning institutions offer study materials in print and using audio and visual media. Self-learning materials are designed to make learning effective and interesting for the learners.
- Distance education learning material is made available to the distance learners using various media and technologies. The learning material can be posted to the students or it can be made available online or in the form of CDs and videos. Thus, distance education relies on the use of technology especially information technology to facilitate learning.
- Information and communications technology like satellite, computers, internet, etc., is used to enable distance learners to acquire knowledge and also interact and communicate with the teachers as and when required.

2.8 KEY TERMS

- **Tutorial in-print:** These self-learning materials are also known as tell and test type materials. These materials are conversational in nature and the makes use of print material
- **Reflective action guide:** These are self-learning materials that facilitate learning through reflective action based activities that the student is required to indulge in to learn about the various concepts included in the course material.
- **Dialogic:** Dialogic self-learning materials are based on the premise of a lot of conversational exchange between the student and the teacher.
- **Audio book:** An audio book is a medium in which the course is provided to the students of the distance education course with books that are vocalized radio-phonically.
- **Audio card:** An audio card is a magnetic medium. It enables the learner to listen to words and repeat them at the same time when the word is read in print.
- **Audio text:** Audio text is a technology in which course materials in form of text containing audio and visuals is delivered to students using computers and telecommunication networks.
- **Podcast and vodcast:** Podcasts and vodcasts refer to electronic media using which audio, video, text and files of various other formats can be easily downloaded and played on computers.
- **Teletex and videotex:** These are two systems which are used in computers to transmit electronic messages in text and graphics form. The transmission of electronic messages can be one-way or two-way allowing interaction as well.
- **ICT:** Information and Communications Technology as it is generally called, is a term used to describe any communication device and its use or application.
- **EDUSAT or education satellite:** A satellite originally developed to allow interactive and satellite based distance education. The satellite has been programmed specially for an audio-visual medium. The satellite makes use of a digital interactive classroom and a multimedia multi-centric system for delivering the education lecture or course.
- **Smart classrooms:** Classrooms in which lesson are learnt by using multimedia systems that use technologies like internet, power point, DVD, CD and other multimedia technologies.
- **E-learning:** Any form of training that is conducted using a computer network.

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2.9 ANSWERS TO ‘CHECK YOUR PROGRESS’

1. Self-learning is considered more advantageous than classroom teaching because self-learning allows individuals to learn at their own pace and therefore learn more effectively. As opposed to classroom teaching where one student can be active and another passive, self-learning in distance education requires an individual to actively participate in the learning process because that is the only learning option available.
2. According to this theory, the aim of developing self-learning materials is to create particular conditions in particular type of learning. According to the behavioural theory, self-learning materials are applied to rote memorizing, training people to do routine tasks, learning arbitrary information, learning rule systems, learning procedures where variation is not acceptable, etc.
3. Self-learning printed material generally includes:
 - Specially written correspondence texts or lessons.
 - Textbooks which have been specially written or already published.
 - Supplementary items which include notes on broadcasts, assignments, instructions, drawings, photographs, maps, charts, journals, newspapers, periodicals, reading guides, bibliographies, etc.
4. Self-learning material is designed by individuals or a team of experts who are a part of an educational institution that offers distance education. The design and the development of a self-learning material is therefore the responsibility of the institution, and the various academic bodies associated with the institution delivering the distance education course.
5. External writers and academic staff perform the following activities in the design and development of self-learning material:
 - Drawing a course curricula
 - Devising a system of course design
 - Briefing and if necessary, training writers
 - Drawing comprehensive contracts with penalty clauses for late or unsuitable material
 - Advising and coordinating writers and their outputs (the different elements of all courses they are producing)
 - Assessing and critically reviewing the course material
 - Ensuring that the syllabus is adhered to
 - Updating the course as per requirement
6. The access devices used in SLM are the cover page, title of a unit, objectives, sections, sub-sections, illustrations, diagrams, charts and tables, glossaries, lesson plans.
7. In many cases only oral material may not be sufficient to get the idea across to the students and so supplementary materials may be needed by the learners. As with printed material, oral material must also provide activities for the students so that they can check their progress.

8. The oral material developed for distance education must have the following characteristics:
 - It must be informative.
 - The oral material must be persuasive.
 - The oral material must be integrative and instructive.
9. An audio book is a medium in which the course is provided to the students of the distance education course with books that are vocalized radio-phonically. This means that the students can learn on their own and listen to the instructions and the course material whenever they want.
10. Podcasts and vodcasts refer to electronic media using which audio, video, text and files of various other formats can be easily downloaded and played on computers.
11. The Electronic Media Production Centre is a hub for the use of electronic media for distance education. The centre serves as a Nodal Resource Centre and is placed in New Delhi. The centre is responsible for production, dissemination and transmission of educational software across the country.
12. ICT or Information and Communications Technology as it is generally called, is a term used to describe any communication device and its use or application.
13. Using ICT technologies like the internet, instantaneous sharing of resources and learning materials is made possible.
14. EDUSAT or education satellite was launched by the government of India in 2004 to serve the educations sectors that offer distance education to a large number of students. EDUSAT was originally developed to allow interactive and satellite based distance education.

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2.10 QUESTIONS AND EXERCISES

Short-Answer Questions

1. List the features of distance education.
2. Write a brief note on self-learning.
3. Name the various theories on which the design of self-learning materials is based.
4. List the characteristics of self-learning materials.
5. Differentiate between print materials used in distance education and textbooks used in conventional learning.
6. Name the various types of self-learning materials used in distance education.
7. What are the disadvantages of print materials?
8. List the advantages of using electronic media in distance education.
9. Name the various types of media used in delivering distance education material.

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10. What factors must be considered when selecting electronic media for distance education?
11. State the objectives of using ICT in distance education.
12. What factors must be considered when integrating ICT in distance education?

Long-Answer Questions

1. Explain the various functions of self-learning materials.
2. Write in detail the process of designing self-learning materials.
3. Explain the roles of various personnel involved in the process of developing self-learning materials.
4. Explain what a unit in self-learning material is and how is it designed and developed?
5. Elaborate on the process of development of oral materials in distance education.
6. Explain the significance of ICT in distance education.
7. Write in detail about ICT infrastructure required for implementing distance education.
8. Write a detailed note on EDUSAT.
9. Write in detail about e-learning.
10. Describe the factors on which the use of ICT depends in distance education.

2.11 FURTHER READING

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UNIT 3 SELF-SUPPORT SERVICES, TECHNICAL AND VOCATIONAL PROGRAMMES AND RURAL DEVELOPMENT

*Self-Support Services,
Technical and Vocational
Programmes and Rural
Development*

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Structure

- 3.0 Introduction
- 3.1 Unit Objectives
- 3.2 Self-Support Service in Distance Education
 - 3.2.1 Development of Student Support Systems
 - 3.2.2 Implementing and Monitoring Support Services
 - 3.2.3 Student Support Services in Open Universities in India
- 3.3 Technical and Vocational Programs Through Distance Education
 - 3.3.1 Objectives of Technical and Vocational Education
 - 3.3.2 Technical and Vocational Education Program Development
 - 3.3.3 Challenges in Implementing Technical and Vocational Distance Education Programs
 - 3.3.4 Improving Technical and Vocational Distance Education Programs
- 3.4 Rural Development in Distance Education
- 3.5 Summary
- 3.6 Key Terms
- 3.7 Answers to ‘Check Your Progress’
- 3.8 Questions and Exercises
- 3.9 Further Reading

3.0 INTRODUCTION

Distance education is a self-mode and self-learning form of education. Distance learners choose their learning activities on their own and do not rely much on teachers and instructors. However, to learn in an effective manner, distance learners do need the support of the distance learning institution offering the course. Distance learning institutions offer various support services to distance learners, which are integral for the success of the distance learning institution. In addition to providing learning materials to distance learners, distance education institutions also offer services like counselling, libraries, personal contact program, etc., so that learners can communicate and interact with the staff and solve any issues they may face.

Distance education is not only provided in conventional degree courses but also in several technical and vocational courses. These are courses of short duration and enable a distance learner develop the skills necessary to find a job of interest and sustain that job.

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Distance education is one of the best modes of education that can be used to educate learners in rural areas. Rural areas are usually isolated areas that lack the infrastructure and the facilities to meet the basic and educational needs of learners. Distance education can reach out to these students to provide them basic as well as technical and vocational education so that the learners can work towards the development of their rural community.

3.1 UNIT OBJECTIVES

After going through this unit, you will be able to:

- Explain self-support service in distance education
- Understand the role of technical and vocational programs through distance education
- Elaborate on the role of distance education in rural development

3.2 SELF-SUPPORT SERVICE IN DISTANCE EDUCATION

Distance education, as has been stated, is that mode of education which facilitates self-learning. It also implies the fact that students need to set a learning and studying environment on their own. This also requires the students to chalk out their learning objectives, access the necessary information and course materials and also plan out their study sessions. Distance learning is a learner centred approach where the role of the teacher or the tutor is limited to providing help and support as and when required. Distance learning therefore functions as a self-service mode, where the learner has to carry out all the necessary functions that facilitate learning and make learning an easy process.

Self-service facilities are generally support services, which are made available to distance education learners directly or indirectly so that the absence of the teacher can be compensated. These services make learning for distance learners easy. These services are used by distance learners for several purposes apart from being used for learning and gathering the necessary information.

Since the inception of distance education, institutions offering distance education courses have not paid much attention to self-support services for students. In fact, these have been a neglected area of distance education for long, but now with increasing enrolment in distance education and student requirement for additional support apart from just the course material, all distance education institutes find it essential to implement a student support service system.

Research has also suggested that because of lack of necessary support services and systems, most distance education learners are unhappy and frustrated with their course and tend to drop out. Thus, to avoid students from dropping out from distance education courses and to meet their learning needs and demands, it is

now mandatory for all distance education institutions to set up and implement the necessary student support services.

The objectives of student or self-support services include the following:

- To enable distance learners to make use of the course package by providing the necessary academic support services.
- To enable learners to make the right choices by offering the required administrative and information support services.
- To enable learners to interact with teachers as well as other students, thereby helping them to curtail a sense of isolation.
- To provide learners with the required support and access to information and resources.

One main feature of distance education is that learners can come from varied backgrounds and age groups. Distance learners may be physically or mentally challenged; they may be young students or middle aged adults; they may be professionals or fresh graduates; they may be skilled or unskilled. The support services therefore need to be planned in such a manner that the educational needs of all types of distance learners are met.

As has already been pointed out, distance education requires the student to develop self-study and self-learning abilities. Distance learning is also characterized by a limited role of teachers, when providing learning instructions to students. Therefore, the students and the faculty may face several problems when using distance education as the mode of education.

The following may be some common learner generated problems in distance education:

- Learners may have problems in adapting to new technologies like computer and Internet.
- Learners may need to develop new study skills.
- Learners may face problems interacting with the faculty as well as other learners.
- Learners may face a difficulty in acquiring information from the various content sources being used.
- Learners may not be able to cope with the stress of learning in an isolated environment.
- Learners may lack motivation and thus may end up learning inefficiently

The following may be some problems that learners may face with tutors in distance education:

- Tutors may have problems interacting with learners.
- They may not be able to provide the correct feedback.
- They may not be able to offer the right guidance and counselling services.

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- Tutors may have problems developing the right material that can be delivered through various technologies used for distance education.
- They may not be able to address the individual needs of the learners.

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The use of good support services therefore becomes essential in distance education, so that the above stated problems can be avoided and learning can be made more effective. Support services for learners are those services and activities that are used in distance education to make learning easy and effective. These support services encompass all such activities that assist in the progress of the students in terms of learning, interaction and effective communication. The main aims of support services for distance learners include the following:

- The support services must create an environment conducive to learning of the learners.
- The support services must motivate the learner to learn in an effective manner and independent manner.
- The support services must be able to help learners acquire knowledge in an environment where there is minimum isolation.
- The support services must aim at promoting the interaction between distance learners and teachers.
- The support services must also aim at providing feedback to the learners in the right manner and at an appropriate time.
- The support services must also help to improve the educational standards of the learners.

The support services offered to distance education learners must be properly planned and executed so that the stated aims and objectives can be achieved. The learner support services must be created keeping in mind the needs of the learners. Along with academic support, the non-academic support services must be planned well in advance and must be implemented in an effective manner.

3.2.1 Development of Student Support Systems

The development of student support systems takes place in a systematic manner. Distance education learners need to access a wide range of support services so that they can learn in an effective manner. These support services need to be developed in a structural format so that the instructions for using each support service is clear to the learner. It is also essential that the support services be ICT facilitated. This will further ensure that the learners find it easy to access these services and use them. When designing the structure for the support services, there are three things that need to be considered—the staff, the roles and responsibilities of the staff as well as that of the support service and the training required to use the support service. The staff refers to the personnel who are behind the successful implementation of the support services. The staff must be selected with great care and the roles and responsibilities must be defined for each staff member in clear and concise terms. In addition to the roles and responsibilities of the staff, the roles and responsibilities of the support service must also be defined. There are several support

services that distance education learners need to access and so the purpose of each of these services must be clearly stated for easy use. Training is essential for distance education learners as well as the staff on how to make use of the support services. Training motivates and makes it easier for the learners to make use of the various support services meant for them.

3.2.2 Implementing and Monitoring Support Services

Once the support services have been developed, these must be implemented and monitored to make sure that they are being used for the right services. Monitoring also ensures that each of the support services is working in an efficient and effective manner and that it is serving the purpose it has been meant for.

In general, the following student support services need to be organized in a distance education institute:

- **Publicity and promotion of distance learning programs:** These support services are generally meant to offer pre-admission services to distance education learners. These services promote distance education programs so that learners acquire information about these programs. The information can be made available to distance learners through the institution's website, newspapers, brochures, study centres and even through individual counselling. These support services provide complete information related to distance education courses like the eligibility criteria, the admission fees, list of the study centres, as well as the last date of the submission of the forms. The main aim of these support services is to enable distance learners to get the required information for admission to the course of their choice.
- **Information cells:** Information cells are support services that are used by learners to acquire information related to all aspects of course. Usually, information cells respond to telephonic queries of distance learners. The student information cell must be ICT enabled so that the person providing the information is able to provide accurate and updated information to learners. The information that the students seek is generally related to the courses offered, the examination schedules, rules and regulations related to the course, etc.
- **Website:** Every distance education institute that offers distance education courses must have a functional website so that the students can access the required information anytime and from anywhere. The website must provide all information from pre-admission to the results of the course.
- **Interactive Voice Response System:** The IVRS is a technology that uses a computer that can automatically detect voice and touch tones using a normal voice. The aim of IVRS is to offer self-service to learners so that they can access all the necessary information they want on their own. IVRS facilitates better enquiry services especially for remote learners.
- **SMS alert service:** With the introduction of ICT, a wide range of technologies are now used for distance education. The use of instant messaging is one of

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them. SMS alert service is a support service that enables learners to get simple, reliable and quick messaging services.

- **Introduction and orientation program:** This is a support service that must be made available to the students at the beginning of each academic session. The aim of this program is to provide distance learners with the necessary information about the learning program and to make an assessment of the difficulties faced by the learners.
- **Calendar of academic activities:** At the beginning of the course, a calendar of the academic activities must be made available to all the learners so that they are aware of any workshops or seminars that are going to be conducted to supplement their learning.
- **Study centres:** Establishment of study centres is one of the best means of offering support services to distance education learners. A distance education institute must establish a network of study centres in different geographic locations. The study centres must be equipped with an efficient staff as well as resources so that the learners can have access to a good infrastructure. Study centres offer support services like counselling, audio-video programs, teleconferencing, libraries, examinations, etc.
- **Preparing and distributing study material:** Distance education learners make use of self-learning study material, which must be developed and distributed by the distance education institution. The study material must be developed in a form that the learners find easiest to use. For instance, if the learners find CDs to be the easiest form of accessing the study material, the institution must ensure that the content is made available in CDs. The study material must be developed by trained and expert faculty and must be delivered to the students using reliable means.
- **Academic counselling:** Academic counselling is another important support service that must be provided to distance education learners. Personal contact programs must be conducted by distance education institutions so that learners can overcome their academic alienation. PCPs make it possible for learners to interact with the faculty, which helps the learners to effectively work towards course completion. An academic counsellor not only helps the learners acquire information about the distance education course in detail but also guides the learners on how to make use of various ICT tools to access and use the prescribed course content.
- **Student response sheets:** In distance education courses, it is essential that the students be given timely feedback about their progress so that they can be motivated into completing the course. Student response sheets are used to evaluate the students and record their performance. The students are provided assignments, which they need to complete and submit back for evaluation. Once these are evaluated, the students are given back the assignments for improvement, reference and guidance.
- **Question bank:** Question banks are support tools that are used by distance education learners for self-assessment. Question banks help learners to know

their progress through the course. Question banks also enables learners to understand the gaps they may face in comprehending the course content and their capability in different domains of the course of study.

- **Library and resource sharing:** Student support services in the form of libraries are resource sharing facilities also significant in distance education. These facilities enable learners to access the resources, which help them to supplement the course content. These support services enable the learners to use books, journals, CDs, and audio visual aids to learn in a better manner.
- **Financial support:** Financial support services may be required by some distance education learners. In these cases, the learners may be offered a fee subsidy or free course material so that their educational needs can be met.
- **Technological services:** Technological services must be provided to learners so that they can make use of ICT for accessing course content and for learning. Technological support may be offered to distance learners by setting up computer laboratories and by providing network facilities at the study centres. Technological support may also be provided by making ICT resources available to the students.
- **Media services:** Media support services are provided to distance education learners so that they can make effective use of ICT based technologies like audio-visual aids and teleconferencing.

Student Support Services offered at Krishna Kanta Handiqui State Open University (KKHSOU), Assam

The university offers several support services to the students in addition to providing self-learning materials. These support services include:

- Academic counselling related to specific subjects by trained academic counsellors
- Practical lab classes for subjects which are practical-oriented
- Library facilities for the enrolled students
- Computers at the study centres
- Phone-in programs to address the queries and solve problems of learners from different parts of the state
- Free SMS service so that students can get updated information
- Provision of audio-visual materials
- ICT technologies at selected study centres

Learner Support Services offered by the Institute of Distance and Open Learning, Gauhati University

In addition to offering SLMs, the university offers the following support services for distance education learners:

- Subject specific academic counselling is offered by academic counsellors at the study centres.

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- The university has set up its own library for the distance learners.
- The university has also set up computer labs at the study centres.
- Free SMS service for students to get the required and important information.
- The university has also developed its own website so that students can get the required information.
- An e-learning portal has also been developed by the university to make it easy for students to learn the course and also allow the students to interact with the faculty, making learning more effective.

Web 2.0 Technologies used for Support Services in Distance Education

The following are the various Web 2.0 technologies that are made use of to offer support services to distance learners:

- RSS is used for generating auto alerts whenever the content is updated.
- A blog makes interactive non-formal communication possible for learners.
- A micro-blog is used for providing distance learners with short instructions and communication.
- Read/write tools are used for developing collaborative documents to facilitate learning.
- Social networking makes dynamic group interaction possible.
- Podcasts enable the learners to listen to audio visuals in an effective manner.
- Social bookmarking enables students to classify, share and search educational links.
- A media repository enables the students to upload and share classroom and laboratory projects and information.

Student Support Services offered by IGNOU

IGNOU offers ICT based student support services to distance education learners. These services include:

- Online submission of admission form
- Online submission of examination form
- Online registration
- Online student grievance redressal handling
- Information support cell
- Online change for address and subjects etc.
- Web enables records management system

Student Support Services offered by SCDL

SCDL has offered student support services for distance learners in the following ways:

- Setting up an e-counselling centre which answers student queries through emails.
- Counselling is offered to students to guide them about selecting the right course according to their interests, skills and attitudes. Counselling can be individual counselling, counselling through emails and chats, counselling through telephones.
- Call centre have been set up by SCDL to give prompt response to the students and guide the students in an effective manner.

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3.2.3 Student Support Services in Open Universities in India

A study was conducted to know about the various student support services available in the various open universities in India, and to know what distance learners thought about these services. To conduct the study, three open universities were selected—IGNOU, BR Ambedkar Open University and the Karnataka State Open University.

The open universities selected believe that the student support services play an important role in the success of a distance learning program and therefore have established student support services that are comprehensive in nature and of good quality. To carry out the study, questionnaires were used to collect data related to the student perception of the student support services and the student support services offered by the open universities.

The three universities offer the following student support services:

- Printed and electronic study materials to encourage students to learn in a self-learning mode. However, the design of the study materials and the quality of the study materials is an issue for the universities as they need to take into consideration the fact that distance learners come from different backgrounds and have different educational needs.
- Personal contact programs and counselling sessions are conducted by all three universities. During these counselling sessions, the counsellors and students interact with each other by means of lectures, discussions, audio-video presentations and group discussions. However, in most cases, the lecture mode dominates, wherein the students are required to listen to what the counsellor has to say. In other words, interaction is one way and does not encourage a lot of discussion.
- Study centres have been established by open universities. These study centres act as modes of communication for distance learners. Most study centres are equipped with several facilities that make learning effective for distance learners. Study centres perform various functions including academic counselling, orientation program, managing assignments and conducting examinations.

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- Assignments are offered by all open universities and serve as a means of evaluating the distance learners. The assignments are a means of establishing interaction between the students and the teachers.
- Other support systems and services offered by these open universities include library services, pre-admission services, induction programs and enquiry services.

CHECK YOUR PROGRESS

1. What are student support services or self-services?
2. Define information cells.
3. What is IVRS?

3.3 TECHNICAL AND VOCATIONAL PROGRAMS THROUGH DISTANCE EDUCATION

Technical and vocational education refers to the system of education, wherein individuals are imparted manual and practical knowledge so that they can develop the skills essential to work. In others words, technical and vocational education offers job training to those who want to develop the necessary skills to work in a specific area or field. Vocation education is non-academic in nature. However, the increased demand of skilled labour in the industry has revolutionized vocational education and a large number of people opt for several technical and vocational education courses.

Technical and vocational education is multi-faceted and prepares a student for a job and not only for college. Technical and vocational education typically imparts training in a wide range of jobs that require special skills to be successfully carried out. Technical and vocational education can be undertaken by working professionals or those who wish to gain entry into a vocation of their choice.

The following are the benefits of technical and vocational education and training:

- Technical and vocational education enables people to perform better at their jobs as they learn the essential skills.
- Technical and vocational education helps working professionals to refine their skills and thus perform better.
- Since technical and vocational education does not deal with academic education and knowledge, most learners eagerly learn the skills that are imparted.
- Technical and vocational education helps one in becoming independent and responsible and prepares one for professional work.
- It enables a person to opt for the job of his or her choice.
- It helps students to realize the importance of manual work.

- This type of education enables students to develop work skills, which are uniform across the globe and thus opens a wide number of job opportunities for the students.
- It enables the students to acquire practical and hands-on work experience for the job of their choice.

In spite of the fact that vocational or technical education is required and essential for students to develop vocational abilities, there are some problems in technical and vocational education that are faced by most of the countries. These include:

- There is lack of linkage between technical and vocational educational institutions and the industry which does not allow students from these institutions to get jobs of their choice.
- Technical and vocational training institutions lack proper management and there is inadequate coordination in the functioning of these institutes.
- Most technical and vocational institutions lack international accreditation and affiliation, which renders the degree or the diploma earned useless and invalid in countries apart from where the training was imparted.
- Vocational and technical education cannot develop at a rapid pace because of the lack of funds.
- Most vocational and technical education courses are not utilized to their full capacity primarily because people are not aware of the importance and the necessity of these courses.

There are several students who do not attend technical and vocational education institutions because they either do not have access to such institutions or they cannot attend the institutions because of time constraints. This is where distance education plays a vital role in the development of technical and vocational educational opportunities for such students. Distance education is inherently flexible in nature and allows students to learn at their own pace and time. Distance education is used to offer several vocational courses to interested students. These courses are generally of a short duration and make use of the best ICT technologies to help students develop the essential skills and make them competitive for a vocation of their choice. Distance education vocational courses also enable students to develop their skills for more than one profession or job as these are short-term courses that can be learned, as and when the students want to. Distance education vocational courses are also apt for working professionals who want to improve their skills so that they can sustain their jobs for a longer time period.

3.3.1 Objectives of Technical and Vocational Education

The following are the objectives of offering technical and vocational education programs through distance education:

- To enable students as well as working professionals to acquire the required technical skills
- To raise the literacy levels of all students in different vocations

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- To train the learners to develop the skills essential to meet the industry demands and requirements
- To offer affordable and cost effective training opportunities to the students or people who want to develop the skills for a specific job
- To provide training to those who are disabled, unemployed or unable to get training from a regular institute so that they can get a job of their choice

3.3.2 Technical and Vocational Education Program Development

Technical and vocational education programs offered by distance education need to be planned and developed in a manner that can meet the learning objectives, which include providing education to enable the learners to develop the essential skills, so that they can work in a vocation of their choice. To develop a technical and vocational education program, the following processes need to be carried out. Although all the processes are interdependent, these need to be carried out parallel to each other so that the program development can take place in the right manner.

Specification of work

The process of technical and vocational education development program starts with the specification of work or job. This process requires a full insight about the desired profession, so that all the necessary details about the work or the job can be known by the developers. The specification of work begins with need analysis. The main aim of need analysis is to identify the occupations and the occupation profiles in the labour market. Need analysis is also conducted to identify what the learners already know and what they can and are required to know to perform a specific job or occupation.

Need analysis in general, needs to be undertaken for:

- Analysis of needs for profiles or occupations
- Analysis of needs for knowledge and skills, i.e., the competencies required to perform the specific occupation.

Need analysis for profiles or occupations are performed at the macro level, i.e., the national level, sectoral level as well as at the individual organization level. This type of analysis helps identify the jobs and occupations that are required at various levels, i.e., regional level, economic as well as individual organization level. This need analysis is not an empirical method of identifying the lack of certain profiles but also involves research approaches to locate the pace of technological changes, the situation of the labour market and also the projection of the various jobs in the economy. Need analysis helps to develop short-term as well as mid-term occupational and job profiles.

Analysis of knowledge and skills helps to get an insight into the knowledge and skills essential for the performance of a specific job or occupation. It is essential to know that each vocation requires a different and specific set of skills and so when developing a technical and vocational education program, it is essential to keep this fact in mind.

Every distance education course that imparts technical and vocational education needs to specify the skills that the course will aid the learners to develop. Within an individual occupation or vocation, the analysis of skills and knowledge is done using the following process:

- Occupational analysis is the process which involves the qualitative analysis of the work, i.e., the conditions in which the job is performed, the principles guiding the performance of the job, the technical skills required for the job, and the operations and procedures required for performing the job.
- Defining an occupation profile requires the description of the specific requirements for the job, the operations to be performed as well as the duties associated with the specific job.
- Creation of occupational standards requires describing how the job will be performed. It requires a description of the activities required to be performed and the skills, knowledge and attitudes required to perform the job.

When designing and developing technical and vocational education programs for distance education learners, the following needs of the learners need to be considered:

- **Normative needs:** Normative needs are needs in which the learner is deficit. In other words, these needs need to form an important part of the technical and vocation education program for distance learners.
- **Experienced needs:** Experienced needs are needs that the distance learners feel are essential to help develop the necessary skills and knowledge in order to sustain and perform in the chosen vocation or job.
- **Expressed needs:** Expressed needs are the needs that the distance learners want to fulfill from the technical and vocational education program.
- **Anticipated needs:** These needs are not required by the learners but these are the expected future needs of the distance education learners.

Specification of learning

Specification of learning deals with the teaching and the learning process. The specification of learning starts with specifying the goals of the technical and vocational education program. In the learning process, the tasks to be performed in relation to the technical and vocational education play an important role. When it comes to technical and vocational learning, tasks can be divided into cognitive tasks, psychomotor tasks and affective tasks. When developing a technical and vocational education program for distance education, two types of tasks need to be defined that will cover the cognitive, psychomotor as well as the affective tasks. These are general tasks and concrete tasks. General tasks focus on the specific tasks for a specific type of training. Concrete tasks are the ones that focus on the desired results or outcomes of the technical and vocational program. For example, a concrete task for an agricultural training program would focus on enabling students to run a dairy farm at the end of the program.

The specification of learning process also requires the definition of the goals that the technical and vocational education program aims to achieve. The goals

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basically focus on how the outcomes of the program will be achieved. Outcomes of a program must always be defined before the learners can start with the program. This helps the learners to organize the learning process in such a manner that the goals of the program can be achieved. Once the goals and outcomes have been defined, the content for the technical and vocational education program is structured and defined.

Content structuring in technical and vocational programs

Content structuring in technical and vocational distance education programs can be divided into:

- **Subject or disciplinary programs:** In this program, the content is divided according to specific scientific fields. In other words, content is structured and developed for a particular subject and is independent from the content of the other subjects.
- **Complex problem programs:** In this program, content from various scientific fields or disciplines is combined. This helps a learner to learn several disciplines at the same time but not in detail. This type of content helps the distance learners to solve particular types of problems.

An important consideration when developing a technical and vocational education program is that the program must be flexible to adjust to the on-going changes taking place in the professional field. Teaching and learning in a technical and vocational distance education course is accomplished through the use of modules. Each module consists of a specific learning topic which leads to the development of professional competence among the learners. Modules are independent units of learning that help the learners to gain various types of skills and knowledge.

The basis for creation of a module is the description of the occupation. In technical and vocational distance education programs, modules can be developed using two concepts—general modularization and fragmental modularization.

General modularization is the process wherein the modules are created by dividing the occupation into several small and less complex tasks. This type of modularization requires specific competencies and skills to be developed for each small task of the occupation. The modules so created are considered as being only a small part of a wider set of a program, that aims at enabling the distance learners develop professional competencies for the entire program.

In fragmental modularization, the modules are created by dividing the occupation into different tasks and each module is recognized as being independent of other modules and also the wider task. The distance learner gains new skills and competencies for each of the modules.

Specification of education and learning conditions

The specification of education and learning conditions includes the following:

- Defining the entry conditions for the distance learners into a specific technical and vocational distance education program

- Identifying the work techniques and methods
- Identifying the learning aids and teaching methods for the learners
- Defining the technical conditions for learning
- Defining the pace and duration of the technical and vocational distance education course
- Defining the methods of assessment and evaluation
- Defining methods for the development of the learning material

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Specification of evaluation and assessment

A technical and vocational distance education program needs to be assessed and evaluated to know whether it has been effective or not. Evaluation basically assesses the influence of the program on productivity and also achievements of the distance learners. In evaluating a technical and vocational distance education program, the following components are evaluated:

- Education work program
- Learner participation during the program
- Conditions in which the program was carried out
- Outcomes of the program

The main aim of assessment and evaluation is to check if the distance learners have been able to achieve professional competencies, and the skills and knowledge essential for a specific vocation or occupation.

3.3.3 Challenges in Implementing Technical and Vocational Distance Education Programs

Technical and vocational distance education programs are effective in providing training to those, who want to develop the skills necessary to work. Distance education makes accessible to the learners the material that can enable them to develop the necessary skills and professional competencies. However, it is not easy to implement such distance education courses because of the following reasons:

- **High cost:** While distance education for degree programs is a less expensive option for most students, technical and vocational distance education is a costly affair. This is mainly because of the scientific and technical learning material which is provided to the students, as well as the necessity of highly skilled teachers and experts who assist the learners in developing the necessary skills. Technical and vocational distance education courses are highly interactive and require the use of ICT which makes these courses very costly.
- **Problems in orientation and induction into the program:** Most distance learners are not oriented and inducted into technical and vocational distance education courses. Due to their technical nature, it is not easy for institutions to conduct orientation programs in an effective manner. Most institutions that offer such technical and vocational distance education courses do not

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realize that learners require support services to understand these courses.

- **Lack of communication:** Ineffective and lack of communication are also major problems for technical and vocational distance education courses. Improper interaction between the teachers and the learners, and the ineffective technologies used for communication pose a problem in implementing these programs in an effective manner.
- **Lack of motivation:** Technical and vocational distance education programs are difficult to implement because the students lack the motivation to learn using the specified techniques. Distance learners are not motivated and convinced enough to get enrolled into these programs, and if students are enrolled, the lack of a classroom type environment and interaction makes them hesitant to learn the necessary skills using these courses.
- **Inability to adhere to time:** Students as well as administrators fail to adhere to the time set for completion of assignments, tasks and projects in distance education courses. Most of the times, the administration is not able to deliver the necessary learning materials to the students in time. This lack of coordination leads to time paucity. Consequently, students are unable to finish their tasks within the required time frame. This makes it difficult for institutions to implement technical and vocational distance education courses.
- **Improper and late feedback:** In technical and vocational distance education courses, the teachers are unable to provide an accurate and necessary feedback at the right time. This results in a lack of motivation for students to reinforce their skills and work towards the achievement of the goals and outcomes of the course.

There are various universities offering technical and vocational distance education courses. Some of them are as follows:

Netaji Subhash Open University imparts training in vocational and non-conventional courses. The aim of the university in providing such courses is to enable the distance education learners, so that they can engage in a livelihood wherein they can generate an income. The university provides an opportunity to the existing workforce to upgrade their skills. The university offers at least 40 vocational and non-conventional courses to almost 5500 learners. The university enables new students as well as working professionals to enrol into these courses and develop the essential skills for working.

The Indian Institute of Distance Education is affiliated to the State University and offers vocational and technical courses to distance learners. The institute specifically aims at meeting the needs of those who want to enhance their professional skills. The institute offers training to students without disrupting their career progression in any manner. The courses offered by the institute enable the students to enhance their qualifications, capabilities and confidence.

3.3.4 Improving Technical and Vocation Distance Education Programs

The following strategies can be used to improve the effectiveness of technical and vocational distance education programs:

- **More focus on learning outcomes:** Learning outcomes of technical and vocational distance education programs define the skills and knowledge that the distance learners will be able to develop once they have completed their course. To ensure effective skill development which is the main aim of such programs, the institutes must enable the distance learners to have a hands-on experience about how a specific work or job is done. For this, the students may be provided laboratory kits for use at home or they can be provided the same at the study centres.
- **Offer practical training:** The technical and vocational distance education courses must offer practical training and hands-on experience to the distance learners at the study centres. Also the students must be given enough time to conduct, learn and develop practical and specific skills. It is also essential that the practical training be overlooked and supervised by experts so that distance learners can conduct the specific task in the right manner.
- **Assess the student activity:** When it comes to technical and vocational distance education programs, it is essential to evaluate and assess the activity of the distance learners. The assessment program must assess and evaluate the performance skills of the learners. It must be ensured that the student can perform the specific task effectively and efficiently.
- **Facilitating industry institute partnership:** A major problem in implementing a vocational distance education course effectively is that most graduates of such courses do not get the jobs of their choice and interest, because of the lack of a partnership or collaboration between the institutions and industrial organizations that can offer jobs to the graduates. It is therefore essential to ensure that a partnership between the industry and distance learning institutes is established. This enables the industry to fulfill its labour needs and demands.
- **Establishing competency based curriculum:** Instead of using a skill based curriculum, technical and vocational distance education programs must focus on a competency based curriculum. This ensures that distance learners develop the required competencies to work in a vocation of their choice. Further, this helps the learners to develop the competencies as per the standards and requirements of the industry.
- **Providing student support services:** It is imperative for technical and vocational distance education courses to provide student support services, so that the students can develop the necessary skills and competencies. Student support services play an important role in distance education courses as these help the students to progress throughout the distance education course.

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Box 3.1: Vocational Program in Mushroom Cultivation

IGNOU started an agro-based vocation program in mushroom cultivation in the year 2000. The program is of a 4 months duration. The program offers multimedia learning packages to distance learners. This package consists of self-study materials with illustrations for the students to learn in an easy and efficient manner. The package also consists of a set of 10 video programs and a 60 minutes audio program that provides information on mushroom cultivation. To provide hands on experience to the distance learners and to give them practical training, IGNOU has selected *Krishi Vikas Kendras* and also private growers who assist the distance learners in developing the necessary practical skills.

Box 3.2: Construction Workers Vocational Qualification Project

This project has been established by IGNOU and aims at enabling construction workers to develop essential skills. The project offers vocational and practical training to construction workers. The project helps learners in developing competencies for jobs like that of a general mason, bar-bender, general works supervisor and also a shuttering carpenter. The project is a certification course that also offers assessment for the workers.

Box 3.3: Indian School of Business Management and Administration

The Indian School of Business Management and Administration offers several short-term diploma courses in several vocational subjects. The courses offer the learners to develop basic management skills and pursue a career in management. The courses are meant for working managers, women as well as fresh graduates who wish to pursue a career in general management. The institute offers the numerous vocational courses in the field of management.

3.4 RURAL DEVELOPMENT IN DISTANCE EDUCATION

Rural development encompasses the transformation of rural, backward and isolated areas on the economic as well as the social domain. Rural areas are areas wherein the population does not have access to even the basic services essential to lead a settled life. Most rural populations do not have access to amenities like electricity, education, drinking water and sanitation. It is important to raise the economic level of such populations, in order to improve their overall economic development. Rural development also reflects the national development and is therefore vital for a nation.

While it is easy to provide good infrastructure facilities to rural populations, the toughest task for rural development is the provision of education to willing students. Rural population suffers from problems like illiteracy, lack of awareness of advantages of education and also a lack of access to schools, colleges and universities. It is difficult for the rural population to access even basic educational facilities. This

is because most rural communities do not have established schools and colleges. If at all, there are schools in rural areas, they lack expert teachers and trainers. Most rural areas are isolated and not well-connected with urban areas, making it difficult for learners to commute to schools, colleges and universities. Lack of motivation to pursue education is another factor which refrains the rural population from receiving basic education facilities.

In such cases, distance education plays a vital role in rural development. Distance education is the mode of education that makes use of various tools and technologies to reach out to learners in isolated and remote areas. Distance education also does not require learners to attend regular classes and therefore is perhaps the only means of achieving rural development.

Rural areas have the following characteristics:

- These are geographically isolated from other communities and areas.
- These have a poor infrastructure.
- The rural areas have a strong community identity wherein more emphasis is placed on the collective needs rather than the individual needs.
- There is a high rate of illiteracy and unemployment.
- The active youth and adults migrate to urban areas.
- There is a high ratio of people living below the sustainable standard of living.
- The mortality rates are high and there is a lack of access to medical facilities.

Distance education using ICT technologies as has been identified as one way in which the rural population can be imparted with basic education and training so that it can move towards an economic and social transition. However, when developing a distance education plan for the rural population, there are a few things that need to be considered. One of the main considerations is the language. It is imperative to formulate distance education programs in a language which is the most suitable for the rural population or which the rural population is comfortable to use. This ensures effective learning.

Another consideration is the level of education needed by the rural population. As has already been stated that most rural populations do not have access to even the basic and elementary education facilities, it is important that the distance learning curriculum be designed keeping the education level of the rural learners in mind. Distance education programs are not only essential at the higher education or college level for rural populations but even at the elementary level.

Another important issue that needs to be considered is that most rural areas lack the basic infrastructure and facilities like Internet and broadband access. It is therefore, essential to develop a distance education program that can be delivered using the right technological approaches. While most distance education courses are delivered through post to distance learners in rural areas, efforts must be made to use ICT in these areas as well to make learning effective. When using ICT for distance education programs for rural learners, another important fact that needs to be considered is that rural population is not technology savvy and may need training to use these technological tools in the right and effective manner.

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The objectives of distance education for learners in rural areas are as follows:

- **To improve the quality of basic education:** Rural areas lack basic schooling facilities, which results in most students not receiving education in an appropriate manner. This also means that in rural areas, there are more school drop-outs and most young learners are more inclined towards helping at the farms or in household work. Education for girls in rural communities is completely ignored. The aim of distance education courses meant for rural communities is to provide basic education to all young children so that they can develop the essential reading and writing skills.
- **To enable the youth to develop skills for employment:** Distance education for rural learners is not limited to only academic content but also encompasses non-conventional courses and vocational training. This enables the youth to develop skills so that they can find employment in the vocations of their choice. Once the youth develop the requisite employment skills, it is easier for them to find employment and earn income that can raise their standard of living.
- **To provide higher education:** Distance education for rural learners is also provided at the higher education level. It has been seen that most of the times, the youth of the rural communities migrates to the urban areas for higher education. This leads to the draining out of potential learners from the rural communities, which further prevents the development of these areas. With the help of distance education programs, the youth is bound to stay in the rural areas and get the necessary education. This eventually leads to the youth working for the transition of the rural area, thereby enabling its development.
- **To provide education to out of school youth:** Since rural communities lack basic education facilities and fail to meet the educational needs of the rural youth, many children and youth in rural areas drop out from schools. Distance education programs are the perfect solution for such people to continue their studies. Distance education programs make the course content available to students at their door step and therefore ensure that the dropouts get a second chance to complete their education.
- **To provide business education:** Since a majority of rural population engages in agriculture and the youth of the rural community wants to establish a business in the field of agriculture, distance education offers a great opportunity for such youth to learn business techniques for the same. Distance education courses are flexible and are offered in a wide range of subject. Rural youth can benefit from business education offered by distance education courses and thereby start their own business, which will ultimately lead to rural development.
- **To develop agricultural professionals and researchers:** The rural community is closely associated with agriculture and knows every little detail about how agriculture can be sustained and developed. Distance education can help the rural population to enhance their basic skills and develop new

skills related to agriculture. Therefore, the rural population can develop sufficient skills to continue as agricultural professionals or researchers by pursuing distance education courses in the same.

Thus, the basic aim of distance education in rural areas is to facilitate rural development. However, there are a few issues that arise to implement distance education in rural areas. These include the cost of implementation. As has already been pointed out, most rural areas lack the basic infrastructure, implementing distance education would turn out to be quite expensive. To implement distance education programs successfully in rural areas, a lot of cost is incurred in setting up the necessary ICT structure. Likewise, providing study and learning material to rural population is not easy, leading to further expenses.

Another major issue is the resistance of rural population to new forms of education and development. Rural populations have a strong sense of community and therefore may be opposed to the new methods of education and learning. In some cases, the rural community may not even support this mode of education and may be totally against it. In such a case, efforts need to be made to make the rural community aware of the several benefits of distance education for the rural population. The rural community must be provided complete details on how the distance education program will be carried out and the technologies involved. The rural youth may also need to be trained to make use of the technologies.

Implementing distance education for rural development is full of challenges but the end result is development of such areas and eventually the nation.

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Box 3.4: Training of Rural Youth by IGNOU

The Training of Rural Youth is a distance learning program started by IGNOU in collaboration with COL. The aim of the program is to make available cost effective and appropriate communication technology available for the training of the rural youth. The project has been initiated in Uttar Pradesh and Haryana in two selected districts. The training is to be provided to the rural youth in commercial vegetable production and fruit nursery production. The program offers self-study material to the rural youth and also audio cassettes and video films. Under the program, the first training program was conducted on potato cultivation. For the program, instructional material was developed in print and also in audio and video.

Box 3.5: Karnataka State Open University

The Karnataka State Open University offers a distance education program in MBA in Agri-Business and Rural Banking that focusses on the development of agri-business and establishment of more rural banks. The MBA course in agri-business provides training in export-import, irrigation, livestock feed, co-operative, rural banking, farm machinery and equipment, production and marketing seeds. MBA in agri-business grooms people into professional managers for core areas of business and allied sectors. This course provides a comprehensive coverage including the foundation, functional and elective courses related to management discipline, in general and agri-business management in particular. The duration of the program is 2 years.

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Box 3.6: Jiwaji University, Gwalior

Jiwaji University offers distance education courses in several fields with the following aims and objectives:

- To provide quality education to youth in the rural areas
- To prepare the youth of the rural areas for a constructive role in the society
- To enable the rural youth to develop skills as per the demands of the labour industry, so that they can get the desired jobs
- To enable the rural youth who have dropped studies due to economic reasons to continue their studies

These courses enable students in rural areas to study at their own pace and are meant for students, who specifically do not want structured learning.

CHECK YOUR PROGRESS

4. What are the benefits of technical and vocational education and training?
5. Why are distance education courses apt for working professionals?
6. What is the main aim of need analysis?

3.5 SUMMARY

- Distance education is fast gaining popularity and a large number of students are enrolling into courses that offer degrees like conventional courses do and also several vocational and technical courses. Distance learners who cannot attend finishing schools or vocational and technical training can enrol in various technical and vocational distance education courses to develop the essential skills that can help such learners to choose a career and a job of their choice.
- To make distance learning effective, distance education institutions offer several support services to the learners who otherwise learn on their own. The main aim of these services is to help the distance learner solve problems and issues that may be faced during learning.
- Distance education is the only mode of education that can be used for educating students in remote and rural areas, which are isolated and backward in terms of the facilities as well as the infrastructure. With access to distance education, the youth of rural communities can fulfil their educational needs and contribute to rural development eventually. Distance education in rural areas is facilitated with the help of technology as well as the postal system, which works the best for distance learners situated in rural areas.

3.6 KEY TERMS

- **Normative needs:** Needs in which the learner is deficit.
- **Experienced needs:** Needs that the distance learners feel are essential to help develop the necessary skills and knowledge in order to sustain and perform in the chosen vocation or job.
- **Expressed needs:** Needs that the distance learners want to fulfill from the technical and vocational education program.
- **Anticipated needs:** These needs are not required by the learners but these are the expected future needs of the distance education learners.
- **Subject or disciplinary programs:** In this program, the content is divided according to specific scientific fields. In other words, content is structured and developed for a particular subject and is independent from the content of the other subjects.
- **Complex problem programs:** In this program, content from various scientific fields or disciplines is combined.
- **General modularization:** The process wherein the modules are created by dividing the occupation into several small and less complex tasks.
- **Fragmental modularization:** A process in which the modules are created by dividing the occupation into different tasks and each module is recognized as being independent of other modules and also the wider task.

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3.7 ANSWERS TO ‘CHECK YOUR PROGRESS’

1. Self-service facilities are generally support services, which are made available to distance education learners directly or indirectly so that the absence of the teacher can be compensated.
2. Information cells are support services that are used by learners to acquire information related to all aspects of course. Usually, information cells respond to telephonic queries of distance learners.
3. The IVRS is a technology that uses a computer that can automatically detect voice and touch tones using a normal voice. The aim of IVRS is to offer self-service to learners so that they can access all the necessary information they want on their own.
4. Following are the benefits of technical and vocational education and training:
 - Technical and vocational education enables people to perform better at their jobs as they learn the essential skills.
 - Technical and vocational education helps working professionals to refine their skills and thus perform better.
 - Since technical and vocational education does not deal with academic education and knowledge, most learners eagerly learn the skills that are imparted.

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- Technical and vocational education helps one in becoming independent and responsible and prepares one for professional work.
 - It enables a person to opt for the job of his or her choice.
 - It helps students to realize the importance of manual work.
 - This type of education enables students to develop work skills, which are uniform across the globe and thus opens a wide number of job opportunities for the students.
 - It enables the students to acquire practical and hands-on work experience for the job of their choice.
5. Distance education vocational courses are apt for working professionals who want to improve their skills so that they can sustain their jobs for a longer time period.
 6. The main aim of need analysis is to identify the occupations and the occupation profiles in the labour market. Need analysis is also conducted to identify what the learners already know and what they can and are required to know to perform a specific job or occupation.

3.8 QUESTIONS AND EXERCISES

Short-Answer Questions

1. What are the objectives of student support services?
2. What are the various student support services required in distance education?
3. What are the objectives of technical and vocation distance education programs?
4. How is technical and vocational distance education program developed?
5. What role does distance education play in rural development?
6. What are the objectives of providing distance education in rural areas?

Long-Answer Questions

1. Describe the various problems distance learners and tutors face.
2. Explain the process of development of student support services.
3. Write a note on technical and vocation education and its importance.
4. Explain the challenges faced in the implementation of technical and vocational distance education programs.
5. How can effectiveness of technical and vocational distance education be improved?

3.9 FURTHER READING

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*Self-Support Services,
Technical and Vocational
Programmes and Rural
Development*

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UNIT 4 CONCEPT AND NEED OF EVALUATION IN DISTANCE EDUCATION

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Structure

- 4.0 Introduction
- 4.1 Unit Objectives
- 4.2 Concept and Need of Evaluation in Distance Education
 - 4.2.1 Process of Evaluation
 - 4.2.2 Factors Evaluated in Distance Education Programs
 - 4.2.3 Evaluation Metrics
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 - 4.4.5 Interregional Guidelines for Evaluation of Distance Education Programs
 - 4.4.6 Using Surveys to Evaluate Distance Education Programs
 - 4.4.7 Evaluating the Effectiveness of a Distance Education Course
 - 4.4.8 CEIT Model for Evaluating Online Learning Course
 - 4.4.9 Feedback
- 4.5 Summary
- 4.6 Key Terms
- 4.7 Answers to 'Check Your Progress'
- 4.8 Questions and Exercises
- 4.9 Further Reading

4.0 INTRODUCTION

In any education system, evaluation is essential. Evaluation is the only means of knowing whether the student has learned the concept or not. Evaluation is essential to assess the achievement level of the student in terms of his or her skills and knowledge. Distance education is an unconventional mode of education and evaluation plays an integral part in distance education.

However, when it comes to distance education, it is not only the achievement or the knowledge level of the distance learner which needs to be evaluated, but also the learning material, the support services and any other component which makes distance education successful. Evaluation in distance education is thus not an easy task and does not only involve examinations alone. The process of evaluation in distance education is a systematic process that relies on various qualitative and

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quantitative techniques. Evaluation in distance education also has several aspects to it and therefore, is a complicated process.

Evaluation in distance learning is not conducted by teachers alone but by students as well. Students are also involved in self-assessment and evaluation when it comes to distance learning; as opposed to the conventional evaluation system where the evaluation is conducted by the teacher to know the level of knowledge or intelligence of the student.

4.1 UNIT OBJECTIVES

After going through this unit, you will be able to:

- Discuss the importance of evaluation in distance education
- Identify the various methods of evaluation used in distance education
- Elaborate on the techniques used for evaluating a distance education program

4.2 CONCEPT AND NEED OF EVALUATION IN DISTANCE EDUCATION

Every educational program needs to be evaluated so that the effectiveness of the program can be known. In any educational program, there are several components involved, which include teachers, students, study material, school organization, environment, socio-economic factors, parents, etc. Each of these components contributes to the educational process in some form or the other. Evaluation of an educational program basically assesses how each of these components effectively contributes to the success of an educational program. The evaluation is done to find out how each of these components can collaborate in a better manner to achieve the stated goals and objectives of the educational program. Evaluation is not only important from the point of view of the teachers but also plays an important role in defining and stating the roles of each of the individual components of an educational system or program.

4.2.1 Process of Evaluation

The following is the process of carrying out evaluation of an educational program:

- Choose the evaluation tools
- Develop the evaluation questions and techniques
- Collect the required data
- Analyse the collected data

In any educational set up, the following are the reasons why evaluation is considered essential:

- Evaluation is required by classroom teachers, supervisors as well as administrators in directing and guiding the process of teaching and learning.

- Evaluation is needed to test the validity and reliability of the instructions.
- Evaluation helps to develop effective instructional materials.
- Evaluation also helps to bring about improvement in the medium and methods of instructions.
- Evaluation is a method using which the teachers can know the educational needs of the students.
- Evaluation is a motivation for the students to study.
- Evaluation also helps the parents in understanding the growth of the students and the interests and the skills of their children.
- Evaluation is a means of achieving cooperation between the teachers and the parents, wherein both work for the betterment of the students.

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The process of evaluation is equally important when it comes to distance education. Distance education is characterized by geographic separation of the instructor and the student, which means there is no interaction between the students and the instructors for long time periods. The learning materials are also provided to distance learners in the form of print materials or audio visual materials. It is up to students on how they make use of the learning materials to learn in an effective manner. Another main feature of distance education is the fact that it embodies the concept of self-learning or self-study. This therefore implies that there are no defined rules as to what a student needs to achieve or learn in a specified time period. Therefore, to know whether the distance education course has been effective or not, it is essential to evaluate it from different perspectives.

In distance education, evaluation is considered a process which determines the quality of education and learning. The evaluation process in distance education encompasses analysis, research, studying, critical thinking, examination and attributing a value to each of the components of the distance education process. The various components of the distance education process include the learners, the instructor or the counsellor, the learning material as well as the support services. The process of evaluation is done for each of the components involved. The process of evaluation in distance education is a complex one and makes use of several methods and techniques.

The process of evaluation begins with the selection of the components that need to be evaluated. It is essential to identify the components that would be included in the evaluation process. Once the component to be evaluated has been selected, it is essential to know how the component contributes to the achievement of the distance education course goals that have been stated.

The next step is to determine the other components that collaborate and are affected by the selected component. It is also necessary to know how the selected component and the related components work or function in the distance education system. The next step is to know the conditions in which the component works or functions and the resources it needs to achieve the stated functions. The process of evaluation also requires the outcomes of the program to be stated. In other words,

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the outcomes of the distance education program must be known so that its effectiveness can be measured.

The next step in the evaluation process is the definition or the development of the evaluation process. To develop the evaluation process, the specific tasks and goals of the distance education program need to be defined. Next, the goals and sub-goals of each of the selected tasks need to be defined in terms of three levels—attitude, knowledge and the skill. The tasks or the goals are organized in a logical manner which basically depends upon how these goals or tasks help in the achievement of the stated attitudinal, knowledge and skill development goals. These goals are then analysed on the basis of several features that are important for such tasks.

Once the attributes for the tasks of the components have been defined, the evaluation methods can be applied to these to know whether the specified goals and tasks have been achieved or not. In other words, different evaluation techniques can be applied to know whether or not the various components of the distance education program have performed as per their knowledge, abilities and skills or not. The techniques of evaluation used include both qualitative and quantitative assessment techniques and a combination of both. The result of the evaluation process depends upon the validity of the data collected and the manner in which the analysis has been conducted.

Kaufman presented the Organizational Elements Model that provides a perspective in the different elements or components on the basis of which a distance education program can be evaluated.

These elements are described below:

Organizational efforts: Organizational efforts in the broad sense refer to the inputs and processes. These are the resources and the teaching and learning materials that the organization or the distance learning institution makes available to the learners. The inputs and processes or the learning materials are under complete control of the educator in a distance learning course, and it is the educator who is responsible for making these available to the learners to facilitate learning. The following are the examples of organizational efforts in distance education that can provide a basis for evaluation:

- Interactive classrooms
- Computers
- Resource people
- Community access locations
- Computer bulletin boards
- Video lectures
- Informal discussion groups
- Organization of the curriculum
- Feedback that the learners get from the instructors

In evaluating the organizational efforts, several questions can be asked about them. For example, ‘Was the selected technology appropriate for the learners?’ or ‘Were the learners able to maintain the pace established for the program?’

Organizational results: Organizational results are the products or outputs of the course. The organizational results are the specific achievements and outcomes related with the distance education course. These organizational results for a distance education program can be the completion of the certificate degree, acquisition of certain specific skills and knowledge, attitudes, etc. However, it must be noted here that the organizational results depend upon the organizational efforts that have been put in. The following are some outputs and products which can be used for the evaluation of a distance education course:

- Number of students completing the distance education course
- Number of certificates issued
- The skills, knowledge and attitudes acquired
- Number of students who passed the examinations
- Increased participation by the distance education learners
- Public awareness about the distance education program

Example of questions that can be asked when evaluating organizational results are: ‘How many learners who began the distance education course have been able to successfully complete the course?’, ‘How have the distance learners who have graduated affected the community?’

Societal impact: Kaufman’s model when applied to the evaluation of distance learning programs makes the evaluation process a very expansive one. The model takes into consideration the fact that the individual learner is affected by the greater community. Further, the focus of distance learning shifts from the individual learner to the community and the society at large. The outcomes of a distance education course affect not only the learner who is enrolled in the course but also the society. A distance education program must lead to self-sufficiency of the learner as well as the society. The following are some of the points on which societal impact can be measured:

- New initiatives in the community
- Resolution of the community problem
- Change in the local job market
- New policies by the government agencies

To evaluate the societal impact of distance education programs, the evaluator may ask the following questions, ‘How have the lives of the learners been affected or enriched by the society after the learners have completed the distance education program?’, ‘In what ways is the community now able to adjust to the concept of distance education which is a new form of education?’

The evaluation process in distance education must be learner-centred to a great extent. The evaluation must focus on the fact that the program leads to the development of the learner and has the potential to empower the learners.

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The CIPP evaluation model of evaluation of distance learning programs focusses on the context, input, process and product associated with the distance education program. Each of these aspects of a distance education course is evaluated when the distance learning program and its effectiveness are evaluated.

Context refers to the objectives of the distance education process. The context deals with how the objectives will be defined for a distance education course and how each of the objectives can be responsive to the assessed needs of the distance education learners. The evaluation process analyses each of the objectives to ensure that they help the distance learner fulfill his needs. The process of evaluation also helps in the diagnosis of problems that may be faced in achieving each of these needs.

Input refers to the design of the distance education program. The input refers to all the procedures that need to be developed to ensure that the distance learner is able to fulfill his or her learning needs. Procedures must be formulated so that the distance learning course can be delivered as per the designed strategies, budget as well as schedules. The procedures must be evaluated to know whether the distance education program is being delivered as per schedule or not.

Process refers to all such activities that control and monitor the distance education program. Processes in a distance education program must be evaluated to ensure that the distance education program is being carried out as per the goals and objectives set. The processes must also be evaluated to ensure that there are no deviations in the achievement of the defined goals and objectives.

Product refers to what the distance education program seeks to attain. The products must be evaluated to know the impact that the distance learning program has on the learners and the results that are obtained.

4.2.2 Factors Evaluated in Distance Education Programs

As has already been stated, distance education requires the student to develop a self-learning environment and learn at his or her own pace with almost negligible interference from the teacher or the instructor. The role of the teacher is that of a facilitator who offers help to the distance learner as and when required. Distance education is facilitated by using different types of tools and technologies. When it comes to distance education, as has already been pointed out, there are various facets that need to be evaluated. Some of the factors that need to be evaluated in distance education programs include:

- **Technology:** When evaluating a distance education course, the use of technology needs to be evaluated. It must be evaluated how easily the students make use of the technology employed to impart learning. Distance education courses employ several technologies and ICTs which the learners may not be familiar with. It is therefore, necessary to evaluate the effectiveness of the distance education course in terms of how comfortable the learners are in making use of the technology. The attitude of the learners towards the technology also needs to be evaluated so that it is known whether the learners face any problems in making use of the technology.

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- **Class formats:** The class formats in distance education must also be evaluated. The class formats deals with the lectures, discussions and questions and answers asked in a specific session. Evaluation must be done to test the effectiveness of the class, in terms of whether the students were able to find answers to their problems and whether they were encouraged to express themselves or not.
- **Class environment:** Though distance education classes are not regular classes and are conducted once in a while, it is essential that the classroom environment be made conducive to learning. The class environment must be evaluated to ensure that it enables the learners to learn in an effective manner. If the class environment is not conducive to learning, efforts must be made to bring about the necessary change.
- **Interaction:** Distance education does not foster a lot of interaction of the students and the teachers. However, if interaction takes place between the students and the teachers, quality and quantity interaction must be ensured. In other words, it must be ensured that the students are given enough time to solve their problems and get answers to their queries. The evaluation must ensure that the interaction is of good quality in the sense that it is able to satisfy the distance learners.
- **Content:** The course content for distance education is prepared by experts in a manner which can promote self-learning. The content must be evaluated to ensure that it is relevant to the course that the student has opted for, and also organized in a manner which makes learning easy and effective. The content must also be evaluated to ensure that it covers all the knowledge concepts that are essential for the student to learn in the specific course.
- **Assignments:** Since distance learning courses are meant for developing a habit of self-study, the learning material is full of assignments to enable the learners to know about their progress. Distance learning materials have a lot of self-assessment questions, exercises and activities that not only enable a person to track the progress but also to learn in an effective manner. It is therefore, essential that the assignments are also evaluated to assess their usability, their degree of difficulty and the time required. The assignments must also be evaluated on how the feedback for these needs to be submitted and within what time period.
- **Tests:** Tests in distance education are not regular school or college examinations. Most of the tests in a distance learning environment are conducted as per the demand and the comfort level of the distance learners. The tests may be conducted at study centres or these may be conducted online. In either case, it is essential to assess the tests to know about their frequency, level of difficulty and also to know how many students are expected to pass the test.
- **Support services:** Support services play a vital role in making distance education effective. Support services are offered by the institution to the students to ensure that the learners can learn and access the learning material

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in an easy and effective manner. The support services must be evaluated, so that it is known which services are available to the students and to what extent. The evaluation of support services also helps to know whether these are actually proving useful for the distance learners or not.

- **Student achievements:** The aim of a distance education course is to meet the educational needs of the students who cannot attend regular school and college. Distance education courses are usually learner-centric, and focus on enabling students achieve their educational goals. The student achievements in terms of fulfilment of their educational goals, the attainment of specific knowledge and skills etc., must be evaluated to know if the students have been able to benefit from the distance education program.
- **Instructor:** Though the role of an instructor is that of a facilitator in distance education, yet it is imperative to evaluate the instructor in terms of his or her availability for the students, the contribution to the distance learning course, preparation and enthusiasm as well as his role as a discussion leader. This type of evaluation helps to know whether the instructor is able to perform the stated role in the right manner and whether the instructor is apt for providing support in the distance learning course.
- **Student attitude:** Distance education courses are not meant for everyone, and all students who do not attend regular schools and colleges may not necessarily take up distance education courses. It is essential to evaluate the attitude of students towards a distance learning course in terms of acceptance, enthusiasm and class participation. This type of evaluation helps in knowing whether the students accept distance education as an alternative mode of education or not.

4.2.3 Evaluation Metrics

The following are the evaluation metrics which are used in evaluating and assessing the success of a distance learning program:

The mission statement of the institution: The evaluation of a distance learning program begins at the institutional level. The mission statement of the distance learning institution must specify the educational philosophy as well as the educational goals of the distance learning program. The distance learning program and educational needs must be in line with the mission of the institution. The evaluation of the mission statement of the institution, as well as of each department within the institution that meets the needs of the distance learners must be done to ensure that the distance learning program can be planned and administered in the right manner. The evaluation of the mission statement of the institution must help to know whether the distance learning program fits into the stated mission of the institution and whether the institution is equipped enough to offer the distance learning program. The evaluation of the mission statement of the institution and of the various departments also helps to know whether the institution has the necessary resources to offer the distance learning course or not. This type of evaluation can be conducted at the end of a term or when the students graduate. It can also be done at the completion of a program or even

after two or three years of the course commencement. This type of evaluation helps in the allocation of resources in the right manner.

The needs of the distance learners and their satisfaction: Distance education programs aim at fulfilling the educational needs of the students who cannot attend regular school or college. A distance education program is also required to offer several types of support services to the students to facilitate their learning. The distance learners come from diverse backgrounds and they may be working adults, drop out students or students who have discontinued their education.

In effect, the needs of all the distance learners are not the same and may be diverse. The needs of the distance learners help in framing the right distance education program and so must be evaluated. It is essential to know the needs of the students and evaluate them so that the distance learning program and its activities can be prioritized according to these needs. The aim of the distance learning program must meet the academic, professional as well as personal needs of the distance learners. Student satisfaction must be evaluated to know whether the distance learning program has been successful or not. The satisfaction of a distance learning program is evaluated in terms of student satisfaction of the delivery of the distance education course and whether the student needs have been fulfilled or not. Student satisfaction can be evaluated by using methods like surveys, interviews, and analysing the existing data sources. Student satisfaction also needs to be evaluated to know if the students are satisfied with the instructors and whether enough interaction is being offered or not in the distance learning program. The evaluation of student needs and student satisfaction helps to make the distance learning program even more effective.

The instructional technology used: Distance learning programs make extensive use of technologies to impart instructions to learners. Therefore, it is essential to evaluate the instructional technology to know the effectiveness of the distance education program. The instructional technology must be evaluated in terms of its ease of access, ease of use, the speed, cost, flexibility and also interactivity. The instructional technology used in distance education programs must be easy to access and use. This is essential because not all distance learners may be technology savvy and if this is the case, the distance learners may need to be trained as well to make efficient use of the technology.

Evaluation of the instructional technology must also be done to know whether it can deliver the instructions speedily or not. It is essential for the technology to deliver the learning material to the distance learners at the right time. Cost effectiveness and flexibility are two other metrics on the basis of which the technology must be evaluated. The technology used must be cost effective in the sense that the cost of using and implementing such technology does not exceed the cost of implementing the program. The evaluation of instructional technology helps to choose the technology that facilitates the learning of the distance learners.

The needs of the staff: Distance education though a self-learning mode of education, requires instructors and staff that needs to be present to support students and prevent them from facing any problems. Most of the staff recruited for implementing distance education programs is part time and therefore they have more workload. From

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planning the instruction material to preparing it and also planning a schedule for implementing the distance education program, everything needs to be done by the part-timers. This also means that the staff needs support in terms of technology, incentives and environment so that they can work in a productive manner. It is essential to evaluate the staff needs so that an environment conducive to their working can be created. This in turn helps in the effective implementation of the distance learning course. If the staff needs are not evaluated and assessed before the distance education program is implemented, it may lead to the failure of the program.

Evaluating the distance education program on the above stated metrics is one of the best ways of ensuring that the program can be implemented in the right manner and that quality course material can be provided to the distance learners to meet all their educational, professional as well as personal needs.

4.2.4 Need for Evaluation

Evaluation in a distance education course is essential for the following purposes:

- The evaluation of a distance education program provides feedback, which may be considered essential to improve the quality of the course material as well as the distance education program in general.
- The evaluation of a distance education program provides information which can be used for personal as well as administrative decision-making to improve the effectiveness of the course.
- It helps to assess the needs of the distance learners in a formal and a systematic manner.
- It helps to monitor the quality of the distance education program and make room for improvement as and when required.
- It further also aids in staff development by assessing the needs of the staff.

4.2.5 Types of Evaluation

Evaluation in distance education program can be broadly categorized into the following:

- **Selective evaluation:** This type of evaluation is done before the commencement of a distance education program, to select a candidate and place his or her name on the enrolment list. Before the commencement of the course, selective evaluation is done on the basis of a selection test. During the course, selective evaluation is done to promote the student to the higher level of the course. Selective evaluation eventually helps the student to acquire a diploma or a degree for the course in which he or she is enrolled.
- **Diagnostic evaluation:** Diagnostic evaluation is done to provide information about the achievements of the students. This type of evaluation helps the student to identify his or her weaknesses and strengths. Diagnostic evaluation also helps the student to know about his or her progress in the distance education course. This type of evaluation can be done by the student on his or

her own with the help of self-assessment exercises provided with the learning material or at the end of the term when the student has to appear for a formal examination.

- **Motivational evaluation:** Motivational evaluation is done so that the students can know about their progress and continue learning. When the student gets a positive feedback for the distance education program, he or she feels motivated to continue learning and perform better. However, the feedback must be provided by the teacher in time.
- **Anticipated evaluation:** This type of motivation is used to know about the anticipated results or needs of the distance education program. Anticipated evaluation helps to find out what the students require or need from the distance education course. This type of evaluation helps to identify the future learning needs of the students which helps develop the program.

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CHECK YOUR PROGRESS

1. What is the process of carrying out evaluation of an educational program?
2. What is the first stage of the evaluation process?
3. Define organizational efforts.
4. Define selective evaluation.

4.3 DIFFERENCE BETWEEN EVALUATION IN TRADITIONAL LEARNING AND DISTANCE LEARNING

Traditional teaching or learning involves face to face interaction between the teacher and the students. While conventional learning still forms a major part of the learning and education industry, distance learning is also fast gaining popularity primarily because it is flexible and enables a student to learn at his or her own pace. In conventional learning, students are required to listen to what the teacher has to say and learn what is taught with almost no practical skills and learning. When it comes to distance learning, the students are required to learn on their own and thus, also develop the requisite skills so that the learning can be effective. In conventional learning, the teacher has a major role to play in terms of encouraging the students to learn and also shaping their ideas and thoughts. This is not the case in distance learning where the teacher has no control over the thinking process of the students because the students learn on their own, contemplating on the best methods to learn a particular topic. In conventional learning, textbook learning is given a lot of importance whereas distance learning focusses more on developing the skills and intellect of the student in a more effective manner.

Traditional learning is an essential on-campus and classroom teaching and learning methodology in which students and teachers interact with each other through

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lectures, discussions and study groups. The traditional learning environments are more structured wherein a student knows that he or she has to attend classes, study the prescribed course and appear for exams at the end of the course. Distance learning is not structured when compared to traditional learning. Distance learning materials are delivered through webinars, in print by post or by using various ICT technologies. This also leads to lesser interaction of the students and the teachers. Additionally, the tests for distance education programs are not structured like those for conventional learning.

Evaluation in conventional learning is usually done to know the achievements of the students. Evaluation in conventional learning aims at finding out how much and how well a student has learnt a concept that was taught in the classroom. The evaluation for a conventional learning course takes place usually at the end of a term or at the end of the year in the form of examinations which the students need to take to be promoted to the next higher level.

The conventional evaluation is based on teacher based tests. These are tests that are prepared and generated by teachers who are experts in different subjects. The questions of these tests are usually not multiple choice questions and require the students to write detailed or descriptive answers. These tests are usually time bound and the assessment of the students depends on how well they do in these tests. Thus, the students also focus more on learning from the book rather than developing other essential skills as well. The tests focus more on the intellect of the students rather than focussing on the multiple intelligences that a child may possess.

In the conventional setting, the tests taken by students are evaluated by the teachers and there are no standards of evaluation of a test. Thus, the evaluation may be biased and the child may not be evaluated in the true sense.

A major problem with evaluation in the conventional learning system is that the students who do not perform well in the tests are considered unable to learn, whereas the fact may be that the student can learn better than most of the other students. Further, in conventional learning, practical skills are not given much importance and there is no system by which these can be evaluated.

In a distance learning environment, testing and evaluation is done by the students as well as the teachers. The learning materials of a distance education course are provided with self-assessment questions, activities and exercises. These can be taken by the students at the end of each unit which enables the students to know whether they have been able to learn the concept well or not. In most cases, the activities and projects need to be submitted to the teacher who has to provide a feedback on the same to help students know where improvement is needed. Thus, the evaluation system in distance learning does not completely focus on only the intellectual development but also other skills.

At the end of the program or course, the students may need to appear for an examination which is conducted as per the schedule suitable for the students. Distance learning focusses on the concept of on-demand examinations. Most of these exams are taken online and are multiple choice questions, which the students need to answer by choosing the appropriate answers.

The evaluation of the exams is done by computers, using a set of instructions which also means that there is no bias in evaluating the performance of the students. The results and feedback of distance learning systems are more accurate and provide the students with an accurate analysis of their performance.

In distance education, the focus of evaluation is not just the distance learners but also the faculty, the course material as well as the technology used for facilitating learning. It is essential to evaluate all these components of a distance learning program to ensure that the program can facilitate effective learning. Evaluation of all these aspects also helps in the formulation of a distance learning program that meets the educational needs of the distance learners and uses the right technological aids for the students.

Thus, the differences between evaluation in a traditional learning and distance learning system can be summarized as follows:

- Traditional learning evaluation focusses on the achievements of the students while distance learning evaluation focusses on the overall distance learning program as well as its various components.
- Evaluation in traditional learning is focussed on the assessment of only the intellectual skills while evaluation in distance learning focusses on the development of several skills.
- Traditional learning evaluation requires the students to answer using descriptive and detailed answers, whereas distance learning evaluation is based on multiple choice questions.
- Traditional learning evaluation may be biased whereas distance learning evaluation is free from all types of biases, since there is less interaction between the teacher and the student.
- In traditional learning, evaluation requires the students to make use of paper and pen while in distance learning, evaluation requires the students to make use of computers and several technologies which may sometimes make it difficult for students to take the exam.
- In a traditional learning system, the feedback of the evaluation is delayed, while in distance education, the feedback is received by the students almost instantaneously.
- Evaluation in a traditional setting is more subjective and focusses on how much the student has achieved with respect to his or her knowledge of a particular subject while in distance learning, the evaluation is objective and focusses on how well the student has achieved the educational goals.

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CHECK YOUR PROGRESS

5. How is the role of the teacher different in distance education?
6. Why can evaluation be biased in conventional learning?

4.4 TECHNIQUE OF EVALUATION IN DISTANCE EDUCATION

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Evaluation in distance learning deals with assessing the overall program as well as the various components of the distance education course. Evaluation in distance learning can be summative, formative or a combination of both these types.

4.4.1 Formative Evaluation

Formative evaluation of a distance learning program is carried out at all stages of the program. Formative evaluation is an on-going process of evaluation, which helps to know the level and efficiency of the activities involved at various stages of learning in a distance education program. Formative evaluation helps to know if the distance education program has been successful or not and whether any improvements are required in the program. Formative evaluation gives the administrators a feedback about the effectiveness of the distance learning program. To carry out formative evaluation, data can be collected from distance learners using several methods. The data so collected is analyzed and a result is arrived at to evaluate the effectiveness of the program.

In formative evaluation, the data can be collected from the distance learners using the following methods:

- **Post cards:** Post cards are sent to all distance learners individually. These are pre-stamped and pre-addressed. These can be sent out to the distance learners every week to let them provide their responses to queries and also to share their issues and problems. The issues and problems are usually discussed when interaction sessions take place.
- **E-mail:** E-mails can be an effective way to collect the information related to the distance education program and its effectiveness from the students. Moreover, e-mail is a great way for student-teacher interaction in distance education and therefore enables the teachers to know all about the progress of the program from the students.
- **Telephone:** Student response in terms of the effectiveness of a distance education program can also be elicited by making phone calls to students. Students can be asked open-ended questions, so that they can provide the true feedback related to the distance education program, its progress and effectiveness.

The following are the stages involved in formative evaluation:

- **Design review:** Design review involves evaluating the design of the distance learning program. The evaluation may be carried out by expert designers or people who are familiar with the design of the distance learning program. The design review begins very early in the process of designing the program and continues till the design has been finalized and eventually implemented. The aim of this stage is to improve the design of the instructional strategies of the distance learning program.

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- **Expert review:** The expert review deals with the evaluation of the content of the distance learning program and the various learning activities involved. The aim of this review is to evaluate the appropriateness of the content that the distance learners are using for learning. The review takes into consideration the needs and requirements of the distance learners. The aim of the expert review is to prevent the development of a distance education course that will not work for the target group of learners. The expert review prevents the development of unwanted or unusable content. It also ensures that no important content is missing from the learning material and also prevents all types of content biases. The review also prevents the development team from adapting unacceptable content development approaches to ensure that the content so developed is in line with the course and student requirements.
- **One-on-one review:** In this stage, a team member of the distance education program holds a one-on-one meeting with a member from the group of the target learners. A discussion is held related to a specific module of the course selected as a prototype. This prototype is used to test whether the course will work well using various technologies and whether the students will find it easy to adapt to the course or not. The review helps to evaluate the distance education program in terms of its workability, acceptability and usability. At this stage, changes to the distance learning program can be supported. However, once the project is fully functional, changes may not be possible.
- **Small group review:** In a small group review, the distance education program is implemented in a small group to evaluate the overall program. The data is collected relating to the implementation and the effectiveness of the distance education program by means of surveys, questionnaires and interviews from the students who belong to the target group.
- **Field trials:** Field trials are carried out in an actual setting wherein it is required to implement the distance education program for the actual target group. In this stage, changes can be made to a limited extent but major changes are not supported.
- **On-going reviews:** The need of on-going reviews is felt because the program cannot be complete in itself. In simple terms, on-going reviews are essential to ensure that the program meets the needs of all the learners in an effective manner. The on-going reviews are carried out keeping in mind that the content development and delivery technologies keep changing. An on-going review evaluates the program for completeness and to suggest the need for redesign and redevelopment of the program to overcome its shortcomings.

4.4.2 Summative Evaluation

The formative evaluation of a distance learning program leads to and forms what is called the summative evaluation. Summative evaluation is carried out at the end of the distance learning program. The aim of summative evaluation is to assess the overall effectiveness of the distance learning program once it has been completed by the distance learner. Summative evaluation tries to assess the impact and effect of the distance learning program on the students, the faculty as well as the institution

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that offers the program. Summative evaluation is done to know the outcomes of the distance learning program and to assess whether the program has been able to achieve its stated goals or not.

The steps of summative evaluation include the following:

Identifying areas of concern: As has been stated that summative evaluation is done at the end of a distance learning program to evaluate its effectiveness and outcomes, it becomes imperative to know the various areas on the basis of which the evaluation can be carried out. These areas of concern are usually those components of the distance learning program which contribute the most to the success of the distance learning program. The following are some general areas of concern that may be identified to perform summative assessment:

- **Inputs for the distance education course or program:** The input data may include information related to the budget and the personnel that contribute to the distance education program. These are areas of concern that help in the development of the distance education program and also in the development of the support services as well as the training that may be needed in the distance education program.
- **Outcomes:** Outcomes of a distance learning program can be the performance or the attitude outcomes that need to be evaluated to know the overall effectiveness of the distance education program. Performance outcomes are evaluated to know whether the students have been able to achieve their educational goals or not. The performance outcomes are usually based on the achievements of the students in terms of how much and how well they have learned using the distance education program. Attitude outcomes are also essential areas that need to be evaluated. Attitude outcomes basically evaluate the attitude of the students towards the distance education course and the technology used. The attitude outcomes help to know whether the students have adapted to the distance education course or not in an effective manner. Program outcomes are the overall outcomes of the distance education program that are evaluated in terms of the number of students who have enrolled in the course and the number of students who have successfully completed the course.
- **Implementation:** Implementation concerns need to be evaluated to ensure that the distance education program has been implemented as per the needs of the various stakeholders involved including the students, the faculty as well as the institution. For students, the implementation concerns that need to be evaluated are the ease of use of the course and the technology through which the course is delivered. It is essential that the students are able to easily access and use learning materials. For faculty, the implementation concerns that need to be evaluated include the preparedness of the faculty to deliver distance education and the ease of access to the various technologies that are to be used to deliver the learning material. The faculty must also have access to developmental facilities and must also be rewarded with incentives. These form important implementation concerns as far as the faculty is

concerned and so it is essential to evaluate these. The implementation concerns for the distance learning institution providing the course include the quality of the course offered and the effectiveness of the course. Every distance education institution strives to offer the best quality educational courses to the distance learners to meet their educational needs.

Once the various areas of concern have been identified, an evaluation plan is developed and the evaluation tools for the same are defined. The evaluation of the distance education program is then carried out and the results are documented. The evaluation of each area of concern identified is carried out separately by making use of the evaluation tools. The results of the evaluation are analysed to find out whether the distance education program has been effective or not and to find out deviations in any. In case, deviations are found in any of the areas evaluated for a distance education program, the necessary steps for improvement are carried out.

Summative evaluation can be conducted using two approaches:

- **Criterion-based evaluation:** Criterion based evaluation of a distance education program is carried out to know how well the stated objectives of the program were achieved. Before a distance education program is developed and implemented, the objectives of the program are defined. These objectives state the goals of the distance education program and are stated in the proposal of the program. When criterion based evaluation is carried out, it is these proposed objectives that are taken as standards to measure the effectiveness of the program. Criterion based evaluation is carried out by testing the performance and the achievements of the distance learners. The performance is measured against the stated performance in the objectives to know whether the distance learning program has been effective or not. Once the standard or the criterion has been established, methods of evaluation can be formulated. One of the most effective methods of evaluation used is comparison studies, which compare the performance of the target program with others of the same kind using the same parameters. The comparison study helps to know whether the distance education program has been successful or not.
- **Authentic or alternative evaluation:** Alternative evaluation procedures are those that do not make use of standard performance or objectives to evaluate the distance education program and its effectiveness. The area or the component of the distance learning program to be evaluated is identified and is assessed on various parameters in most cases using comparison studies. This type of evaluation provides a more authentic description of the area which is evaluated. These evaluation approaches do not make use of standardized tests and every time a new test may be developed to evaluate the performance of the distance learning program module or area. This therefore results in a more objective evaluation of the distance learning program.

4.4.3 Qualitative and Quantitative Evaluation

The evaluation of a distance learning program may be done using qualitative or quantitative techniques and tools. Qualitative techniques of evaluation focus more

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on describing the distance education program within the larger context of the educational setting. The qualitative methods of evaluation are more objective and take into consideration the fact that changes may be implemented in the distance education program. The evaluators try to understand the distance education program in greater details and focus on how the program calls for the participation of the key stakeholders, etc. This type of evaluation focusses on the outcomes of each of the components of the program. One of the main features of the qualitative evaluation methods is the fact that they do not rely on predetermined criteria and standards. This therefore, allows for a more accurate and comprehensive evaluation of the distance education program. Qualitative evaluation of distance education programs makes use of tools like:

- Open-ended questions, wherein the respondents are asked to identify the strengths and weaknesses of the distance education program, or to suggest changes or are required to give a feedback on the learner attitude towards the program.
- Observation, wherein the evaluator may observe the group dynamics and thereby seek insights into the distance learning program. The observer can be a participant wherein the evaluator becomes a part of the group being observed or a non-participant wherein the evaluator does not ask questions but observes the behaviour of the distance learners in an interactive session.
- Content analysis requires the evaluator to review the content and evaluate it on the basis of the standard measures offered.
- Interviews can be used as qualitative evaluation tools, wherein the evaluator may interview the students or the faculty and perform the evaluation on the basis of the various responses obtained from them. The interviews may be conducted on a one-to-one basis or in a group depending on the area of concern being evaluated.

Quantitative evaluation involves the evaluation of the components that can be statistically analysed. This type of evaluation requires the evaluator to ask questions related to a specific category. Once the evaluator gets the responses, these answers must be tabulated using a statistical tool and must be analysed statistically to measure the effectiveness of the distance education program. These methods of evaluation are most relevant for evaluating distance education programs, wherein the number of students is very large. However, these methods cannot be applied to distance learning programs where the class size is very small. In addition, only a few facets of the program can be evaluated, which does not give a clear picture or the accurate evaluation of the program as a whole. Quantitative evaluation techniques also require the data collected to be analysed statistically, which can be a cumbersome and time consuming process. Though the chances of error in this type of evaluation are minimal, yet the quantitative approach is not a feasible method for evaluating distance education courses.

Evaluation tips for the evaluator:

- The evaluator must rely on available questionnaires and must not try to re-invent these.

- The evaluator must however make changes in the questions after reviewing them, so that these are relevant to the program or the component being evaluated.
- The evaluator must sequence the questions for the best responses.
- The evaluator must make use of open-ended questions for evaluation purposes.
- The evaluator must not try and be judgemental and must make sure to illicit honest responses.
- The evaluator must build a rapport with the students or the faculty so that they can provide adequate responses.
- The evaluator must make use of the evaluation process to understand the process of learning and teaching.
- The evaluator must try to get positive as well as negative feedback and then evaluate this as necessary.

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4.4.4 System Approach to Evaluating a Distance Learning Program

The distance education program can be viewed as a system wherein the various components collaborate and coordinate to implement the program in an effective manner. As a system, the distance education program can be divided into four components namely input, process, output and impact and it is these components that are evaluated using different techniques and methods of evaluation to assess the effectiveness of the distance education program.

Input evaluation: Input evaluation involves the evaluation of the capabilities of the distance education program, the expertise involved in the process, and also the system design that best meets the needs of the various users. When the input component of the distance education system is evaluated, it requires inputs like the needs of the distance learners, the number of distance learners as well as the cost of the distance learning program. Input evaluation helps in the formulation of a distance education program that can best meet the needs of the various students. This type of evaluation also helps in designing effective learning material and the technology needs to support the program.

Process evaluation: Process evaluation is not limited to evaluating the program when it is being implemented but also focusses on what the distance education system should be doing but is not doing. It provides a review of how all components of the distance learning system are functioning and this further helps to evaluate the effectiveness of the distance learning system as a whole. During process evaluation, the instructor effectiveness is also measured in order to analyse whether the teaching/learning process is meeting the stated goals and objectives or not. Evaluation must also be done for the learner-learner interaction and learner-teacher interaction. This will help to know whether the students are allowed to frequently interact with the teacher or not and is a measure of the efficient functioning of the system.

Output evaluation: Output evaluation is done to know the direct and immediate impacts or effects of the program on the various stakeholders involved. This type of

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evaluation helps to know how much the program was used and whether it contributed to the learners developing some attitudes, skills and knowledge or not. Output evaluation is the measure of the extent to which the program objectives were achieved once it was implemented.

Impact evaluation: Impact evaluation is done to evaluate the impact or the effect of the distance education system or program on the students as well as the society at large. The impact evaluation is carried out by analysing how many needs of the students have been met by the program and is usually done by testing the performance of the students enrolled in the distance education program.

From the point of view of the system approach, the following evaluation strategies can be used by the evaluator to assess the various components of the distance education system as well as the system as a whole:

- **Objective-oriented approach:** The objective oriented evaluation strategy focusses on the extent to which the objectives of the distance education program have been achieved. This approach works best for the distance education programs that have clearly defined and achievable objectives. This strategy however cannot be used successfully for distance education programs which have ill-defined objectives as this causes a problem in measuring learning outcomes.
- **Management-oriented approach:** This evaluation strategy chiefly helps in decision- making related to the program. The main users of this evaluation strategy are the administrators who make policy decisions related to the distance education programs. This approach of evaluation however is of little use to the students or the teachers involved in the distance education process.
- **Consumer-oriented approach:** The aim of the consumer-oriented approach is to develop a program that meets the needs of the distance learners or a program that will be accepted by the distance learners. The main problem with this approach is that it does not take into consideration the individual needs of the distance learners and focusses on the program as a whole.
- **Expertise-oriented approach:** This approach mainly involves the evaluation of the distance learning curriculum by experts. The aim of the approach is to find out whether the curriculum meets the needs and demands of the learners. The evaluator also needs to take into consideration the technology used to implement and deliver the curriculum to the learners.
- **Adversary-oriented approach:** This approach to evaluation takes into consideration the positive as well as the negative feedbacks of the students, as well as other stakeholders involved in the distance education program. The evaluator must take the views of those who support, as well as those who oppose the distance learning program when using this approach to evaluate a distance learning system.
- **Participant-oriented approach:** The participant-oriented approach to evaluation assesses the distance education system for and from the point of view of each of the stake holders involved. This approach makes use of

qualitative methods of evaluation so that the distance education program can be evaluated from different perspectives. If the evaluator finds a common ground for all stakeholders and evaluates the distance education program using this approach, the results of the evaluation are bound to be ineffective and of no use to any of the stake holders.

All the above strategies can be carried out to evaluate the distance education program in isolation or in combination. The main aim of these strategies is to evaluate the distance education program as an open system wherein all stakeholders are free to give their inputs and also expect some specific outcomes from the program. In general, all these approaches require the evaluator to ask questions from the stakeholders involved and then analyse the answers to reach a conclusion. By evaluating the distance education program using these approaches, the external and internal factors affecting the distance education program can be identified.

4.4.5 Interregional Guidelines for Evaluation of Distance Education Programs

The interregional guidelines for the evaluation of distance education programs were framed by the Council of Regional Accrediting Commissions. These guidelines provide a basis to frame a distance education plan. Distance learning institutions also make use of these guidelines to develop an assessment framework to evaluate the distance education programs. These guidelines act as standards on the basis of which any distance education program can be evaluated.

- The distance learning program must be appropriate and in line with the mission and purpose of the institution providing the course: The mission statement is important for the institution in order to frame a distance learning program that can meet the educational needs of the students associated with the institution. It is also important that the students who wish to enrol for the distance education program of an institution meet the requirements stated by the institution and the requirements that an institution expects students to have if they want to be served by the distance learning institution.
- The institute must integrate the planning and expansion of distance education course into its regular planning and evaluation processes: The institution offering the distance learning program must consider it a responsibility to develop and expand the distance education program as and when required. It is necessary that the institution must offer a quality distance learning program to the enrolled students and adequate support to the implementation of the program.
- The institution must integrate the distance learning program into its system of governance and academics: The distance education programs offered by institutions must meet the standards specified for such programs. Moreover, the faculty of the institution must be responsible for implementing the program. It is also essential that the programs be evaluated by the institution at regular time intervals.
- The curriculum of the distance learning program must be competitive enough to be compared to the programs offered in traditional learning: The distance

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learning institution must offer programs in several disciplines. The curriculum of the distance learning course must be defined in a manner that makes the content coherent and competitive. Also the curriculum for the distance learning program must be comparable as well as competitive so that it can be evaluated on the same parameters as traditional learning courses. The curriculum must be supported by sufficient services so that it can be delivered in an effective manner.

- The institution must evaluate its distance learning program in terms of the achievement of the stated goals and also use the evaluation results to bring about improvements in the course: The institution must carry out the evaluation of the distance learning programs as well as the various components of the program including the student performance, the support services offered, the technology that supports the distance education course and the student-teacher interaction. The evaluation must help the institution to ensure that the learning objectives are achieved and in case of problems with the implementation and deviations, if any, can be corrected to improve the program.
- The institution offering the distance education program must have a faculty trained enough to deliver the instructional material in the right manner and must also provide enough support facilities to the faculty: The institution must select the faculty responsible for delivering the distance learning material with care and must also make sure that the faculty is trained enough to make use of the necessary technologies. The faculty must also be provided with support facilities using which the delivery process and eventually the teaching can be made more effective. The faculty responsible for a distance learning program must ensure that the stated goals of the distance education program are achieved.
- The institution offering the distance education program must offer academic as well as support services to the students who are enrolled in the course: The institution in addition to providing learning material to the students enrolled in the distance education course, must also make sure to provide support services to the students to make learning effective for them. The institution must provide the students with information and orientation services, so that the students get an insight into what the distance education program has to offer for them. The students must also be provided technological support from the institution, so that they find it easier to use the various technologies to access the distance education material and thereby improve their learning. The institutions must also be able to handle the grievances of the students related to the course and solve the issues in an efficient manner.
- The institution must provide enough support facilities and services for the expansion of the distance learning program: The institution offering the distance education course must ensure that it has developed a robust and a scalable infrastructure to accommodate a large number of students in the distance education course. The institution must make sure that it can manage as many students who are interested in pursuing a course with the institution as possible.

The institution must provide all the support and services essential for the expansion of the distance education program.

- The institution must guarantee and maintain the integrity of the distance education program it offers: It is essential that the institute offering the distance education program maintain the integrity of the distance education course especially in terms of academic integrity. The institution must ensure that it makes valid and usable learning resources and delivers the learning material using the best tools and technologies. The institution must also make sure that the assessment procedures for students are designed in a manner that enables them to perform well without having to cheat. The institute must also make sure that the student who enrolled for the distance education program is the same one who completes the course and interacts with the faculty and also appears for the online examinations.

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4.4.6 Using Surveys to Evaluate Distance Education Programs

Collecting information and data is imperative for the evaluation of a distance education program. When evaluating a distance education program, surveys can be effective methods of collecting the required data and information which can be analysed for conducting the evaluation. When using a survey as a tool to evaluate a distance education program, it is essential to ensure that the survey is designed and developed in an appropriate manner. The survey design must take into consideration the fact that the respondents understand how the survey operates. It is also essential to ensure that the survey is designed in a manner that makes it respondent friendly, so that the correct data can be collected. The design of the online survey must also take into consideration the fact that many respondents may not have access to the Internet and so the survey must be available in other formats as well, apart from being available in a web friendly format.

The use of surveys for evaluating a distance education program has many advantages. One of the main advantages is that it is the best means of collecting data on a topic of sensitive nature. The use of surveys may result into a more honest feedback from the respondents. Surveys especially when online, are easy to distribute and it is easy to separate the collected data for analysis. Surveys are also time and cost effective means of collecting the necessary data for distance learning program evaluation.

Surveys also have some disadvantages when these are used for evaluating a distance education program. Online surveys may not be easy for all to use, especially for people who cannot access the internet and are not tech-savvy. When using surveys, it is very difficult to separate the responders from the non-responders especially when the sample size is very large.

4.4.7 Evaluating the Effectiveness of a Distance Education Course

A distance learning course is one of the most important components that need to be evaluated because the success of a distance learning program depends on the learning

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material. The learning material must be accessible as well as usable for it to be positively evaluated.

A distance education course is said to be effective and gets a positive feedback in evaluation when it meets the following criteria:

- The distance education learning material is easy to navigate.
- The distance education material provides access to applications that support the content of the learning material.
- The distance education course provides information as to how to contact the instructor.
- The distance education material provides access to links to the learning management system of the institution which offers the course.
- The content of the course is easy and meets the educational needs of different types of students.
- A variety of media can be used to deliver the course material.
- The students can make use of standard online communication tools to access the learning materials.
- The interaction between the students and the instructor is regular and effective.
- The distance learning material provides feedback throughout the course.
- The assignments and the grading system are clearly and concisely defined in the course material.
- The distance learning material allows for the assessment of the skills and the knowledge of students in various ways.
- The course content is logically organized and connected.
- The language in which the distance education course is written is friendly and supportive and enhances the learning skills of the students.

4.4.8 CEIT Model for Evaluating Online Learning Course

To evaluate an online learning course, the CEIT model can be used. This model focusses on Comparisons, Effectiveness, Quality Improvement and Transformation.

The comparison focusses on evaluating the various online learning practices that can best be used to deliver the distance learning program in an effective manner. The comparison helps to improve the online learning course. Effectiveness focusses on the various components and elements that can make the online learning course more effective. Quality improvement focusses on how changes in the online learning course affect the overall online learning program and whether the changes are accepted in a positive fashion or not. Transformation basically focusses on how an online learning program can affect the institution offering such a program.

The CEIT model evaluates the most important components and processes of an online learning program with an aim to bring about changes to improve the program.

4.4.9 Feedback

When the distance learners are evaluated in a distance education program, they need instant feedback so that they can stay motivated and even incorporate changes to improve their performance and learning in distance education. The following are some techniques that can be used to provide prompt feedback in a distance learning program:

- The evaluator must make use of acknowledgement in feedback wherein the distance learner needs to confirm or assure that he or she has received the feedback.
- The evaluator must provide feedback which is informational in nature.
- The evaluator must ask questions to learners and encourage them to find solutions to the given problem instead of giving the stated answers.
- The evaluator must design assignments that require distance learners to give feedback to each other.
- The evaluator must selectively evaluate discussions.
- The evaluator must provide a summarized feedback.
- The evaluator must set clear feedback expectations.
- The evaluator must have access to the specific tools and technologies to evaluate.

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CHECK YOUR PROGRESS

7. List the different modes of collecting data in formative evaluation.
8. State the significance of on-going reviews.
9. What is a criterion-based evaluation?
10. What is the focus of qualitative techniques of evaluation?

4.5 SUMMARY

- Like for any education method, evaluation is also considered important for distance education. Evaluation in distance education is however a complex and complicated process that must be carried out in a systematic manner.
- Distance education makes use of formative as well as summative assessment to evaluate the distance education program and not the student alone. Distance education entails the students assessing themselves by attempting the self-assessment questions and exercises, which are provided to them in the learning materials. Thus, students can keep a track of their progress. For evaluation, distance education makes use of qualitative as well as quantitative techniques, though the results of the qualitative techniques are considered to be more appropriate.

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- Distance education uses evaluation as a tool to assess the various components and elements which include the distance learners, the faculty, the study material, the ICT used as well as the program itself. The aim of evaluation in a distance learning program is to check whether the program has been successful or not and whether the program has been able to achieve its aims and objectives that were stated when the program was incepted.

4.6 KEY TERMS

- **Selective evaluation:** A type of evaluation that is done before the commencement of a distance education program, to select a candidate and place his or her name on the enrolment list.
- **Diagnostic evaluation:** Evaluation carried out to provide information about the achievements of the students. This type of evaluation helps the student to identify his or her weaknesses and strengths.
- **Motivational evaluation:** Evaluation that is done so that the students can know about their progress and continue learning.
- **Anticipated evaluation:** A type of motivation that is used to know about the anticipated results or needs of the distance education program.
- **Formative evaluation:** An on-going process of evaluation, which helps to know the level and efficiency of the activities involved at various stages of learning in a distance education program.
- **Summative evaluation:** Evaluation that is carried out at the end of the distance learning program. The aim of summative evaluation is to assess the overall effectiveness of the distance learning program once it has been completed by the distance learner.

4.7 ANSWERS TO ‘CHECK YOUR PROGRESS’

1. The following is the process of carrying out evaluation of an educational program:
 - Choose the evaluation tools
 - Develop the evaluation questions and techniques
 - Collect the required data
 - Analyse the collected data
2. The process of evaluation begins with the selection of the components that need to be evaluated. It is essential to identify the components that would be included in the evaluation process. Once the component to be evaluated has been selected, it is essential to know how the component contributes to the achievement of the distance education course goals that have been stated.
3. Organizational efforts in the broad sense refer to the inputs and processes. These are the resources and the teaching and learning materials that the

- organization or the distance learning institution makes available to the learners.
4. Selective evaluation is done before the commencement of a distance education program, to select a candidate and place his or her name on the enrolment list. Before the commencement of the course, selective evaluation is done on the basis of a selection test. During the course, selective evaluation is done to promote the student to the higher level of the course.
 5. In conventional learning, students are required to listen to what the teacher has to say and learn what is taught with almost no practical skills and learning. When it comes to distance learning, the students are required to learn on their own and thus, also develop the requisite skills so that the learning can be effective. In conventional learning, the teacher has a major role to play in terms of encouraging the students to learn and also shaping their ideas and thoughts. This is not the case in distance learning where the teacher has no control over the thinking process of the students because the students learn on their own, contemplating on the best methods to learn a particular topic.
 6. In the conventional setting, the tests taken by students are evaluated by the teachers and there are no standards of evaluation of a test. Thus, the evaluation may be biased and the child may not be evaluated in the true sense.
 7. In formative evaluation, the data can be collected from the distance learners using post cards, e-mail and telephone.
 8. The need of on-going reviews is felt because the program cannot be complete in itself. In simple terms, on-going reviews are essential to ensure that the program meets the needs of all the learners in an effective manner. The on-going reviews are carried out keeping in mind that the content development and delivery technologies keep changing.
 9. Criterion based evaluation of a distance education program is carried out to know how well the stated objectives of the program were achieved. Before a distance education program is developed and implemented, the objectives of the program are defined. These objectives state the goals of the distance education program and are stated in the proposal of the program. When criterion based evaluation is carried out, it is these proposed objectives that are taken as standards to measure the effectiveness of the program.
 10. Qualitative techniques of evaluation focus more on describing the distance education program within the larger context of the educational setting. The qualitative methods of evaluation are more objective and take into consideration the fact that changes may be implemented in the distance education program.

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4.8 QUESTIONS AND EXERCISES

Short-Answer Questions

1. Why is evaluation essential in education?
2. State the process of evaluation in distance education.

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3. What are the five elements of evaluation in distance education?
4. What are the various factors or components that need to be evaluated in distance education?
5. List the evaluation metrics used in distance education.

Long-Answer Questions

1. Explain the categories of evaluation in distance education.
2. Write a note on the differences between evaluation in conventional learning and evaluation in distance learning.
3. Explain formative evaluation in detail.
4. Write in detail about summative evaluation.
5. Explain in detail the system approach to evaluation of a distance learning program.
6. Describe the interregional guidelines for evaluation of distance education.

4.9 FURTHER READING

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UNIT 5 CONCEPT AND IMPORTANCE OF COUNSELLING IN DISTANCE EDUCATION

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Structure

- 5.0 Introduction
- 5.1 Unit Objectives
- 5.2 Counselling in Distance Education
 - 5.2.1 Qualities of a Counsellor
- 5.3 Quality Assurance in Distance Education
 - 5.3.1 The Process of Accreditation
 - 5.3.2 Challenges of Maintaining Quality in Distance Education
- 5.4 Role of Distance Education Council, IGNOU
- 5.5 The Distance Education Council of India Bill, 2014
- 5.6 Summary
- 5.7 Key Terms
- 5.8 Answers to 'Check Your Progress'
- 5.9 Questions and Exercises
- 5.10 Further Reading

5.0 INTRODUCTION

The process of counselling involves the establishment of a relationship between a counselee and a counsellor, in which the latter has to help the former solve a problem. Counselling is also considered necessary in education because students face several problems when they come to school, college or universities. These problems may be related to their education, personal life or career choices. Students need help so that they can take the right decisions related to their education and vocational life and can also adjust to their environment.

In distance education, counselling plays an important role. Distance education is characterized by little or no interaction between the learners and the students, which may make the learner feel isolated. In such a case, the learner may even lose the motivation to continue the course and drop out from the course. Counselling in distance education is conducted by academic counsellors to provide interaction for the distance learners so that their feeling of isolation is reduced.

Counselling in distance education can be done face to face or by using the various information and communications technology. In either case, the aim must be to help the distance learner stay motivated by addressing the problems of the distance learners.

Quality assurance is one issue in distance education that needs to be addressed, so that distance education institutions can provide quality programs to the enrolled students. It must also be ensured that only accredited courses are made available to the distance learners.

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5.1 UNIT OBJECTIVES

After going through this unit, you will be able to:

- Discuss the importance of counselling in distance education
- Explain process of counselling in distance education
- Elaborate on the qualities of a good counsellor
- Describe how quality assurance can be achieved in distance education and its importance
- Assess the role of IGNOU in distance education
- Analyse the Distance Education Council of India Bill, 2014

5.2 COUNSELLING IN DISTANCE EDUCATION

Counselling is a formal process which aims to help a person who requires it and tries to provide solutions to the stated problems. The process of counselling is an interactive process between a counsellor and a counselee. Counselling entails the counselee and counsellor to discuss problems and then arrive at a solution for the same. In this process, the counsellor encourages the counselee to focus on the problem to get an insight into the problem and then find ways of dealing with the problem. Therefore, in the process of counselling, the counselee plays an active role and tries to reach solutions to various problems with the assistance of the counsellor. The role of the counsellor is limited to providing support to the counselee as and when required.

Counselling may be needed by people for various reasons and counselees are people from all walks of life. Over the last few years, counselling has also become an important area in the field of education. It is believed that students need counselling to realize their full potential and to perform well in their educational as well as vocational life. Counselling in education does not focus only on the educational needs of the students but also focusses on the personal, social and vocational needs of the students. Counselling guides the students to adjust to their education, personal, social as well as vocational life and environment.

Counselling is required by students at all levels of education, with the need being more at the primary and higher level of education. At the elementary level, counselling is not needed to a great extent because students have just entered school and are trying to settle into the educational environment. At the primary level of education, counselling can play a major role in enabling students adjust to the environment around them.

When students reach the primary level of education, they are usually in their adolescence and may experience several changes physically as well as intellectually. The students may look more for approval from the parents, teachers and their peers. Further, at this stage the pressure of doing well in the education sphere is more. Some students may not be able to deal with all such changes and pressures and therefore may show behavioural and adjustment problems. This is where counselling is required by such students. The counsellor helps the students to get insights into their strengths and weaknesses and their skills and aptitudes. On the basis of the positive feedback from the counsellor, students try to bring about changes in their behaviour to adjust to the educational and social environment. Thus, the aim of counselling at the primary level is to help students adjust to the educational, personal and the social environment.

At the higher level of education, counselling is needed to enable students to adjust not only to their educational but also their vocational environment. At this level of education, students are often confused as to the choice of subjects and courses. Counselling helps the students identify the areas of their interests and skills and thus choose the right course. Counselling also prepares students for the vocational choices ahead. At this level of education, counselling provides the students with the necessary information about the various career options available and the requirements for these careers. The process of counselling enables the students to choose a career of their choice so that they can generate income for themselves. Counselling also helps the students acquire the required information about the various colleges and universities they can join for pursuing their higher studies. The process of counselling at the higher level of education, therefore, helps students to make the right course and career choices.

Distance education is a form of education where the students and teachers are separated geographically. In this mode of education, the students learn on their own with little or no support from the teachers. Distance education has several advantages over the conventional model of education. Distance education offers flexibility which allows students to study at their own pace and according to their needs. In distance education, the autonomy is with the learner who is solely responsible for what and how he or she learns. With distance education, it is possible for almost any person to fulfil his or her educational needs. The distance learners can be from any sphere or walk of life. Distance education is also characterized with very less interaction between the students and the teachers as well as between the various learners of the same course. The concept of distance education is increasingly becoming popular with an increase in student enrolment by a significant margin. The fact that the distance learning method is a self-mode of learning does not however mean that the distance learners do not face problems and do not need counselling.

Counselling is as important and as much needed in distance education as in the conventional education system. The very fact that distance education learners learn in isolation is an issue that gives rise to the need of counselling in distance education. The distance learner enrolls in a course because he or she is motivated to learn. However, the student when learning in isolation may need to contact someone for help or may need human support to stay motivated in order to learn in an effective

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manner. Distance education learners learn in a flexible environment, which means that the learners may also be engaged in other activities. They and may even have prior commitments, which means that they may not be able to complete the course content within the specified deadlines. Further, a distance learner may not have any prior educational experience, making it difficult for the learner to learn effectively.

A distance learner may need a lot of support and help when he or she is learning, so that problems and obstacles can be overcome. Distance education learners are expected to be mature and essentially motivated to complete the stated course. This however does not mean that they may not face problems at the educational, personal and vocational front when pursuing the distance education course. There are several problems that a distance education learner may face. The distance education learner is given freedom to learn at his or her own pace. This in itself may be a problem for the learner, who may not be able to manage time. Distance learners may usually need to deal with emotional, educational and social stress, which can be handled by means of counselling.

Educational stress arises from the fact that distance education learners have to manage and take responsibility of their learning and learning associated activities. Distance learners work and learn in isolation and so may have to deal with various problems that lead to educational stress. These problems may include:

- The distance learner may not be able to meet deadlines for submission of assignments and projects. This is because the distance learner may have prior commitments and may not be motivated enough to complete the assignments in the given time.
- The distance education learner, as has already been stated, can be any person who may not have any educational background and so may face problems when writing assignments or when appearing for exams.
- Distance education learners work in isolation and may not be able to work effectively when it comes to group activities. They may face problems cooperating with the group.
- The distance education learner acquires knowledge in a flexible environment and according to his or her wish, which may not enable the distance learner to develop good study habits.
- The distance education learner gets all the distance learning material at the door step or via e-mail and so may not have any idea about how to use a library. In other words, the distance learner may not be able to find references for the various subjects that he or she is studying, thereby limiting his or her knowledge to the learning material alone.
- Distance learning makes use of self-assessment and projects that the learners have to submit at the stated time. In most distance education programs, these assignments, projects and activities are the means of assessing the learner as examinations are not conducted for these programs. Thus, a distance learner may not know how to prepare for exams and how to take exams when the need arises.

- The distance learner acquires knowledge from the comfort of his or her home or office and may not be able to relate to the campus environment.
- Distance learning makes use of several techniques and technologies for enabling the student to learn. However, it is not essential that all students adapt to the technology and learn effectively using them. A distance education learner may not be familiar with other methods of learning apart from the print material.

Social stress may be experienced by distance learners simply because they work in isolation from others. Distance learning does not involve a lot of interaction of the students with teachers and other learners as well, which means that the distance learners may not be able to develop relationships with lecturers, other learners and peers. This also implies that distance learners may not have developed the essential communication and interaction skills. Distance learners usually access the study material from home or office, which means that there can be disturbances and problems in time management. The distance education learner may also not be able to develop an interaction with the support staff that helps him or her in solving any problems related to the distance learning course.

Emotional stress is another area that distance education learners may need to deal with. Since distance learners may learn from home, they may develop emotional stress as to manage their other responsibilities and learning simultaneously. Since, distance learning students learn in isolation, they may develop poor self-concept and study habits. These learners may even lack the discipline essential to learn in a self-learning environment.

The above stated problems may not enable a distance education learner to cope with the program and the learner may be forced to discontinue the course. Therefore, to ensure that the distance learner keeps on learning in an effective manner and copes with the distance education course, it is essential that counselling services be made available to distance education students as well.

Counselling in distance education is usually offered by academic counsellors who bridge the gap between the learners and the institution that offers the distance education course. The aim of academic counsellors is to help the distance learners become effective learners by dealing with their problems and helping them overcome stress. The academic counsellor may offer three types of counselling to students. These include the following:

- **Educational or academic counselling:** Educational counselling is the form of counselling that helps the distance learners to overcome their educational problems. Academic counselling aims at helping the distance learner to make the most of the educational opportunities and also enables the learner to cultivate the right discipline and study habits to learn in an effective manner. This type of counselling helps the learner overcome all sorts of educational problems that may be faced when pursuing a distance learning course. Educational counselling also helps learners adapt to the different teaching methods used in distance education and helps them stay motivated to learn.

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- **Vocational counselling:** Vocational counselling is also needed by distance learners so that they can pursue a career of their choice, vocational counselling enables a distance education learner to choose the right job as per the interests and abilities of the student. Distance learners who undertake technical and vocational distance education programs also need counselling to ensure that they have chosen the right course to get a job in the area of their choice. Vocational counselling helps the distance learners to develop skills which are needed to sustain in the job or the profession of their choice.
- **Personal-psychological counselling:** Personal-psychological counselling is the type of counselling required by the distance learners so that they can adjust to the distance learning environment. It enables the distance learners to cope with their pace that they have set for self-learning. This type of counselling also helps the distance learners to overcome their barriers to interpersonal communication. In simple words, the personal-psychological counselling enables learners to adjust to the distance learning program mentally as well as physically.

The counsellor who counsels the distance education learners must offer the following services to the learners:

- **Orientation services:** Orientation services enable the distance learner to get familiar with the distance education institution and the course to which he or she is enrolling. It enables the distance learner to get the necessary information related to the key players in the distance education course like the co-ordinators, the learning material as well as the technologies that will be used to deliver the learning material. These services enable the distance learners to adjust to the program mentally and emotionally. Orientation services enable the distance learners to adapt to the distance learning environment. Orientation services also help the learner know about the courses in which he or she can enrol and acquire related information about the course.
- **Information services:** Information services are rendered by the academic counsellor in distance education so that the learners can be provided all the necessary information related to distance education programs as well as the institutions offering these programs. These services increase the knowledge and awareness of the distance learner related to the programs. These services also help the learner take the right decisions related to the course, which they can choose. Information services provide information like the available curriculum, characteristics of different tertiary educational programmes, correspondence schools, cost of part-time tertiary education or alternative sources of finding ones education such as grants and scholarships. The academic counsellors also provide occupational information to the distance learners. The occupational information provides the distance learners with information related to all types of career options available, and associated information so that they can pursue the right career after they complete the distance education program.

- **Referral services:** Academic counsellors who counsel distance education students must have the essential skills and must be able to refer the student to another counsellor if he or she feels that the student needs specialized help or counselling.
- **Placement services:** The distance education learners must also be offered placement services. The counsellor must help the distance learners get placement in the profession of their choice. Placement services are offered by the academic counsellors to ensure that the right students are placed in the right courses, so that the distance learners are able to get the right types of jobs. This may also require the counsellor to perform assessment of the skills and the knowledge of the distance learner so that the placement can be done in the right manner.
- **Record keeping:** The academic counsellor is also required to maintain records of the distance learners along with their complete information and achievements. These records help the counsellors to ensure that the distance learners are learning in an effective manner and progressing in the right direction.
- **Counselling services:** Counselling services may be provided by the academic counsellors so that the distance learners can adjust to the distance education program in the best possible manner. The counselling services may be offered to help the distance learner adjust to learning in isolation or these may be offered to enable the distance learner adapt to the various technologies that are used in distance education programs in an efficient manner. Counselling services help the distance learners to perform well in the course and also help learners feel comfortable with this mode of education.

The activities involved in counselling distance learners include the following:

- **Informing:** Informing is an activity that involves providing accurate and necessary information to the distance learners. These activities are independent of the learner and it is essential to provide the appropriate information to all distance learners without bias and discrimination.
- **Advising:** The distance learner may have several queries and problems and it is the job of the counsellor to provide the best advice or suggestion to the distance learners. Advising entails helping the distance learners take the best decision related to the course.
- **Counselling:** Counselling helps the distance learners to understand their needs and motivations related to the course. Counselling enables the distance learners to take right decisions about themselves.

Counselling for distance learners is required for the following reasons:

- Counselling helps the distance learners solve their academic problems and clear all doubts they may have related to any subject.
- Counselling helps the distance learners get an insight into their academic abilities.

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- Counselling helps the distance learner to know about his or her interests and motivations.
- Counselling enables the distance learners to interact with the counsellor and even with other learners, which helps to reduce their feeling of isolation.
- Counselling enables the distance learners to learn how to make use of the various technologies as well as learning material.

There are several support mechanisms that the counsellor may make use of when counselling distance education learners. These include the following:

- Self-learning materials are used by the counsellors to help the distance learners know about the course structure, and what they are going to learn during the program. These materials are also used as a means to assess and evaluate the performance of the distance learner, so that the counsellor can know whether the student is progressing in the right direction or not. Self-learning materials are designed in a manner which makes learning easy and effective for the distance learners.
- Counselling sessions are arranged at the study centres so that the distance learners can have face to face interaction with the counsellors and other learners as well. The counselling sessions are usually conducted by an academic counsellor so that they can help the distance learners identify and overcome the problems faced in the distance learning program.
- Assignments are formative evaluation tools used by counsellors to know the performance of the distance learners. Assignments are required to be submitted by the learners and the counsellors are required to provide a feedback which enables the learner as well as the counsellor to determine whether the distance learner is motivated enough to learn in an effective manner or not.
- Interactive radio counselling is used by counsellors when the distance learners come from remote areas and cannot attend the counselling sessions at the study centres. This type of counselling is conducted for a group of distance learners who face similar and general problems related to the distance education course.
- Use of various types of multimedia tools is done so that the learning can be made more effective and interesting for the learners.
- Radio and television broadcasts are used by counsellors to conduct one way counselling for the distance learners. This type of counselling primarily involves providing information services to the learners so that they can make the right choices with respect to the course they are enrolling in.
- Teleconferencing is used for conducting one way or two way interactive sessions with the learners. During the interaction, the counsellors address the various general as well as specific problems of the distance education learner. This type of activity ensures that the learners can overcome their feeling of isolation when it comes to learning.
- Projects are often given to distance education learners so that their interaction with the supervisors and instructors can be increased. Most of the projects

need to be undertaken at the study centres wherein the students can make use of the various support services that are provided to make learning more effective for them.

- Practical sessions are also conducted for distance learners by the counsellors. In these sessions, the distance learners are required to perform the activities related to the distance education program. The main aim of these sessions is to make learning interesting for the distance learners and to keep them indulged in the learning process. These sessions reduce the feeling of isolation of the distance learners and also enable them to get a feeling of a classroom environment wherein interaction takes place between the counsellor and the students.
- Skill development centres are special centres where the distance learners pursuing vocational courses are required to perform activities to develop the necessary skills to learn in an effective manner. These activities are performed under the guidance of the supervisors and the mentors who help the distance learners perform the activity in the right manner and develop the right set of skills.

Counselling adds to distance education the much needed human element. Although, counselling sessions are conducted for distance learners these are not made compulsory for them keeping in mind the fact that some distance learners may lack the resources to attend these sessions. However, these sessions prove to be very beneficial for the learners as they are encouraged to interact with others and overcome their apprehensions about the chosen distance education program.

Counselling for distance education learners can take the form of face to face counselling or it can be conducted from a distance by using communication and technological aids. Using communication tools and technologies, counselling can be conducted using audio or visual aids. Interactive counselling using the various communication tools in distance education can either be synchronous or asynchronous. Asynchronous counselling is provided at a time which is not a part of the study schedule of the distance learners. Thus, in asynchronous counselling, there is a time gap between the responses of the counsellor and the distance learner. E-mail is one of the most commonly used communication tools for asynchronous counselling. Using email, the distance learners post their queries to the counsellors who respond to the query in an appropriate manner at a later date or time. Asynchronous counselling is therefore not real time counselling.

Synchronous counselling is real time counselling, which is often provided to the distance learners at a time which forms a part of their study and scheduled sessions. In synchronous counselling, there is no or little delay in the response of the counsellors and the learners. Teleconferencing and online chat are two most commonly used methods of synchronous counselling in distance education programs. This type of counselling is also more interactive in nature and requires the distance learner as well as the counsellor to take active part in the counselling session.

Although distance learning institutions make every possible effort to provide counselling and support to the distance learners, there are some problems that

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occur when it comes to counselling for distance education. These include the following:

- The distance learners do not attend the counselling sessions because they either lack the resources to attend the session or they do not have the time to attend the counselling.
- The distance learners may not find the counselling sessions useful and interesting.
- The distance learner may be used to the self-mode of study and may feel that he or she does not require counselling in any form.
- When attending the counselling sessions, learners may not be able to communicate with the counsellor because they are not used to interacting with others in this mode of learning.
- In most counselling sessions, the counsellor may not be able to overcome biasness and also may lack the required skills to counsel distance learners.
- The counsellor may not maintain the counselling session as an interactive session and may revert to the use of lectures, focussing more on what he or she wants to say instead of what the distance learners have to say and the problems they need solutions to.
- Counsellors expect the distance learners to be mature and therefore have lots of expectations from them. Counsellors when conducting counselling sessions, often forget that the learners are from different backgrounds and some of them may even lack basic education.
- In most cases, the counsellors complain that they do not have sufficient time to resolve the problems of each learner, which makes the counselling session ineffective.
- Many counsellors do not evaluate the assignments submitted by distance learners on time. Further, they do not provide accurate and honest feedback to help the distance learners to improve their performance.
- For a counselling session for distance learners, there needs to be a specific number of learners present, and in most cases the number of people attending the session is very low. This in many cases, results in the suspension of regular sessions, which further lowers the motivational level of the learners.
- Counselling in distance education is usually conducted for courses wherein there are a large number of students enrolled, or courses which are popular ones. For distance education programs that are not very popular and are conducted for a very short duration of time, counselling sessions are not conducted, which makes the distance learners uneasy about enrolling into the course.
- The academic counsellors who conduct counselling for distance learners, have very little interaction with fellow counsellors as well as the faculty of the institution offering distance education courses and therefore may not be familiar with the mission and goals of the institution. This also implies that the counsellor may not be able to provide effective counselling to the students.

The counselling techniques used in distance education can be many and they may vary from one institution to another. The type of counselling technique primarily depends on the distance between the counsellor and the learners, and on the type of information that needs to be shared. The counselling technique also depends upon the communication technology available for conducting the counselling session.

The following counselling techniques are used for distance education learners:

- **Face-to-face counselling:** This is the most important technique used for the counselling of distance education learners. Face-to-face counselling requires the counsellor and the learner to meet in person. This can involve individual counselling, where the problems of an individual learner are solved by the counsellor. Face-to-face counselling can also take the form of group counselling, wherein the counsellor interacts with a group of distance learners and discusses general issues that concern the entire group of learners. This type of counselling is considered to be the most effective, as it helps the learner discuss the problems with the counsellor in person. However, face-to-face counselling can be expensive in terms of the time required to counsel the distance learners and the travel that may be involved on the part of either the learners or the counsellor. Further, face-to-face counselling may not be accessible and possible for all types of learners, especially the ones who reside in remote locations.
- **Telephone counselling:** Telephone counselling may be conducted for distance learners by the counsellors. Telephone counselling can take place in the form of one to one telephone counselling. In this form of counselling, the distance learner gets in touch with the counsellor over a telephone and discusses his or her problems. Teleconferencing is another technique that can be used in telephone counselling. It involves conducting interactive counselling with a group of distance learners. Teleconferencing can be a two-way audio counselling or it can be a one-way video counselling.
- **Counselling using internet and computer:** When the Internet is used for counselling, a counsellor as well as the distance learner needs to access computers and use a telecommunication network. Usually, online discussion is carried out by the counsellors and can be done for several number of distance learners at the same time. E-mail is another method used for counselling using the internet. The distance learners post a query to the counsellor who responds to the query at a later date.
- **Counselling through letters:** The technique of counselling through letters is an old technique but is used by many distance learners who reside in remote locations and do not have access to other means and technologies used for counselling. To respond to the letter of the distance learner, the counsellor needs to read the letter carefully so that he or she can respond to the problem of the distance learner.
- **Counselling through handbooks and manuals:** In distance learning programs, several print materials and manuals are used to make the distance learners familiar with the distance learning program. These are used to address

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the information needs of the students and also enable the distance learners get advice and suggestions related to several aspects of distance education.

Counselling at various stages of distance education program

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Counselling is required at each stage of a distance education program. At the pre-entry stage, distance learners require counselling to meet their information needs. When students enrol in a distance education course, they need information on the courses that they can enrol into. The distance learners need information related to the entry requirements for a particular course. Distance learners also need counselling at the pre-entry stage of distance education related to application and registration procedures of the distance education program. Counselling at the pre-entry stage is conducted by the academic counsellor as well as by the program coordinators.

Counselling at the induction stage of distance education is essential to enable students to receive the necessary information related to the structure, rules and functions of the distance education institute offering the distance education program. At this stage, counselling is also needed to enable the distance learners formulate their goals and specify the objectives they wish to achieve. Counselling at this stage further enables the distance learners to know about the features of the distance learning program and also the study skills relevant for the completion of the distance learning course.

Counselling is also needed by the distance learners during the course of their program. During the course of the program, the distance learners require information about the implementation of the course and the learning materials which will be used. Counselling is needed by the students to track their progress through the course. Counselling also helps the students to overcome personal as well as technical problems that the students may sometimes face during the course of the program. Counselling during the course of the program is provided by written notes, handbooks, telephones and even face-to-face interaction. Counselling during the course of the program further enables the distance learners to prepare for the examinations and assessments so that they can achieve the goals and objectives set for learning.

At the exit stage or at the end of the distance learning program, counselling is needed by the distance learners to get the required information related to certificate or the degree that the students will be awarded. The distance learners are also provided information related to additional study options available to them. Counselling at this stage thus prepares the students for higher education as well as vocations that the distance learners may be interested to pursue. This type of counselling is provided either face-to-face or is provided by using telephones and other communication tools and technologies.

Box 5.1: Modes of Counselling Available at IGNOU

Indira Gandhi National Open University provided counselling to its distance learners to enable the learners:

- To know about their goals and objectives related to distance education
- To know about the areas of their interests so that they can choose the right course
- To be familiar with the university and its rules and regulations
- To be motivated to learn effectively

The counselling at IGNOU aims at advising and helping students to take the right decisions related to the specific courses they want to enrol to. The counselling process at IGNOU is carried out to provide information services to the distance learners throughout the program.

The following are the modes of counselling that are made available to students at IGNOU:

- Face-to-face counselling is offered to the distance learners at the study centres that are allocated to them at the time of admission. Face to face counselling takes place in a pre-scheduled manner with the help of the resources available at the study centres. Face to face counselling is usually subject wise counselling which is provided to the students. Usually the face to face counselling is interactive in nature. The counsellors make use of various techniques like brainstorming, discussions, role plays, simulations and games to encourage the participation of the distance learners. Face-to-face counselling is perhaps the best form of counselling available, as it provides almost instantaneous feedback. Videoconferencing is a technology that can be used to facilitate face-to-face counselling of the distance learners. Video conferencing makes use of ICT to facilitate the counselling of a group of distance learners.
- Teleconferencing is also a counselling technique used by IGNOU to offer counselling to distance learners. Teleconferencing provides live interaction between the distance learners and the academic counsellors. At IGNOU, teleconferencing involves interaction through television. IGNOU offers two way audio and one way video counselling to the students to counsel them in various subjects and about various aspects of the distance education course. The students who want to attend the counselling sessions are required to be present at the study centres. The learners can hear and see the faculty on the TV sets provided at the study centres and then interact with the faculty through telephone lines.
- Interactive radio counselling is also practiced by IGNOU. In this type of counselling, experts are invited to counsel the students through radio. The distance learners interact with the expert using telephones to get the answers to their queries. The distance learners can access radios from their homes and so this form of counselling is considered to be one of the best techniques used. The distance learners can thus tune into the radio program from anywhere and talk to the experts using the toll free number provided by IGNOU.
- EDUSAT based counselling enables the distance learners to have two way interactions with the counsellors using the video mode. This type of counselling provided instantaneous response to the distance learners related to their queries about the various subjects and other aspects of a distance education program.

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Box 5.2: Counselling services offered by Netaji Subhash Open University

The following are the counselling and support services offered by the Netaji Subhash Open University:

- Pre-admission counselling
- Induction meeting
- Face-to-face counselling & PCP
- Home Assignment
- Library facility
- Special Lecture Programme (SLP)
- Meet the students' programme
- Video-conferencing
- Audio-video cassettes
- Radio counselling (GyanVani).
- Teleconferencing
- E-mail
- EDUSAT

Ways in which counsellors can encourage students to contact them

The following are some of the ways using which a counsellor can encourage student-counsellor contact:

- The counsellor must encourage the distance learners to contact them through e-mails and private messages.
- The counsellors must encourage face-to-face meetings if they are at the same geographic location as the learners.
- The counsellors must make use of communication and counselling tools that the students are most comfortable using.
- The counsellors must share their views, ideas, values and experiences with the students and encourage them to do the same.
- The counsellors must ensure that the response time to e-mails is minimal.
- The counsellors must appear to the students as warm and welcoming.

5.2.1 Qualities of a Counsellor

An academic counsellor bridges the gap between the distance learner and the institution in which the learner is enrolled. The main aim of the counsellor is to provide a human element in distance education, which is missing in most cases and to reduce the feeling of isolation of the distance learners. In counselling distance education learners, the counsellor plays the following roles:

- **Advisory role:** The main role of the counsellor is that of advising the distance learners. In the advisory role, the counsellor has to assist the distance learner to identify his or her strengths and weaknesses. In the advisory role, the

counsellor provides educational as well as occupational information relevant for the distance learner. The counsellor further advises the students regarding various educational and career aspirations. The task of the counsellor also includes helping the distance learners develop the necessary skills and abilities so that they can adjust to and cope with the distance education program.

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- **Appraisal role:** In the appraisal role, the counsellor assesses and appraises the distance learners. The counsellor not only collects the necessary information related to the distance learners, but also maintains the necessary records of the distance learners in a confidential manner. The counsellor also assesses the skills, knowledge and abilities of the distance education learner and gives feedback as to how improvement can be done.
- **Placement and follow-up role:** In this role, the counsellor helps the distance learners in taking advantage of the educational as well as occupational opportunities available to the learners. Placement services are provided by counsellors to help the learners make the right career decisions. In this role, the counsellor also needs to provide the necessary occupational information to the distance learners.
- **Referral role:** In this role, the counsellor refers the distance learners to specialist counsellors and agencies who carry out special counselling for such learners. This is usually done when the counsellor feels that he does not possess the abilities to counsel the distance learner and offer the required help.
- **Information service role:** In this role, the counsellor searches, collects, manages and disseminates the information which may be required by the distance learners. The counsellors provide the information to the distance learners to help the learners make the right choices at the educational as well as the occupational front.
- **Consultancy role:** In this role, the counsellor consults with the staff and parents to improve the effectiveness of the distance education program. In this role, the counsellor also consults the distance learners on the aspects which need to be improved in the distance education program.
- To provide several services to the distance learners and to perform various roles, the counsellors need to have some special qualities. The following are the qualities of a counsellor.
- **Confidence:** A counsellor must have the confidence to establish the various goals of counselling. The counsellor must develop the confidence to providing counselling to the learners.
- **Sensitivity and trustworthiness:** The counsellor must be sensitive to the needs, values and beliefs of the distance learners. The counsellor must respect the integrity, rights and needs of the distance learners. The counsellor must aim at providing counselling to distance learners in a manner which benefits the distance learner in several ways. The counsellor must also be trustworthy. In other words, he must ensure that the distance learners trust him or her and share and discuss their problems.

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- **Open-mindedness:** A counsellor must be open-minded, which means that he or she must listen to the problems of all distance learners with an open mind without being judgemental. The counsellor must be able to listen to the problems of the distance learners effectively and offer solutions on the basis of the facts collected. This also means that the counsellor must never provide pre-determined solutions.
- **Self-integrity and self-control:** Self-control and self-integrity are important qualities of the counsellor. A counsellor must not let his or her personal opinions, values and beliefs affect the decisions or solutions for a specific problem of the learner.
- **Professional commitment:** A counsellor is a professional who offers his or her services to the learners. The counsellor must be professionally committed to offer his or her services to the distance learners, within the limits of the professional ethics and standards. A counsellor must never try and develop personal relationships with the learner and must keep the relationship strictly professional. The counsellor should in no case practice discrimination or bias when offering his or her services.
- **Communication skills:** A counsellor must possess effective communication skills so that the counselling can be useful and effective. The counsellor must be a good and attentive listener and reader so that he or she can identify the problems that the distance learners want to share. The counsellor must also have good speaking skills and must speak in a friendly tone while discussing problems. The counsellor must also discuss the issues of in a language that is easily understood by the learners.
- **Maintain confidentiality:** Counsellors must always maintain a confidentiality regarding the problems and issues shared by the learners. The counsellor must ensure that the information that the distance learners have shared is in no way accessed by any unauthorized people or by those who do not know how to make use of the information.

A counsellor who counsels distance learners must also be up to date with the various technologies used in the distance education course. The counsellor must also be able to make use of the ICT and other tools that are used for counselling in distance education.

5.2.2 The Process of Counselling in Distance Education

Counselling has been defined as a process wherein a counsellor and counselee develop a relationship for helping the counselee solve his or her problems. The process of counselling is essentially an interactive process which requires the counselee to discuss with the counsellor his or her problems, and the counsellor to provide support and assistance to the counselee to develop ways and methods of solving the problem.

In distance education, counselling is a process that works to help the distance learners solve their several problems by interacting with the counsellor. The process of counselling in distance education can be divided into the following stages and each stage is supported by using ICT tools and technologies:

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- **Initial joining:** This is the stage in which the distance learner first comes in contact with the counsellor. In this stage, the counsellor puts in all the efforts to build a counselling relationship and ensure that the distance learner, who is the counselee, feels at ease and is comfortable discussing his or her problems with the counsellor. In this stage, the counsellor makes every effort to get to know the counselee. In the initial stage, the roles of the counsellor and the counselee are delineated. The counselee may often enter the counselling relationship with a misconception that the counsellor will be able to provide immediate solutions to the problems. The counsellor therefore has to clarify to the counselee about his or her role and tell the counselee that his or her role is to help the counselee express his or her concerns and enable the counselee to get a better understanding of his or her strengths and weaknesses. At this stage the counselee must be clear that the role of the counsellor is not to provide advice or suggestion, but to assist the counselee to find solutions that may work best for him or her. In this stage, the counsellor and the counselee may also decide on the number of counselling sessions that may be required.
- **Beginning the session:** It is at this stage that the counsellor begins to answer the questions to the counselee and tries to find out the problems that the distance learner is facing. The counsellor must try to help the counselee relax and discuss whatever issues are faced by him or her. The aim of the counsellor at this stage, must be to make the counselee comfortable so that the counselee can discuss all his or her problems.
- **Active listening:** This is the stage in which the counsellor needs to listen to the counselee about his or her problems. In this stage, the response from the counsellor must be minimal, so that the focus is on the client and his or her problems. At this stage, the counsellor must encourage the counselee to talk. The counsellor can also make use of questions to get to the cause of the problem. This helps the counsellor to develop an idea about the best ways that can be used to solve the problem of the counselee.
- **Planning goals:** In this stage, the aim of the counsellor is to enable the counselee to discover the various choices that are available for solving the problem. The counsellor helps the counselee set goals that need to be achieved at the end of the counselling session. The aim of the counsellor is to help the counselee develop a positive outlook to the fact that his or her problem can be solved.
- **Ending the session:** Once the goals have been set, the counsellor may end the session. At this stage, the counsellor may decide to end the counselling if he or she feels that the problem of the distance learner has been resolved. The counsellor may even refer the counselee to specialist counsellors for more help. The counsellor may further decide to continue counselling the counselee if it is felt that a few more sessions can help the counselee solve the problem.

Since the mode of counselling plays a vital role in distance education counselling, it is essential that the media be selected in a careful manner. The mode of counselling

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in distance education must enable the distance learner or the counselee to take an active part in the counselling process. Further, the counselling media must be able to present all the information related to counselling to the distance learner in a clear and an unambiguous manner. When selecting the media for counselling, the following factors must be taken into consideration:

- The technology used for counselling must be easy to access for the distance learners. If the distance learners are not able to access the technology which will be used in the counselling session, the counselling session is rendered ineffective.
- The media used for counselling must be flexible; in the sense that the distance learners must be able to make use of the media as per their needs and requirements.
- The cost of the media or technology to be used for counselling in distance education is another factor. It must be ensured that the technology being used is cost-effective.
- The counselling needs that the media can fulfill must also be considered when choosing the media for counselling.
- The counselling strategy also affects the choice of media selection.
- The technology chosen for counselling must be user-friendly and easy for the learners. The organizational structure also affects the choice of technology used for counselling. The technologies used for counselling in distance education vary from one institution to another and therefore must be chosen with care.
- The speed with which the technology is able to provide or disseminate counselling information, must also be considered when selecting the media. It must be ensured that the technology selected is the one that provides information safely and at a fast speed.

CHECK YOUR PROGRESS

1. Why is counselling significant at the primary level?
2. Why is social stress experienced by distance learners?
3. Why is 'vocational counselling' needed by distance learners?
4. What is the appraisal role of the counsellor?

5.3 QUALITY ASSURANCE IN DISTANCE EDUCATION

Distance education is a mode of education that has made access to education easy to a large population. When learners enrol for a distance education course, they have the perception of the course being as good as any conventional course that

they would have otherwise opted for. Distance learners opt for distance education programs because they might not be able to choose regular courses because of several problems. Distance learning promotes self-learning and self-study, which also implies that the learning material in distance education must be of very good quality. Quality is therefore of great importance in distance education programs. Quality in distance education refers to the quality of the learning material as well as the learning process. It may also refer to the quality of the graduates it produces in terms of their skills and knowledge.

When it comes to distance education, quality assurance is considered to be an integral part of this mode of learning. Quality assurance is a systematic process of reviewing the distance education program to ensure that it meets its goals and objectives. Quality assurance also ensures that the distance education program meets the standards that are expected by the learners. In distance education quality assurance helps to ensure that:

- the mission and objectives of the institution are clear and known to all
- the delivery system works effectively and in a fool-proof manner
- the roles and responsibilities of all the components and elements are clear and known
- the review system is in place to check that everything is working according to the plan
- in case of things going wrong or deviations taking place, corrective measures are taken

There are three modes of quality assurance, which are used in distance education programs. These include assessment, audit and accreditation. Quality assurance in distance education is needed to make improvements in the distance education process to meet the needs and changing demands of the internal as well as the external factors affecting distance education.

Assessment is an evaluation system that results in grades. A distance education program may be assessed to grade it in a numeric, literal or descriptive form. For example, assessment of a distance education program may result in it being graded as very good or unsatisfactory. Assessment primarily focusses on the output of the distance learning program and uses the quantitative data to grade the system. The main problem with assessment is that it does not include in it the function of quality improvement, which is one of the aims of quality assurance.

Audit is the process of review of the distance education program to determine if the curriculum, staff and infrastructure can meet the aims and objectives of the program that were stated when the program was developed. An audit chiefly assesses what an institution is doing to achieve the various stated goals.

5.3.1 The Process of Accreditation

Accreditation is the process of external review of a distance learning program to check the quality and standard of the distance learning program. The main aim of accreditation is to check the quality of the distance learning program and bring about

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improvements required in the program. The process involves reviewing the distance education program with respect to standards that have been defined by an external association or body for the distance education program to be termed as a quality distance education program. Usually, a program which has been accredited is considered to be a good quality program. A distance education program that has not been accredited does not get the support of distance learners and ceases to exist after a certain time period.

There are two types of accreditations that are used for distance education programs:

- **Institutional accreditation:** This process focusses on the institution offering the program. Institutional accreditation takes into account factors like the mission of the institution, management, the teaching staff, the learning resources, facilities provided by the institution, student support services, etc.
- **Program accreditation:** Program accreditation is the process which takes into consideration the quality of the distance education program in terms of its educational objectives, curriculum, student services, quality of facilities and the administration of the program.

The process of accreditation can be divided into the following four steps:

- (i) **Development of standards:** The accreditation standards need to be developed by an external regulatory body. The standards can be set for the institution or the program and are applicable to all distance learning institutions and programs. To be accredited as a quality program, the distance education program needs to meet the criteria specified in the standards developed.
- (ii) **Self-evaluation:** Before an external review of the program can take place, the institution is required to self-evaluate the distance education program. The institution offering the distance education program is required to submit a written report related to the various aspects of the distance education program.
- (iii) **External review:** External review is carried out by a team of experts who study the self-evaluation report and perform an assessment and audit of the program before offering the accreditation to the program or the institution.
- (iv) **Accreditation decision:** Based on the review of the self-evaluation report and also the review of the external reviewers, a decision is reached by the accreditors as to whether the institution or the program meets the quality standards and can be accredited or not. The institution or the program can also be placed in probation and may bring about quality improvements before it is accredited.

There are various aspects of distance education that are covered by quality assurance or that need to be of good quality to ensure that the program can be accredited. These include:

- **Quality of the products:** The quality of products in a distance education program may refer to the quality of the learning materials, the number of graduates, the examination pass rate, etc. The quality of products may vary from one institution to another.

The quality of products in a distance learning program depends on the resources available and also the number of students that the education has to serve.

- **Quality of processes:** The quality of processes refers to the quality of teaching and learning processes, the counselling process and also the delivery process of the distance learning program.
- **Quality of production and delivery system:** This refers to the quality of the course production, the delivery mechanism used, use of technologies in the distance education program, etc.
- **Quality of philosophy:** The quality of philosophy refers to the mission statement of the distance learning institution, the educational aims and objectives set by the distance learning program as well as the institutional culture.

The following are the quality assurance concerns in distance education that need to be addressed:

- **Assessing the student-staff ratio:** In a conventional learning system, a teacher teaches a group of several students in the classroom. The student-staff ratio is usually fixed at various levels of education and in various types of subjects. This is however not the case with distance education. Since distance education is a mode of education characterized by the geographic separation of the students and the teachers, therefore, it is not easy to assess the student-staff ratio. Most of the teachers and instructors in distance education are part time faculty members and this makes it all the more difficult to assess the student-staff ratio. The very fact that distance education is a self-learning method of education also implies that some students may not be willing to work with teachers, which also poses a problem in assessing the student-staff ratio.
- **Criteria to be used for assessment and accreditation:** Distance education relies on the use of self-learning materials and ICT for ensuring the effective implementation of the program. The criteria to be used for assessment and accreditation in distance learning are not easy and cannot be spelt out.

One of the main problems in stating criteria for assessment and accreditation is the fact that in distance learning, students take responsibility for organizing learning and controlling the manner in which they learn. Further, in distance education, there are several factors that need to be considered to make learning more effective and it is not easy to develop standards that can take into account all such factors and practices.

- **Defining benchmarks and indicators:** Since there are no specific guidelines as to how the quality of a distance education program can be assessed, it is not easy to define benchmark and performance indicators. There is no benchmark that can define as to what instructional material is considered of good quality. Likewise, there are no performance indicators that can measure the student support services and term them as quality services. In distance learning, there are no defined activities or projects that need to be undertaken

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by the students to set a benchmark of performance. Thus, assessing a distance learning program for quality often becomes difficult.

- **Defining boundaries:** Distance education has evolved as a mode of education that has no defined boundaries. This has become more evident with the use of online distance education courses. There are very few institutions that operate using study centres, since the online availability of courses has decreased the need of physical sites in distance education programs. With this arises the problem of adopting methods to assess the distance education program with respect to the quality of products it makes use of, and the quality of services that it offers.
- **Assessor:** It has been stated that the assessment or accreditation of distance education programs is done by assessors or experts. However, the problem lies in determining whether these experts are to be selected from the field of higher education or from the field of distance education. In either case, it is possible that the experts are not clear about how the institution carries out its distance learning course.

5.3.2 Challenges of Maintaining Quality in Distance Education

Distance education is a mode of education that is used by a large number of learners from heterogeneous backgrounds to meet their educational needs. This mode of education is inherently a self-learning mode, which implies that the learner can choose the place and time of learning. The very basic nature of distance education poses problems and challenges in maintaining the quality of the program. The following are the quality assurance challenges faced by distance education programs:

- **Cost effectiveness:** A distance education program involves a lot of cost in the production and delivery of learning materials using various technologies. It needs to be assured that the outcomes of the program justify the cost involved. A cost-benefit analysis is essentially to be carried out when a distance education program is implemented.
- **Media:** Distance education makes use of several types of media and technologies to support learning for the distance learners. The distance education program, however, needs to adopt a media which is appropriate to the program. The criteria for choosing the appropriate media is not defined, which poses a problem in maintaining the quality of a distance education program to achieve the best results.
- **Support and retention:** Distance education learners come from different backgrounds and with different educational needs. Further, many distance learners may not be motivated enough to learn using this mode of education. It is essential to support the learners in every manner possible so that they can be retained in the course. However, for a distance education institution, it is not possible to develop support services for individual students.
- **Training of staff:** Distance education is a shift from conventional teaching where the teacher used conventional tools like the blackboard and textbooks

to impart instructions to the students. In distance education, the teachers as well as the distance learners need to make use of several tools and technologies to make learning effective. However, many distance learners and the staff may not be able to make use of these technologies in an effective manner and so need to be trained to do so. Technical support is highly required for distance education programs.

- **Testing procedures:** Distance learning does not make use of a conventional examination system. In distance learning, students are provided with self-assessments and assignments that they need to complete and submit for feedback. Therefore, it is difficult to specify the quality and the standards for testing distance learners and also evaluating them on a specified set of standards.
- **Meeting special requirements:** Distance learning programs are accessible to all types of people, even the disabled. However, to meet the needs of special students or distance learners, distance education institutions need to develop materials and procedures in a manner to meet these needs. However, maintaining the quality of this type of material may not always be possible for the distance learning institution.

Quality assurance is important to improve the quality of distance learning programs in terms of their effectiveness and efficiency.

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5. State the role of an audit in a distance education program.
6. Define the term 'accreditation'.
7. What are the kinds of accreditations used for a distance education program?
8. Why is it difficult to define benchmarks when reviewing a distance education course?

5.4 ROLE OF DISTANCE EDUCATION COUNCIL, IGNOU

The Distance Education Council (DEC) was set-up in New Delhi in India in 1991, under the Indira Gandhi National Open University Act. The Distance Education Council was established with the aim of promoting distance and open learning in India. The DEC coordinates the distance education program in various Indian universities and also works to maintain the standards of distance education. The Distance Education Council is responsible for maintaining the standard and quality of teaching, evaluation and research involved in distance education.

The Distance Education Council is an apex body concerned with the maintenance and promotion of distance learning standards in India. The Vice

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Chancellor of IGNOU is the chairman of the Distance Education Council. Other members of the DEC include representatives from the Ministry of Human Resource Development, from the Universities Grant Commission and also from the National Assessment and Accreditation Council. The DEC also has vice chancellors of State Open Universities as its members.

The main role of the Distance Education Council is to promote and maintain the quality and standard of distance and open learning in India. This is done by the DEC in the following ways:

- The DEC develops and establishes a network of distance learning institutions and universities.
- The DEC identifies the programs for which distance education programs need to be developed on priority and provides the necessary support for the development of such programs.
- The DEC promotes universities to adopt open and flexible methods of learning and teaching by providing several combinations of distance learning courses.
- The DEC provides the necessary financial support to universities and institutions to implement distance education programs.
- The Distance Education Council arranges for the sharing and development of instructional materials for distance education programs.
- The DEC also organizes student support services to provide the required support and help to the distance education learners.
- The DEC sets broad norms related to the fees that is to be charged for different distance education programs from the students.
- The DEC collects, maintains and disseminates information related to the various distance education courses.
- The DEC advises the various states to set up universities for promotion of open and distance learning.
- The DEC sets up the Review Committee, which assesses the performance of distance education institutions and the programs offered by them.
- The DEC also establishes a framework and structure for distance education programs.
- The Distance Education Council also sets the norms and rules for admission, evaluation and assessment of the distance learners in different distance education courses.
- The DEC provides a list of requirements for entry into distance education programs of various universities.

The DEC is also responsible for carrying out the process of recognition for distance education universities. The DEC grants recognition to various distance learning universities on the basis of how prepared the university is to offer the distance learning program.

The following are the various recognition statuses that the DEC grants to open and distance learning institutions or universities:

- **Provisional recognition:** This is granted to universities that apply to the DEC to offer distance education programs and courses. Provisional recognition is granted only to those universities that satisfy minimum criteria for starting and offering distance education programs. This type of recognition permits universities to offer educational courses using the distance mode of education. Provisional recognition is granted to universities for one year.
- **Continuation of provisional recognition:** Institutions or universities that are granted provisional recognition and have applied to the DEC for regular recognition are placed under continuation of recognition till the Review Committee visits and reviews the institution to grant it regular recognition.
- **Post facto recognition:** Post facto recognition is granted to institutions and universities that were offering distance learning courses prior to the establishment of the DEC and before the introduction of the recognition scheme. This type of recognition is accorded to the universities because of the demand of the students or the employers who employ graduates from such universities.
- **Regular recognition:** All institutes and universities that offer distance education programs have to apply for regular recognition mandatorily to the DEC. Regular recognition recognizes the distance learning institution as well as the course as being of good quality. Regular recognition is granted for a period of minimum of 3 years and a maximum of 5 years.
- **Territorial jurisdiction:** DEC does not insist on territorial jurisdiction of the state universities. In effect, every university offering a distance education course is free to follow and work according to its own Acts and Statutes.
- **Approval to study centres:** It is not the duty of the DEC to approve the study or regional centres opened by various universities for supporting distance learners. The setting up of study and regional centres is at the discretion of the university or the institution offering the distance education course.

The DEC is also responsible for assessing the grants needs of the various distance education institutions. The DEC appoints a committee to review the finance needs of the distance learning institutions and then assesses the grants essentially required for the development of distance education in various universities. On the basis of this assessment, the DEC grants finances to the distance education council.

Financial assistance is however provided to only the following:

- An open university established by or under an act of State Legislature and is declared fit to receive assistance from central sources.
- Any university that is declared fit under the UGC Act.
- Any institution deemed to be a university under the provisions of the UGC Act.

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The following are considered to as the main functions and responsibilities of the Distance Education Council:

- To encourage state governments and established universities to set up open and distance learning institutions and offer distance learning programs
- To provide academic guidelines to the distance learning institutions to carry out a distance learning program
- To provide financial support and grants to the distance learning institutions
- To develop and establish norms related to admission, evaluation and certification in distance education courses
- To assess and accredit distance learning universities and institutions to ensure their quality
- To encourage use of technology in distance learning courses
- To enable sharing of resources and technology across various distance education institutions
- To facilitate effective learning by providing student support services
- To promote research and innovation in distance learning institutions and systems
- To facilitate training of staff to offer distance learning instructions
- To create databases and record keeping devices to maintain a record of distance learners, distance learning institutions and facilities offered by the various institutions

5.5 THE DISTANCE EDUCATION COUNCIL OF INDIA BILL, 2014

As per the provisions of the Distance Council of India Act, the following stand true for Distance Council of Education or DEC:

- The Council shall be a body corporate by the name aforesaid, having perpetual succession and a common seal with power, subject to the provisions of this Act, to acquire, hold and dispose off property both movable and immovable and to contract and shall, by the said name, sue and be sued.
- The head office of the Council shall be at Delhi and the Council may, with the previous approval of the Central Government, establish Offices at other places in India or abroad.
- The Council shall consist of the following members:
 1. A Chairperson
 2. A vice-Chairperson
 3. The secretary to the Government of India dealing with Higher Education or his nominee, not below the rank of Joint Secretary, ex officio

4. The Secretary to the Government of India dealing with Expenditure or his nominee, not below the rank of Joint Secretary, ex officio
 5. The Secretary to the Government of India dealing with Space or his nominee, not below the rank of Joint Secretary, ex officio
 6. The Secretary to the Government of India dealing with Information Technology or his nominee, not below the rank of Joint Secretary, ex officio
 7. The Secretary to the Government of India dealing with Heavy Industries or his nominee, not below the rank of Joint Secretary, ex officio
 8. Chairman, University grants Commission, ex officio
 9. Chairman, all India Council for Technical Education, ex officio
 10. Vice-Chancellor of the Indira Gandhi national Open University, ex officio
 11. Three members to be nominated by the Central Government from amongst the following:
 - The Director-General of the Indian Council of Agricultural research or his nominee.
 - The Chairperson of the national Council for Teacher Education or his nominee.
 - The President of the Medical Council of India or his nominee.
 - The President of the Dental Council of India or his nominee.
 - The President of the Indian Nursing Council or his nominee.
 - The President of the Bar Council of India or his nominee.
 - The President of the Council of the Institute of Chartered Accountants of India or his nominee.
- Two Vice-Chancellors of the State Open Universities.
 - One expert each from the following categories having knowledge of and experience in the field of:-
 - o Agriculture sciences, health sciences or Natural Sciences;
 - o Engineering or Technology;
 - o Humanities, Social Sciences, Commerce or Education;
 - o Management or Law;
 - o Online education or e-learning;
 - o Media, Communication or Satellite technology;
 - o Educational administration, planning, management or finance;
 - o Industry.

Powers and Functions of the Council are described in Chapter III of the Act. These are described as follows:

‘Subject to the provisions of the University Grants Commission Act, 1956 or The All India Council for Technical Education Act, 1987, Pharmacy Council of India, National Council for Teacher Education, Indian Council of Agricultural Research,

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Indian Nursing Council, Council of Architecture, Medical Council of India, Rehabilitation Council of India, Dental Council of India, Central Homeopathic Council and others, providing for the coordination, determination and regulation of standards in various field of higher education, it shall be the duty of the Council to take necessary steps for the promotion, coordination and determination of standards of the distance education system relating to higher education and for that purpose, the Council May

- Lay down norms, guidelines and standards for offering various programmes of higher education through distance education system and prescribe physical and infrastructural facilities, staffing pattern and staff qualifications required for such programmes and enforce the same.
- Grant recognition to programmes of higher education offered through distance education system within the country and/or outside.
- Act as a nodal authority for providing communication network, tools, technologies, radiobroadcast, telecast internet, satellite communication and the interactive technology relevant for distance education.
- Establish collaborative network of higher education institutions for joint development and/or sharing of educational resources.
- Establish and maintain centres or higher education institutions of distance education for providing common facilities and services, and for promotion of research, innovation and training for study learning material course writers, moderators and technical personnel working in ODL system.
- Lay down norms, guidelines and standards for regulating and monitoring online programmes
- Regulate the collaboration between foreign education providers and indian higher education institutions and take steps to prevent commercialization of distance education system
- Assess the financial needs, allocate and disburse grants out of the fund of the council to a recognized higher education intuition offering programmes through distance mode for such purposes as may be prescribed by regulations
- Develop guidelines for charging fees by higher education institutions imparting distance education so that fee is commensurate and not exorbitant to recover the cost of development of the programme
- Advise the central and state governments, union territory administrations, universities and open universities, on the following matters on demand:- a) establishment of new open universities and institutions of distance education; b) release of grants to higher education institutions of distance education for any general or specific purpose; c) selection of vice-chancellor for an open university d) introduction of a programme through distance education in a university or an institution not having such system of education; and e) any other matter relating to distance education.
- Undertake surveys and studies on matters related to distance education

- Prescribe norms and standards for appraisal of higher education institutions imparting distance education
- Coordinate with the university grants commission and other regulatory and promotional bodies in the field of higher education, for the fulfillment of the objective of this act;
- Undertake inspection of higher education institutions imparting distance education in the manner as may be laid down by regulations and issue necessary directives for removal of deficiencies, if any.
- Take such measures as are necessary to maintain prescribed norms and standards in the higher education institution offering distance education programs including derecognition.
- To lay down criteria for equivalence of degree diploma and certificate awarded through distance education system vis a vis conventional system.
- Take all necessary steps to prevent commercialization of open and distance education.
- Perform such other functions as may be prescribed.’

The following institutions need approval from DEC to offer distance education courses:

- National/State Open Universities
- DEIs in conventional universities established by Act of Parliament or State Legislature or deemed to be universities declared by the Central Government under Section 3 of the University Grants Commission Act, 1956
- Institutions of National Importance declared under an Act of Parliament
- Other ODL institutions of higher learning which are recognized by Central/ State Government / statutory councils.

For recognition, the processes and learning materials are considered. The following are the considerations:

- The study material must be at par with the level of award for which it is prepared.
- The study material must be in self-learning format.
- The institution must have core faculty in place as per the guidelines of the DEC.
- Institution must follow admission and evaluation criteria as mentioned by the apex body.
- Practical and hand on activities and experiences are provided as per the needs of the distance education course.
- The study centres must not be franchised.
- The examinations must be conducted and managed by the parent institution.

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The following are the guidelines of the DEC regarding the distance education programs that can be offered:

An Open and Distance Learning (ODL) institution should offer programmes as per:-

- the objectives of the University/Institution
- the national and regional needs
- norms of the concerned statutory bodies

At least 50 per cent of the study material should be in Self Instructional format. University/ institution should have bodies like Planning Board/Academic Council/School Boards, etc. for taking academic and administrative decision.

The following are the guidelines with respect to teaching learning strategies as per the DEC in distance education:

- The parent institution must lay down a proper mechanism for the development of the curriculum.
- The quality of the self-learning materials is of paramount importance. Self-learning materials could be in the form of printed materials, CD-ROMs, audio, video, DVDs, Web based materials, etc.
- There should be a maximum and minimum period in which the distance learner can learn the program.
- The distance education material must be quantified in terms of credits. A credit is the study input required by a distance learner to complete the distance education program. For instance a certificate program that can be completed in 6 months required 12-18 credits. The credits also decide the volume of the course content.
- Counselling is important for a distance education program.
- Distance learning institutions must follow a specific procedure for the admission, development and delivery of content and evaluation.
- The self-learning material can be delivered using any media but must have the following qualities- self-learning, self-explanatory, self-evaluating, self-motivating, self-contained and self-directed.

The DEC lists the following special features of self-learning and study materials used in distance education:

- The material must have clearly stated objectives
- The material must be written using a user friendly approach.
- The material must be divided into short and manageable units.
- The material must make use of illustrations wherever required.
- The material must be easy to navigate so that the users do not find it difficult to locate something.
- The material must have links to other media as well.

- The material must be developed keeping in mind the varied needs of the learners.
- The material must be full of helpful examples.
- The material must provide feedback so that the learners can keep track of their progress.
- The material must have enough exercises to enable learners practice what they have learnt.
- The material must also include glossary and summary.

The following are the guidelines of the DEC pertaining to the evaluation system in distance education:

- The evaluation mechanism must be clearly spelled out.
- Term End Examination (TEE) portion should be 70 per cent to 80 per cent of the total evaluation, the remaining portion of 20 per cent to 30 per cent should be continuous evaluation.
- The examination must be conducted by the university or the institution and not the study centre.
- Outside agencies should not be involved in tasks like setting of the question paper, administering the exam, etc.
- Every institution must have a separate cell or department that manages and conducts the examination.

For the delivery of the learning material, the following is stated by the DEC:

‘Generally, multi-media is used by distance educators for delivery of content/ instruction, utilizing media mix keeping in mind the nature of the programme, and its requirements, the type of institution, the resources available and above all the access of the learners to that media.’

Distance learning institutions and universities must make use of media like face to face counselling sessions, interactive radio counselling, teleconferencing, audio programmes, video programmes, e-mail, computer conferencing, chat sessions, dynamic website etc.

For infrastructural facilities in distance education institutions, the DEC states that the institution must provide sufficient space for housing administrative and academic staff and also its activities. The institution must offer enough space for administering student support services and also library services. The parent institution must also provide audio-video and multimedia facilities at the study centres for the distance learners.

The following are ICT needs for distance education institutions as per the DEC:

- The institution must maintain a comprehensive database to facilitate the delivery of the program. The institution must make use of digital voice integrated system (DVIS) or integrated voice response systems (IVRS) and communication technology.
- The institution must have its own website to facilitate distance education. Help desk services must be available 24x7 for the distance learners.

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- The institution must make regular technology updates and also introduce new and innovative technologies to ensure providing quality distance education.

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The following is the procedure for seeking recognition from the DEC:

1. The application is to be submitted in the prescribed format through:
 - The Registrar
 - Director / Secretary of the Governing Body in case of other institutions.
2. All proposals received may be scrutinized and deficiencies, if any, will be communicated to the institution for rectification so that the process of recognition can take place in an efficient and effective manner.
3. Once the application is complete in all respects and found satisfactory, DEC may constitute a committee for an on-site assessment of the institution.
4. The committee may have a nominee of UGC and a nominee from AICTE for institutions with Technical and Professional programmes.
5. Seven hard copies along with a soft copy of the filled in format need to be sent to the DEC.
6. The ODLI should justify its claims in the application submitted for recognition by the DEC for recognition and providing documentary evidences for the same to be provided to the committee visiting them.
7. The Committee shall give a detailed report and justify its findings / recommendations with supporting documentary evidence.
8. On the recommendations of the assessment Committee, the DEC shall consider grant of recognition status to the institution.
9. The decision on the recommendations recognition along with recommendations of the Committee will be communicated to the ODL Institution.
10. The institution is required to give an undertaking that it will comply with the conditions of recognition prescribed by the DEC.
11. The recognition means that the institution is fit to offer distance education programmes and the qualifications awarded by it are recognized by the DEC.
12. The recognition is valid for a period of three years unless specified otherwise by the DEC.
13. Application fee of Rs One lakh by demand draft payable to IGNOU at New Delhi has to be submitted by Universities/institutions other than those run / managed by the State / Central Government.

If in case an institution does not meet the guidelines for recognition, it is not awarded the recognition. DEC may even withdraw the recognition status if it finds deterioration in the academic standards of the distance learning institution.

The DEC has withdrawn the recognition status of the following universities:

- University of Kerala
- Jodhpur National University
- University of Calicut

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11. Who coordinates the distance education program in various Indian universities?
12. What is post-facto recognition?

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5.6 SUMMARY

- Counselling is integral to distance education and must be carried out by academic counsellors regularly. This ensures that the distance learners get a chance to interact with the teachers as well as the other learners. This type of interaction enables the distance learners to reduce their feeling of isolation.
- Counselling can be conducted by academic counsellors either face to face or by using video conferencing and other ICT techniques. The counsellor may conduct individual counselling or may indulge in group counselling.
- The counsellor who counsels distance learners must be a professional, possessing good communication skills and must also be capable of using technology to conduct counselling in an effective manner.
- Quality assurance in distance education ensures that the distance education program is of good quality. The distance education institution offering the program must be accredited. It must also be ensured that the learning materials and student support services provided are of good quality. However, maintaining quality assurance in distance education is not an easy task because of the basic nature of distance education which requires the learners to learn in isolation and learn at their own will.

5.7 KEY TERMS

- **Vocational counselling:** A form of counselling that enables a distance education learner to choose the right job as per the interests and abilities of the student.
- **Personal-psychological counselling:** A type of counselling that helps the distance learners to overcome their barriers to interpersonal communication and adjust to the distance learning program mentally as well as physically.
- **Orientation services:** Services that enable the distance learner to get familiar with the distance education institution and the course to which he or she is enrolling.
- **Information services:** Services rendered by the academic counsellor in distance education so that the learners can be provided all the necessary information related to distance education programs as well as the institutions offering these programs.

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- **Accreditation:** A process of external review of the distance learning program to check the quality and standard of the distance learning program.
- **Quality of processes:** The quality of teaching and learning processes, the counselling process and also the delivery process of the distance learning program.
- **Quality of philosophy:** The mission statement of the distance learning institution, the educational aims and objectives set by the distance learning program as well as the institutional culture.
- **Quality of production and delivery system:** The quality of the course production, the delivery mechanism used, use of technologies in the distance education program, etc.
- **Provisional recognition:** Recognition granted to universities that apply to the DEC to offer distance education programs and courses.
- **Post facto recognition:** Recognition is granted to institutions and universities that were offering distance learning courses prior to the establishment of the DEC and before the introduction of the recognition scheme.
- **Regular recognition:** Recognition that identifies the distance learning institution as well as the course as being of good quality.

5.8 ANSWERS TO ‘CHECK YOUR PROGRESS’

1. When students reach the primary level of education, they are usually in their adolescence and may experience several changes physically as well as intellectually. The students may look more for approval from the parents, teachers and their peers. Further, at this stage the pressure of doing well in the education sphere is more. Some students may not be able to deal with all such changes and pressures and therefore may show behavioural and adjustment problems. This is where counselling is required by such students.
2. Social stress may be experienced by distance learners simply because they work in isolation from others. Distance learning does not involve a lot of interaction of the students with teachers and other learners as well, which means that the distance learners may not be able to develop relationships with lecturers, other learners and peers.
3. Vocational counselling is also needed by distance learners so that they can pursue a career of their choice, vocational counselling enables a distance education learner to choose the right job as per the interests and abilities of the student.
4. In the appraisal role, the counsellor assesses and appraises the distance learners. The counsellor not only collects the necessary information related to the distance learners, but also maintains the necessary records of the distance learners in a confidential manner. The counsellor also assesses the skills, knowledge and abilities of the distance education learner and gives feedback as to how improvement can be done.

5. Audit is the process of review of the distance education program to determine if the curriculum, staff and infrastructure can meet the aims and objectives of the program that were stated when the program was developed. An audit chiefly assesses what an institution is doing to achieve the various stated goals.
6. Accreditation is the process of external review of a distance learning program to check the quality and standard of the distance learning program. The main aim of accreditation is to check the quality of the distance learning program and bring about improvements required in the program.
7. Institutional accreditation and program accreditation are the types of accreditation used in a distance education program.
8. Since there are no specific guidelines as to how the quality of a distance education program can be assessed, it is not easy to define benchmark and performance indicators. There is no benchmark that can define as to what instructional material is considered of good quality. Likewise, there are no performance indicators that can measure the student support services and term them as quality services. In distance learning, there are no defined activities or projects that need to be undertaken by the students to set a benchmark of performance.
9. The Distance Education Council or DEC was established with the aim of promoting distance and open learning in India. The DEC coordinates the distance education program in various Indian universities and also works to maintain the standards of distance education.
10. Post facto recognition is granted to institutions and universities that were offering distance learning courses prior to the establishment of the DEC and before the introduction of the recognition scheme.

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5.9 QUESTIONS AND EXERCISES

Short-Answer Questions

1. Why is counselling required in distance education?
2. State the types of stress that distance learners have to deal with.
3. List the types of counselling offered to distance education learners.
4. Name the services offered by a counsellor in distance education.
5. What are tools used for counselling in distance education?
6. What are the challenges faced in counselling in distance education?
7. State the counselling techniques used by counsellor in distance education.
8. What are quality assurance concerns in Distance Education?

Long-Answer Questions

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1. Explain the need of counselling and types of counselling services offered at various stages of distance education.
2. Elaborate on the roles of a counsellor in distance education.
3. Discuss the qualities of an academic counsellor.
4. Explain challenges faced in distance education to maintain quality of distance education programs.
5. Write a detailed note on Distance Education Council.
6. Explain the recognition statuses granted by the DEC to universities that offer distance education programs.
7. Elaborate on the need of quality assurance in distance education.
8. Explain the three modes of quality assurance used in distance education.

5.10 FURTHER READING

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APPENDEIX

**List of Universities/Institutions approved by Distance Education
Council (As on 01/02/2010)**

Appendix

S. No	University / Institute Name	Address
National Open University		
1.	Indira Gandhi National Open University, New Delhi	Indira Gandhi National Open University, MaidanGarhi, New Delhi – 110 068
State Open Universities		
1.	Dr. B.R. Ambedkar Open University, Hyderabad	Dr. B.R. Ambedkar Open University, Prof. G. Ram Reddy Marg, Road No. 46, Jubilee Hills, Hyderabad – 500 033, Andhra Pradesh
2.	Dr. Babasaheb Ambedkar Open University, Ahmedabad, Gujarat	Dr. Babasaheb Ambedkar Open University, R.C. Technical Institute Campus, Opp. Gujarat High Court, Sarkhej-Gandhinagar Highway, Sola, Ahmedabad – 380060, Gujarat
3.	Karnataka State Open University, Mysore, Karnataka	Karnataka State Open University, Manasagangotri, Mysore – 570 006, Karnataka
4.	Krishanakant Handique State Open University,	Guwahati, Assam Krishanakanta Handique State Open University, Housefed Complex, Last Gate, Dispur, Guwahati – 781006, Assam
5.	M.P. Bhoj (Open) University, Bhopal, MP	M.P. Bhoj (Open) University, Raja Bhoj Marg (Kolar Road), Bhopal – 462016, Madhya Pradesh
6.	Nalanda Open University, Patna, Bihar	Nalanda Open University, 3rd floor, Biscomaun Bhawan, West Gandhi Maidan, Patna – 800 001, Bihar
7.	Netaji Subhas Open University, Kolkata, WB	Netaji Subhas Open University, 1, Woodburn Park, Kolkata – 700 020, West Bengal

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8.	Pt. Sunderlal Sharma (Open) University, Bilaspur, Chhattisgarh	Pt. Sunderlal Sharma (Open) University, Near Pandit Deen Dayal Upadhyay Park, VayaparVihar, Bilaspur– 495001, Chhattisgarh
9.	Tamil Nadu Open University, Chennai, Tamil Nadu	Tamil Nadu Open University, Directorate of Technical Education Campus, Guindy, Chennai – 600 025, Tamil Nadu
10.	U.P. Rajarshi Tandon Open University, Allahabad, UP	U.P. Rajarshi Tandon Open University, University Campus, Shantipuram (Sector-F), Phaphamau, Allahabad – 211 013, Uttar Pradesh
11.	Uttarakhand Open University, Haldwani, Uttarakhand	Uttarakhand Open University, Near SBI, Kusumkhara Chauraha, Haldwani, Dist. Nainital– 263139, Uttarakhand
12.	Vardhaman Mahaveer Open University, Rajasthan	Vardhman Mahaveer Open Kota, University Rawat-Bhata Road, Kota – 324 010, Rajasthan
13.	Yashwantrao Chavan Maharashtra Open University, Nasik, Maharashtra	YCMOU, Dnynagangotri, Near Gangapur Dam, Nashik– 422 222, Maharashtra

Dual-Mode Universities**ANDHRA PRADESH**

1.	Andhra University, Visakhapatnam	School of Distance Education, Andhra University, Vishakhapatnam – 530003, Andhra Pradesh
2.	University of English and Foreign Languages, Hyderabad	School of Distance Education, University of English and Foreign Languages, Hyderabad – 500007, Andhra Pradesh
3.	Jawaharlal Nehru Technological University, Hyderabad	School of Continuing & Distance Education, Jawaharlal Nehru Technological University (JNTU), Mahaveer Marg, Hyderabad – 500028, Andhra Pradesh
4.	Kakatiya University, Warangal	School of Distance Learning and Continuing Education (SDLCE), Kakatiya University, Vidyaranyapuri, Warangal – 506009, Andhra Pradesh

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| 5. | Maulana Azad National Urdu University,
Hyderabad | Directorate of Distance Education,
Maulana Azad National Urdu
University, Gachibowli,
Hyderabad – 500032,
Andhra Pradesh |
| 6. | Acharya Nagarjuna University, Guntur | Centre for Distance Education,
Acharya Nagarjuna University,
Nagarjunanagar, Guntur – 522510,
Andhra Pradesh |
| 7. | National Academy of Legal Studies
and Research University (NALSAR),
Hyderabad | Directorate of Distance Education,
NALSAR University of Law,
3-4-761, Barkatpura,
Hyderabad – 500027,
Andhra Pradesh |
| 8. | Osmania University, Hyderabad | Centre for Distance Education,
Osmania University,
Hyderabad – 500007,
Andhra Pradesh |
| 9. | PottiSreeramulu Telugu University,
Hyderabad | Centre for Distance Education,
PottiSreeramulu Telugu University,
Nampally, Hyderabad – 500004,
Andhra Pradesh |
| 10. | Sri Krishnadevaraya University,
Anantapur | Centre for distance Education,
Sri Krishnadevaraya University,
Anantapur– 515003,
Andhra Pradesh |
| 11. | Sri Venkateswara University, Tirupati | Directorate of Distance Education,
Sri Venkateswara University,
Tirupati– 517502,
Andhra Pradesh |
| 12. | Sri. PadmavathiMahilaVisvavidyalayam,
Tirupati | Distance Education Centre,
S.P. MahilaVisvavidyalayam,
(Sri. Padmavati Mahila
Visvavidyalayam),
Tirupati– 517502,
Andhra Pradesh |
| 13. | University of Hyderabad, Hyderabad | Centre for Distance Education,
University of Hyderabad,
Central University,
Hyderabad – 500046,
Andhra Pradesh |
| 14. | Dravidian University, Kuppam | School of Distance & Continuing
Education, Dravidian University,
Srinivasavanam,
Kuppam– 517425
Andhra Pradesh |
| 15. | GITAM University, Vishakhapatnam | Gitam Centre for Distance Learning,
Gitam University, Gandhi Nagar
Campus, Rushikonda,
Visakhapatnam– 530045,
Andhra Pradesh |

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16. Rashtriya Sanskrit Vidyapeetha, Tirupati Directorate of Distance Education,
Rashtriya Sanskrit Vidyapeetha,
Tirupati– 517507,
Andhra Pradesh

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ARUNACHAL PRADESH		
1.	Rajiv Gandhi University, Itanagar	Institute of Distance Education, Rajiv Gandhi University, Rono Hills, Doimukh, Itanagar– 791112, Arunachal Pradesh
ASSAM		
1.	Dibrugarh University, Dibrugarh	Directorate of Distance Education, Dibrugarh University, Dibrugarh– 786004, Assam
2.	Gauhati University, Guwahati	Institute of Distance and Open Learning (IDOL), Gauhati University, B.K.B. Auditorium, GopinathBordoloi Nagar, Guwahati – 781014, Assam
BIHAR		
1.	BabasahebBhim Rao Ambedkar Bihar University, Muzaffarpur	Centre for Distance Education, Babasaheb Bhim Rao Ambedkar Bihar University, Muzaffarpur– 842001, Bihar
2.	Lalit Narayan Mithila University, Darbhanga	Directorate of Distance Education, Lalit Narayan Mithila University, Kameshwarnagar, Darbhanga – 846004, Bihar
3.	Magadh University, Bodh Gaya	Directorate of Distance Education, Magadh University, Bodh, Gaya – 824234, Bihar
4.	Patna University, Patna	Directorate of Distance Education, Patna University, Patna – 800005, Bihar
CHHATTISGARH		
1.	MATS University, Raipur	Institute of Distance Education, Mats University, Aarang, Raipur-493441, Chhatisgarh
2.	Dr. C. V. Raman University, Bilaspur	Institute of Distance Education, Dr. C.V Raman University, Kargi Road, Kota, Bilaspur– 495113 Chhatisgarh

DELHI		
1.	Jamia Millia Islamia, New Delhi	Arjun Singh Centre for Distance and Open Learning, Jamia Millia Islamia, Maulana Mohd. Ali Johar Marg, New Delhi – 110025
2.	Jamia Hamdard, New Delhi	Jamia Hind, Saket, New Delhi – 110030
3.	Guru Gobind Singh Indraprastha University, Delhi	Directorate of Open and Distance Education, Guru Gobind Singh Indraprastha University, Guru Gobind Singh University, Kashmere Gate, Delhi – 110 403
4.	University of Delhi, Delhi	Campus of Open Learning, Delhi University, Delhi – 110 007
GUJARAT		
1.	Sumandeep University, Baroda	Directorate of Distance Education, Sumandeep Vidyapeeth University, At & PO. Piparia, Taluka Waghodia, Dist. Vadodara – 391760, Gujarat
HARYANA		
1.	Chaudhary Devlal University, Sirsa	Centre for Distance Learning, Chaudhary Devlal University, Barnala Road, Sirsa – 125055 Haryana
2.	Guru Jambheshwar University, Hisar	Directorate of Distance Education, Guru Jambheshwar University of Science & Technology, Hissar– 125001, Haryana
3.	Kurukshetra University, Kurukshetra	Directorate of Distance Education, Kurukshetra University, Kurukshetra– 136119, Haryana
4.	Maharishi Dayanand University, Rohtak	Directorate of Distance Education, Maharishi Dayanand University, Rohtak– 124001, Haryana
5.	Maharshi Markandeshwar University, Ambala	Maharshi Markandeshwar University, Mullana, Ambala – 133203 Haryana
HIMACHAL PRADESH		
1.	Himachal Pradesh University, Shimla	Centre for Distance Education and Open Learning (ICDE&OL), Himachal Pradesh University, Summer Hills, Shimla – 171005, Himachal Pradesh

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JAMMU & KASHMIR		
1.	University of Jammu, Jammu	Directorate of Distance Education, University of Jammu, New Campus, Jammu (Tawi) – 180006, Jammu & Kashmir
2.	University of Kashmir, Srinagar	Centre of Distance Education, University of Kashmir, Hazratbal, Srinagar – 190006, Jammu & Kashmir
KARNATAKA		
1.	Bangalore University, Bangalore	Directorate of Correspondence, Courses & Distance Education, Bangalore University, Central College Campus, Dr. B.R. Ambedkar Veedhi, Bangalore – 560001, Karnataka
2.	Gulbarga University, Gulbarga	Directorate of Distance Education, Gulbarga University, Jnana Ganga, Gulbarga – 585106, Karnataka
3.	Kannada University, Hampi	Distance Education Centre, Kannada University, Hampi Vidyananya, Hospet-Tq, Bellary Dist., Karnataka – 583276
4.	Karnataka University, Dharwad	Directorate of Distance Education, Karnataka University, Vishwachetna Building 1st Floor, Pavate Nagar, Dharwad – 580003 Karnataka
5.	Kuvempu University, Shimoga	Directorate of Correspondence Courses, Kuvempu University, JnanaSahyadri, Shankaraghatta, Shimoga 577451, Karnataka
6.	Mangalore University, Mangalore	Directorate of Distance Education, Mangalore University, Bio-Sciences Block, Mangalagangothri, Mangalore – 574199, Karnataka
7.	Manipal University, Manipal	Directorate of Distance Education, Manipal University, 2nd Floor, MCOAHS Building, Manipal – 576104, Karnataka

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| 8. | National Law School of India University,
Bangalore | Distance Education Department,
National Law School of India
University,
Nagarbhavi, Bangalore – 560072,
Karnataka |
| 9. | Visvesvaraya Technological University,
Belgaum | Directorate of Distance Education,
Visvesvaraya Technological
University, Jnana Sangama,
Belgaum – 590018, Karnataka |

NOTES**KERALA**

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|----|--|---|
| 1. | Kannur University, Kannur | School of Distance Education,
Kannur University,
Mangattuparamba,
Kannur University Campus,
Kerala – 670567 |
| 2. | Mahatma Gandhi University, Kottayam | School of Distance Education,
Mahatma Gandhi University,
Priyadarsini Hills PO,
Athirampuzha, Kottayam – 686560,
Kerala |
| 4. | University of Kerala, Thiruvananthapuram | Institute of Distance Education,
University of Kerala,
Kariavattom,
Thiruvananthapuram – 695581,
Kerala |

MADHYAPRADESH

- | | | |
|----|---|--|
| 1. | AwadheshPratap Singh University, Rewa | Distance Education Centre
AwadheshPratap Singh University,
Rewa – 486003, Madhya Pradesh |
| 2. | BarkatullahVishwavidyalaya, Bhopal | Institute of Open and Distance
Education,
Barkatullah University,
Hoshangabad Road,
Bhopal – 462026, Madhya Pradesh |
| 3. | Devi Ahilya Vishwavidyalaya, Indore | Directorate of Distance Education,
Devi Ahilya Vishwavidyalaya,
IMS Building, Takshashila Campus,
Khandwa Road, Indore – 452017,
Madhya Pradesh |
| 4. | Dr. Harisingh Gour Vishwavidyalaya, Sagar | Institute of Distance Education,
Dr. Harisingh Gour Vishwavidyalaya,
Sagar – 470003,
Madhya Pradesh |
| 5. | Jiwaji University, Gwalior | School of Studies in Distance
Education, Jiwaji University,
Distance Education Building,
Near City Center Gate,
Gwalior – 474011, Madhya Pradesh |

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| 6. | M.G. Chitrakoot Gramodaya
Vishwavidyalaya, Chitrakoot | Centre for Distance Learning &
Continuing Education,
M.G. Chitrakoot Gramodaya
Vishwavidyalaya,
Chitrakoot Dist., Satna – 485331,
Madhya Pradesh |
| 7. | Maharishi Mahesh Yogi Vedic
Vishwavidyalaya, Katni | Maharishi Mahesh Yogi Vedic
Vishwavidyalaya Karondi,
Post. Umariya Pan,
Katni– 483332, Madhya Pradesh

Address for Correspondence:
Directorate of Distance Education,
Maharishi Mahesh Yogi Vedic
Vishwavidyalaya,
Gram: Lamti, Kanchan Bihar,
Vijaynagar, Jabalpur – 482002,
Madhya Pradesh |
| 8. | Rani Durgawati University, Jabalpur | Directorate of Distance Education,
Rani Durgawati Vishwavidyalaya,
Saraswati Vihar, Pachpedi,
Jabalpur – 482001,
Madhya Pradesh |

MAHARASHTRA

- | | | |
|----|--|---|
| 1. | Bharati Vidyapeeth University, Pune | Directorate of Distance Education,
Bharati Vidyapeeth University,
Lal Bahadur Shastri Marg,
Pune – 411030, Maharashtra |
| 2. | Mahatma Gandhi Antarrashtriya
Vishwavidyalaya, Wardha | Distance Education Centre,
Mahatma Gandhi Antarrashtriya
Hindi Vishwavidyalaya,
Post Box No.16, Panchteela,
Wardha– 442001, Maharashtra |
| 3. | Padamshree Dr. D.Y. Patil University,
Mumbai | Directorate of Distance Education,
Padamshree Dr. D.Y. Patil
University, D.Y. Patil Vidyanagar,
Nerul, Navi Mumbai– 400706,
Maharashtra |
| 4. | Sant Gadge Baba Amravati University,
Amravati | Institute of Distance Education,
Sant Gadge Baba Amravati
University, University Campus,
Amravati – 444602, Maharashtra |
| 5. | Shivaji University, Kolhapur | Centre for Distance Education,
Shivaji University, Vidya Nagar,
Kolhapur – 416004, Maharashtra |
| 6. | SNDT - Women's University, Mumbai | Centre For Distance Education,
Shreemati Nathibai Damodar
Thackersey (SNDT) Women's
University,
Juhu Tara Road, Santacruz (West),
Mumbai – 400049, Maharashtra |

7.	Swami Ramanand Teerth Marathwada University, Nanded	Directorate of Distance Education, Swami Ramanand Teerth Marathwada University, Vishnupuri, Nanded– 431606, Maharashtra
8.	Tilak Maharashtra Vidyapeeth, Pune	Faculty of Distance Education, Tilak Maharashtra University, VidyapeethBhavan, Gultekdi, Pune – 411037, Maharashtra
9.	University of Mumbai, Mumbai	Institute of Distance Education, University of Mumbai, Vidyanagari, Kalina, Santacruz (East), Mumbai– 400098, Maharashtra
10.	NMIMS University, Mumbai	School of Distance Learning, NMIMS University, SVKM's NMIMS University, V.L. Mehta Road, Vile Parle (West), Mumbai– 400056, Maharashtra
11.	Dr. D.Y. Patil University, Pune	Institute of Distance Learning, Dr. D.Y. Patil University, Sant TukaramNagar, Pimpri, Pune – 411018, Maharashtra

MEGHALAYA

1.	North-Eastern Hill University, Shillong	Centre for Distance Education, North-Eastern Hill University, NehuBijni Complex, Laitumkhrah, Shillong– 793003, Meghalaya
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ORISSA

1.	Berhampur University, Berhampur	Distance Education Centre, Berhampur University, Bhanja Bihar, Berhampur – 760007, Orissa
2.	Fakir Mohan University, Balasore	Center of Distance and Continuing Education, Fakir Mohan University, VyasaVihar, Balasore– 756019, Orissa
3.	North Orissa University, Mayurbhanj	Directorate of Distance & Continuing Education, North Orissa University, Sri Ram Chandra Vihar, Takatpur, BaripadaDistt., Mayurbhanj– 757003, Orissa
4.	Sambalpur University, Sambalpur	Directorate of Distance and Continuing Education, Sambalpur University, JyotiVihar, Sambalpur– 768019, Orissa

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5. Utkal University, Bhubaneswar
 Directorate of Distance & Continuing Education,
 Utkal University,
 VaniVihar,
 Bhubaneswar – 751007, Orissa

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PUDUCHERRY		
1.	Pondicherry University, Puducherry	Directorate of Distance Education, Pondicherry University, R. Venkatraman Nagar, Kalapet – 605014, Puducherry
PUNJAB		
1.	Guru Nanak Dev University, Amritsar	Centre for Distance Education, Guru Nanak Dev University, Amritsar – 143005, Punjab
2.	Lovely Professional University, Phagwara	
3.	Punjab University, Chandigarh	Department of Correspondence Studies, Punjab University, Chandigarh – 160014, Punjab
4.	Punjab Technical University, Jalandhar	Punjab Technical University, Jalandhar-Kapurthala Highway, Post Bag No. 01, Kapurthala, Punjab
5.	Punjabi University, Patiala	Department of Correspondence, Punjabi University, Patiala – 147002, Punjab
6.	Thapar Instt. Of Engg. & Technology, Patiala	Department of Distance Education, Thapar Institute of Engineering & Technology, Patiala – 147004, Punjab
RAJASTHAN		
1.	Jain VishvaBharati Institute, Ladnun	Directorate of Distance Education, Jain VishvaBharati Institute (Deemed University), Ladnun– 341306, Rajasthan
2.	JRN Rajasthan Vidyapeeth, Udaipur	Directorate of distance Education, JanardanRai Nagar Rajasthan Vidyapeeth, Airport Road, Pratap Nagar, Udaipur – 313001, Rajasthan
3.	NIMS University, Jaipur	NIMS University, Shobha Nagar, Jaipur – 303001, Rajasthan
4.	Jaipur National University, Jaipur	Directorate of Distance Education, Jaipur National University, JagatPur, Jaipur – 302025 Rajasthan

SIKKIM		
1.	Sikkim Manipal University	Address for University: Sikkim Manipal University, 5th Mile, Tadong– 737102, Gangtok, Sikkim Address for Correspondence: Sikkim Manipal University, 1st Floor, Syndicate House, Manipal– 576104, Karnataka
2.	EIILM University, Jorethang	Distance Education Institution, Eastern Institute for Integrated Learning in Management University (EIILM), Jorethang, Dist. Namchi– 737121, Sikkim
TAMILNADU		
1.	Annamalai University, Annamalainagar	Directorate of Distance Education Annamalai University Annamalai Nagar – 608002, Tamil Nadu
2.	Bharathiar University, Coimbatore	School of Distance Education, Bharathiar University, Coimbatore – 641046, Tamil Nadu
3.	Bharathidasan University, Tiruchirapalli	Centre for Distance Education, Bharthidasan University, Palkalaiperur, Tiruchirapalli– 620024, Tamil Nadu
4.	Dr. MGR University, Chennai	Directorate of Distance Education, Dr. MGR University, Dr. MGR Educational & Research Institute, EVR High Road (NH 4 Highway), Maduravoyal, Chennai – 600095, Tamil Nadu
5.	Madurai Kamaraj University, Madurai	Directorate of Distance Education, Madurai Kamraj University, Madurai – 625021, Tamil Nadu
6.	Manonmaniam Sundaranar University, Tirunelveli	Directorate of Distance and Continuing Education, Manonmaniam Sundaranar University, Abishekapatti (P.O), Tirunelveli – 627012, Tamil Nadu
7.	Periyar University, Salem	Periyar Institute of Distance Education, Periyar University, Salem – 636011, Tamil Nadu
8.	Shanmugha Arts, Science, Technology & Research Academy (SASTRA), Thanjavur	Distance Education Centre, Shanmugha Arts, Science, Technology and Research Academy (SASTRA), Tirumalaisamudram, Thanjavur – 613402, Tamil Nadu

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9.	Karpagam University, Coimbatore	School of Open & Distance Education, Karpagam University, SF No. 559, Pollachi Main Road, Eachanari Post, Coimbatore – 641021, Tamil Nadu
10.	SRM University, Kancheepuram	Directorate of Distance Education, SRM University, SRM Nagar, Kattankulathur -603203, Kancheepuram Dist., Tamil Nadu
11.	Tamil Nadu Agricultural University, Coimbatore	Directorate of Open and Distance Learning, Tamil Nadu Agriculture University, Coimbatore – 641003, Tamil Nadu
12.	Tamil Nadu Dr. Ambedkar Law University, Chennai	Directorate of Distance Education, Tamil Nadu Dr. Ambedkar Law University, 'Poomposhil', 5, Greenways Road, Chennai – 600028, Tamil Nadu
13.	Tamil University, Thanjavur	Directorate of Distance Education, Tamil University, Thanjavur – 613010, Tamil Nadu
14.	University of Madras, Chennai	Institute of Distance Education, University of Madras, Chepauk, Chennai – 600005, Tamil Nadu
15.	Vinayaka Mission 's University, Salem	Directorate of Distance Education, Vinayaka Missions University, Shankari Main Road (NH-47), Ariyanoor, Salem – 636308 Tamil Nadu
16.	Alagappa University, Karaikudi, Tamil Nadu	Directorate of Distance Education Alagappa University Karaikudi– 630003, Tamil Nadu
17.	St. Peter's University, Chennai	Center for Distance Education, St. Peter's University, Avadi, Chennai– 600054, Tamil Nadu
18.	Mother Teresa Women's University, Kodaikanal	Directorate of Distance Education, Mother Teresa Women's University, Kodaikanal– 624101, Tamil Nadu
TRIPURA		
1.	Tripura University, Suryamaninagar	Directorate of Distance Education, Tripura University, Suryamaninagar– 799130, Agartala, Tripura (West)

UTTAR PRADESH		
1.	Aligarh Muslim University, Aligarh	Centre for Distance Education Aligarh Muslim University “NASHEMAN”, Opp. Sulaiman Hall, Aligarh – 202002, Uttar Pradesh
2.	Allahabad Agricultural Institute (Deemed University), Allahabad	Allahabad Agricultural Institute (Deemed university), P.O. Agricultural Institute, Allahabad – 211007, Uttar Pradesh
3.	Amity University, Noida	Amity School of Distance Learning, Amity University, Amity Campus, Post Box No. 503, Sector-44, Noida – 201303, Uttar Pradesh
4.	Dayalbagh Education Institute, Agra	Dayalbagh Education Institute, Distance Education Cell, Dayalbagh, Agra – 2820110 Uttar Pradesh
5.	Shobhit Institute of Engg. & Tech. (Deemed University), Meerut	Shobhit Institute of Engg. & Tech., (Deemed University), Meerut, Dulhera Marg, Roorkee Road, Modipuram, Meerut – 250010, Uttar Pradesh
6.	University of Allahabad, Allahabad	Correspondence Courses and Continuing Education, University of Allahabad, Near UPTRON Chauraha, Govindpur, Allahabad – 211004, Uttar Pradesh
7.	University of Lucknow, Lucknow	Institute of Distance and Continuing Education, University of Lucknow, Lucknow– 226007, Uttar Pradesh
8.	Swami Vivekananda Subharti University, Meerut	Swami Vivekananda Subharti University, NH-58, Haridwar Road Partapur Bypass Road, Meerut, Uttar Pradesh
UTTARAKHAND		
1.	Dev Sanskriti Vishwavidyalaya, Haridwar	Centre for Distance Education, Dev Sanskriti Vishwavidyalaya, Chaitanya Bhavan, Dev Sanskriti Vishwavidyalaya, Gayatri Kunj, Shanti Kunj, Haridwar– 249411, Uttarakhand

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|----|--|--|
| 2. | University of Petroleum and Energy Studies, Dehradun | <p>Address for Campus Office:
University of Petroleum & Energy Studies (UPES),
Energy Acres,
PO Bidholi via Prem Nagar,
Dehradun– 248007,
Uttarakhand</p> <p>Address for Correspondence:
Centre for Continuing Education (CCE),
University of Petroleum & Energy Studies (UPES),
SCO, 9-12, Sector -14,
Gurgaon – 122001, Haryana</p> |
| 3. | ICFAI University, Dehradun | <p>Directorate of Distance Education
ICFAI University,
Dehradun,
Rajawala Road, Central Hope Town,
Selaqui, Dehradun – 248197,
Uttarakhand</p> |

WEST BENGAL

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|----|--|---|
| 1. | Jadavpur University, Kolkata | <p>Directorate of Distance Education,
Jadavpur University,
Jupiter Building,
Kolkata – 700032, West Bengal</p> |
| 2. | Rabindra Bharati University, Kolkata | <p>Directorate of Distance Education,
Rabindra Bharati University,
Emerald Bower Campus,
56A, B.T. Road, Kolkata – 700050,
West Bengal</p> |
| 3. | University of Burdwan, Burdwan | <p>Directorate of Distance Education,
University Of Burdwan,
Golapbag, P.O. Rajbati,
Burdwan– 713104, West Bengal</p> |
| 4. | University Of Kalyani, Kalyani | <p>Directorate of Open and Distance Learning, University of Kalyani,
B-12 /195, Kalyani,
Nadia – 741235, West Bengal</p> |
| 5. | University of North Bengal, Darjeeling | <p>Directorate of Distance Education,
University of North Bengal,
Door-SikshaBhawan,
P.O. North Bengal University,
Raja Rammohanpur,
Dist. Darjeeling – 734013,
West Bengal</p> |
| 6. | Vidyasagar University, Midnapore | <p>Directorate of Distance Education,
Vidyasagar University,
Dist. Paschim Medinipur,
Midnapore West – 721102,
West Bengal</p> |

INSTITUTES		
1.	Symbiosis Centre for Distance Learning, Pune	Symbiosis Centre for Distance Learning, Symbiosis Bhavan, 1065-B, Gokhale Cross Road, Model Colony, Pune – 411016, Maharashtra
2.	IMT Distance and Open Learning Institute, Ghaziabad	IMT Distance and Open Learning Institute, A-16, Site-3, UPSIDC Industrial Area, Meerut Road, Ghaziabad, Uttar Pradesh
3.	Welingkar Institute of Management Development and Research, Mumbai	Welingkar Institute of Management Development and Research, Welingkar Institute of Management Studies, C.T.S 163/10 to 179/10, Lakshamsi Napoo Road, Next to 'R.A. Podar College, Near Matunga Central Rly Station, Matunga, Mumbai– 400019, Maharashtra
4.	AIMA, Delhi	Centre for Management Education, AIMA, Management House, 14, Lodi Institution Area, Lodi Road, New Delhi – 110 003
5.	Sinhgad Technical Education Society	Sinhgad Institute of Management, Sinhgad Technical Education Society, 44/1, Vadgoan, Budruk, Off Sinhgad Road, Pune – 411 041, Maharashtra
6.	IILM Institute of Higher Education, Gurgaon	IILM Institute of Higher Education, Plot No – 69, Sector – 53 Gurgaon, Haryana
7.	Institute of Rail Transport, New Delhi	Institute of Rail Transport (Regd.) 17-18 Rail Bhawan, Raisina Road, New Delhi – 110 001
8.	Indian Institute of Carpet Technology, Bhadohi, UP	Indian Institute of Carpet Technology, Chauri Road, S.R.N, Bhadohi – 221 401 Uttar Pradesh
9.	Indira International Distance Education Academy, Indira Group of Institutes, Pune	Indira International Distance Education Academy (IIDEA), Sl. 1/1, Millennium Arcade, Chaphekar Chowk, Chinchwad, Pune – 411033
10.	TECNIA Institute of Advanced Studies (CDL), New Delhi	TECNIA Institute of Technology, 58 Tecnia Institute of Advanced Studies, TECNIA Institute of Technology, F-19/14, Sector-8, Rohini, Delhi – 110 085

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| 11. | JK Business School, Gurgaon, Haryana | JK Business School,
Damdama Lake Road,
Tehsil Sohna, Village Bhondsi,
Gurgaon, Haryana |
| 12. | PSB Educational Foundation, Pune,
Maharashtra | PSB Educational Foundation,
D-302, Wonder City, Katraj,
Pune – 411046, Maharashtra |
| 13. | NIMT Institute of Management and
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