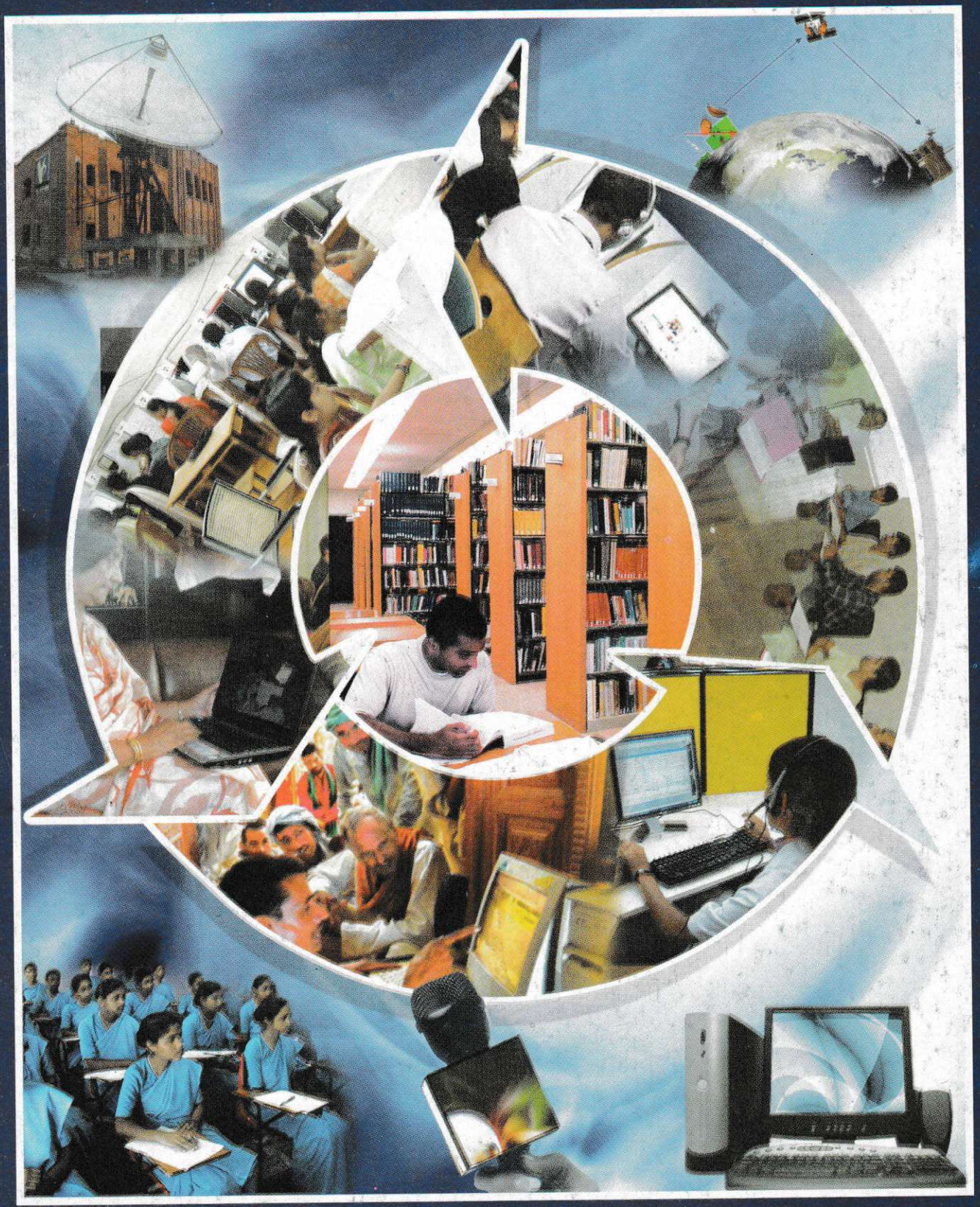
INDIRA GANDHI NATIONAL OPEN UNIVERSITY
School of Extension and Development Studies

MAE-003

KNOWLEDGE MANAGEMENT, INFORMATION DISSEMINATION AND NETWORKING IN ADULT EDUCATION



Networking and Adult Learning

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Indira Gandhi
National Open University
School of Extension and
Development Studies

MAE-003
Knowledge Management, Information Dissemination and Networking in Adult Education

Block

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NETWORKING AND ADULT LEARNING

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COURSE MAE-003 KNOWLEDGE MANAGEMENT, INFORMATION DISSEMINATION AND NETWORKING IN ADULT EDUCATION

BLOCK 3 NETWORKING AND ADULT LEARNING

Introduction to the Block

This Block deals with different aspects of networking in the context of adult learning. It explains the concept, significance, fundamental principles and types of networking in adult education. It presents various types of computer networks such as LAN, MAN and WAN, different components of network, importance of Internet, and its benefits and advantages including e-mail lists of sites related to adult education. It highlights ways and means of using latest ICT for networking, improving infrastructure and facilities, implementation of adult education policies and programmes, and streamlining coordination, management and administration to enhance production and dissemination of information. It discusses a few case studies that highlight the beneficial effects of generating locally relevant information and making its database. It also presents a global case study called Adult Learning Documentation and Information Network (ALADIN), a professional network of networks in the field of adult education with a summary of its aims, objectives and activities. This consists of four units i. e. Units 10 to 13.

Unit 10 deals with networking in social and professional life by providing an insight into the basic concepts and principles of networking that are necessary for professional growth of adult educators.

Unit 11 systematically expands the concept of network and describes different types of networks. It also focusses on components of networking, use of information and communication technology for networking and providing internet services for adult literacy and education, Electronic Networking of Practices (ENoPs), problems associated with ENoPs and role of networking vis-a-vis library and information services in an adult learning setup.

Unit 12 presents various types of computer networks such as LAN, MAN and WAN, and their importance in adult education and usefulness to adult educators. It also presents a few case studies that highlight the beneficial effects of instructional technology in generating locally relevant information, making its database and disseminating information through computer networks at the local level for reaching the unreached and the less-reached.

Unit 13 describes Adult Learning Documentation and Information Network (ALADIN), a case study of global network of professional networks by providing a summary of its aims, objectives and activities in the field of adult education.

UNIT 10 NETWORKING IN SOCIAL AND PROFESSIONAL LIFE

Structure

10.0 INTRODUCTION

Networking places an important role in social and professional life of an individual. In Unit 10, we have, therefore, attempted to introduce the concept, need, nature and types of networks and their relevance to social and professional lives of adult educators. We will also present some important websites that provide links or access to various types of resources which can be exploited by adult educators for their professional development as well as for the benefit of adult learners and the community.

10.1 OBJECTIVES

It is expected that after going through this Unit you will be able to:

- Explain the need and concept of networking;
- Discuss the basics of professional networking;
- Enumerate diverse types and benefits of networking; and
- Appreciate the relevance and importance of networking in social and professional life.

10.2 NETWORKING

Let us understand what a network is and why we should network. Since networking is primarily a social activity, it is relatively simple and easy to apply its methods for building a professional network as well so that we will be in know-how of emerging themes in our profession. Networking enables us to use consultation to organise our activities at work, ensure that we receive credit for our innovations and above all learn to engage professionally with active scholars

from different disciplines and cultures. So, in a nutshell, our concern here is to establish effective relationship between our professional network and our work. It reflects the process of weaving ourselves and our work into a set of professional links. In Units 11 and 12, you will study about the nuts and bolts of networking and computer networking, network building and concepts underlying advanced networking that includes the process by which our networking and work interests in adult education become institutionalised. So, let us first discuss some fundamental aspects of professional networking.

10.2.1 What is a Network?

Network refers to accessing the links to relevant people/resources we know and then to people/ resources they know. Here, we use the term "relevant" in functional terms, that is, we know how our professional world operates and with whom we have mutual interests in our professional life. Our network will in this sense comprise those interests of others which are similar to our professional interests.

The process of accessing the links is established in an organised way, for a specific purpose. Networking involves establishing goals, analysing the kinds of help we need in achieving our goals, analysing and developing our skills, and finally building and cultivating our network. In so doing, we need to keep in mind some qualities of people – who like to give advice, like recognition, like to be helpful, etc. Furthermore, it is a fact that knowing about and accessing resources referred to by those who belong to one's network has always helped in analysing and developing one's professional skills. In a network, one is always receiving help and at the same time one is also enriching the network by sharing knowledge and resources, and by offering to enhance its size and quality of its database. In this sense networking is like a two-way street. It is not just asking for help, but agreeing to be helpful in return.

10.2.2 Why Network?

It has been found that calling someone after a referral generates 80 per cent more results than a cold call without a referral, 75 per cent of people get their jobs through networking. Have you heard about the Law of 250? It refers to a chain of contacts. Every person knows at least 250 other people, each of your contacts knows at least 250 people, so that comes to 62,500 people at your 2nd level of contacts. Each of your 2nd level contacts knows 250 people - and that is over 15,000,000 contacts. Here, many contacts may be common. Yet, without going into enormous figures cited above, you can safely say that through your contacts at the first and second levels, you can more reasonably expect to obtain information and other assistance for achieving your goals than you would if you had no contacts at all to tap.

In this sense a network is like a tap that we can shut or open as per our needs. We need, of course consciously, to keep our presence in it alive if we wish to continue to enjoy its benefits. The more we contribute to maintaining it, the better it will serve us. But, we must do it by adhering to some basic principles of professional life.

Check Your Progress

Notes: a) Space given below the question is for writing your answer.

b) Check your answer with the one given at the end of this unit under "Answers to Check Your Progress".

1) State at least two goals for which you like to be part of a network and then write a short note on the kinds of skills you like to develop in order both to give help and receive help.

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10.3 BASIC PRINCIPLES OF PROFESSIONAL SOCIAL LIFE

How do we become a part of a professional network? Here, we encounter two fundamental principles of professional social life. The first one pertains to articulation of commonalities. It has two dimensions. One dimension is that we develop relationships with people on the basis of shared values, shared goals, shared research interests, or anything else of a professional nature that we would share with others in our profession. In order to articulate commonalities, we need to formulate a distinct language for establishing our professional relationships. Since the people who excel in our profession (i. e., adult education) often live in different parts of the world and hold worldviews quite different from your own. We will certainly need to learn more to express ourselves in a language that is understood by our professional colleagues at home and abroad. The other dimension of this principle pertains to exploration of differences, disagreements, debates and other engines to promote clear and analytical thinking. It is no use to avoid conflict in our professional relationships. Rather we need to be able to assert our opinions in public at professional forums. Of course, disagreements are always conducted within the framework of articulated commonalities and therefore the principle of articulating commonalities is the secret of sustaining our membership of a professional network.

The second principle of professional life refers to what the sociologists like to call "structural holes". We may like to read more about this concept in Ronald Burt's book, *Structural Holes: The Social Structure of Competition*, published in 1995 by Harvard University Press. A structural hole refers to a group of people

who do not know each other but professionally speaking ought to know. Our professional interests define a structural hole and we get a place in that hole because we have formed relationships with all those whose professional interests are linked to our professional interests in several different directions. The fact of different directions is indeed relevant because our professional relationships are mostly with those from different communities and regions. The more diverse the relationships we form with people/resources, the more unforeseen will be the opportunities that arise for our own professional growth as well as for others. Being placed in a structural hole that contains professionals in several other communities, we need not fear the isolation of a limited world of relationships within our own professional colleagues. We can enter a professional network through the Internet as well. In order to learn about using the Internet for this purpose, we need to refer to information about Internet tools explained in any basic course on computer operations for beginners. So, if you do not already possess the relevant skills, better you acquire them now. However, you will get some basic understanding of the Internet and its uses in Unit 11 of this Block.

Check Your Progress

Notes: a) Space given below the question is for writing your answer.

b) Check your answer with the one given at the end of this unit under "Answers to Check Your Progress".

2) Identify common values, goals and research interests you share with fellow adult educators and list the number and nature of social relationships you have formed within India.

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10.4 TYPES AND BENEFITS OF NETWORKING

As we all know networks can be very diverse. Krolak (2003) mentions the following types of networking in a handout on Networking:

- horizontal (same sector, same level), vertical (same sector, different level) or cross sectoral (different sectors, different level);
- informal (no coordination), non-formal (some form of co-ordination) or formal (registration with legal and financial responsibilities);
- local, national or international;
- unrestricted or restricted;

- centralised or decentralised; and
- highly structured or unstructured

Benefits of Networking: Krolak (2003) also mentions in her handout on networking the following benefits of networking.

- Facilitating the exchange of (professional) information, ideas, skills, knowledge, experiences, expertise and materials.
- Linking people of different levels, disciplines, organisations and backgrounds.
- Restricted access to communication tools such as e-mail.
- Providing the critical mass needed for advocacy, action and policy change.
- Providing members with a source of peer support, status, encouragement, motivation and professional recognition.
- Organisational strengthening.
- Offering capacity building opportunities such as workshop, conferences and exchange programmes.
- Providing interpersonal or intercultural relations and communication skills.
- Offering opportunities to access e.g. funds, training, scholarships.
- Recommending or referring individuals or organisations.
- Offering marketing opportunities to a wider audience.
- Creating awareness of similar and shared concerns and common objectives.
- Making best use of (limited) resources and pooling them centrally.
- Joint cataloguing / union catalogue.
- Fighting the feeling of isolation.
- Developing new leadership and improving competence and capabilities.
- Learning from each other.
- Supporting co-operative group work and team building.
- Less duplication of work and effort.
- Working as a group gives a better chance to solve common problems more quickly and effectively.

With this understanding of the types and benefits of networking you can start networking with different networks. For your ready reference and access to certain websites, you can look at Section 10.5 below.

10.5 ACCESSING WEBSITES USEFUL FOR ADULT LEARNING

You can try and access the following websites, which are in fact very useful to you and you can discover the type of networking each one belongs to. Please note that you may not find all the links functioning at the time you may try to open them. Often one link may not be functioning or may have been withdrawn or may have been in the process of its up-dation, so do not despair and keep trying to access. You may find some websites still operational and quite useful to you. All the same, it is better to approach this exercise with caution and not feel disappointed if you can not open some of the links listed below.

The List of Links or Websites Useful to Adult Educators:

Adult Basic Learning and Education (ABLE) — http://www.bellanet.org/adultlearning/inde10.cfm: It is a comprehensive site with documents and an extensive bibliography of publications on adult education and learning. It includes information, list of participants and on-line archives of contribution to the ABLE online forum that took place in May and June 2002.

Andragogy Net — http://www.andragogy.net/: It includes information on upcoming adult education conferences and international and national organisations and institutions.

Asian South Pacific Bureau of Adult Education (ASPBAE) — http://www.aspbae.org: ASPBAE's fundamental purpose is to defend and advance the rights of adults throughout the Asia-Pacific Region to learn throughout their lives in order to gain control of their destiny.

Commonwealth of Learning (***ALADIN Member***) — http://www.col.org/: A comprehensive site with information, electronic resources, and knowledge services on distance education and learning.

Educational Resource Information Center — http://www.eric.ed.gov:/: Access to ERIC's databases provides all clearinghouses, publications, ERIC's digests, information services and updates from the system.

ERIC Clearinghouse on Adult, Career, and Vocational Education (ERIC/ACVE) (***ALADIN Member***) — http://www.ericacve.org/: A comprehensive site with a variety of information resources including access to ERIC's databases and information services, database of ERIC/ACVE publications, In-process abstracts, links to a variety of information services and resources, listings of electronic journals, and access to a variety of relevant sites.

European Association for the Education of Adults (EAEA) (***ALADIN Member***) — http://www.eaea.org/: Website includes information on the activities of EAEA and its member organisations, directory of members, news and events on adult education and documents on adult and lifelong education policy in Europe.

Informal Education — http://www.infed.org/: It provides access to the online encyclopedia of informal education and to e-archives of informal education documents and publications.

International Bureau of Education (IBE) (***ALADIN Member***) — http://www.ibe.unesco.org/Links/linkhome.htm: It is a comprehensive collection of links to education-related resources, documents, organisations, conferences, data and other information sources.

International Council for Adult Education (***ALADIN Member***) — http://www.web.net/icae: Maintained by the International Council for Adult Education (ICAE) this site includes information on ICAE activities, projects and publications, directory of regional and national member organisations, and current news and events related to adult education and learning.

UNESCO Education Sector (***ALADIN Member***) — http://www.unesco.org/education: It includes news and information on UNESCO's programmes, activities and publications in the education sector. Access to *Education Today*

magazine provides addresses and links to UNESCO offices, institutes and networks. The Virtual Library contains references to educational materials published by UNESCO. Some full-text materials for downloading are included.

UNESCO Information Sources – http://www.unesco.org/unesdi/: Provides central access point to UNESCO's bibliographic, referral (directories, projects, etc.) and full-text databases produced by UNESCO; access to libraries, information services, full-texts of UNESCO documents, photo bank, worldwide translation database and other materials.

10.6 LET US SUM UP

After reading the basics of networking in the context of adult learning as described in Unit 10, you will find that diverse interests have come together under one umbrella, i. e., networking. The unit will open up your networking for more resources from different regions of the world. Only a network of many networks or a meta-network can link diverse constituent elements into a coherent whole. ALADIN, the Adult Learning Documentation and Information Network, is an excellent example of a meta-network and for adult educators it is a mine of knowledge and information on adult learning resources. As adult educators we will discover in ALADIN a welcoming platform to receive a vast database and in return it would welcome accounts of your experiences in the area of adult learning, documentation and information. We will learn in detail about ALADIN in Unit 13.

10.7 ANSWERS TO CHECK YOUR PROGRESS

1) I like to be part of a network for two goals — for sharing knowledge and learning resources and for receiving help from some as well as helping some others. I like to acquire skills relating to promotion of learning among adults and running of an adult learning setup.

2) I share with fellow adult educators at home and abroad common value for spread of education to all sections of society without exception to one's class, gender, age, religion and location. I also share the goal of achieving hundred per cent literacy in India as well as the research interests in ways of devising plans and programmes for adult and lifelong learning in other countries. One's social relationships should extend beyond the realm of one's profession — within and outside one's profession. It is possible to cultivate friendships based on one's common values, goals and interests. Most often, in one's professional career one is able to create a large network of friends and foes. It is interesting to note how not only friends but also foes help one to grow in multiple ways that receive impetus through competition and rivalry.

10.8 REFERENCES

Burt, Ronald. 1995. *Structural Holes: The Social Structure of Competition.* Massachusetts: Harvard University Press.

Krolak, Lisa. 2003. *Energizing ALADIN.* Hamburg: UIE (Unpublished).

UNIT 11 UNDERSTANDING NETWORKING IN ADULT LEARNING

Structure

11.0 INTRODUCTION

An adult educator can improve the facilities and services of an adult education setup by networking. He/she can do the networking only when he/she has a clear understanding of the concept, need, features and components of networking, networking through ICT, Electronic Network of Practice (ENoP) and the role of networking in relation to Library and Information Services. In this Unit we will discuss all these aspects of networking vis-a-vis an adult education setup.

11.1 OBJECTIVES

After going through this unit, it is expected that you will be able to:

- Define networking, its concept, need, features and components;
- Explain uses of the Internet in adult literacy and education;
- Differentiate Communities of Practices (CoPs), Electronic Networks of Practices (ENoPs) and knowledge sharing; and
- Understand the role of networking in relation to library and information services.

11.2 NETWORKING: CONCEPT, NEED AND COMPONENTS

Let us first look at the concept of networking.

11.2.1 Concept of Networking

A network is a social structure made of nodes which are generally individuals or organisations. It indicates the ways in which they are connected through various social familiarities ranging from casual acquaintance to close familial bonds. Networking is basically an inter-institutional arrangement intended to break information isolation. The term was first coined by Barnes (1954). Networking involves a set of skills and activities relying heavily on effective interpersonal communication for gathering, processing, and moving information in an organisation. Networking is a set of behaviours that takes place within the context of organisations.

None of us can survive in any business or profession without a strong network of information and referral sources. Every person has a network of old schoolmates, relatives, colleagues from office, former jobs or leisure activities, and friends. The crucial factor is our mindset towards networking — recognising networking as an important activity, not a waste of time. Networking is valuable not simply because of the information we gather, but because of the sense of cooperation or goodwill that we create. Networking is often considered as the hidden side of organisational leadership.

The human network is a part of social structure composed of individuals, friends, collaborators or other organisations connected through a variety of means, devices and technology — personal computers, mobile phones, gaming consoles and PDAs. In many instances the term 'networking' is described as the architecture of participation. It is the intersection of communications networks and social networks – a telecommunications network where people are the endpoints. Networking is the building and maintenance of relationships with a wide range of individuals, groups or institutions who share common interests, goals or expertise. Networking implies relationships between people which are the determining factor in programmes. Both, men or women, have to network. But women face different challenges than men in the workplace. To meet these challenges successfully women need to put extra effort to network. Networking is about sharing information, ideas, resources, opportunities, etc. As members of a network we look to each other for advice, tips on jobs, careers and employment and create a support system for each other. These informal and strategic alliances can benefit us greatly in our professional growth.

Networking is emerging as an important concept in the study of professional effectiveness, advancement, leadership and organisations. It has been linked to studies of leadership skills, power and influence, career development and promotion tactics, organisational structure and communication processes. Networking has become popularised and is often considered to be related to job seeking and personal advancement, with an emphasis on self-promotion and using others for one's own ends (Stark, 1985).

Check Your Progress

Notes: a) Space given below the question is for writing your answer.

b) Check your answer with the one given at the end of this unit under "Answers to Check Your Progress".

1) i) What is a network?

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ii) What is networking?

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11.2.2 Need for Networking

In any organisation there are structured groups like different departments or work groups and unstructured or informal groups. Individuals' involvement in unstructured groups is equally important, because networking is becoming the best way to accomplish things in organisation. Albercht and Ropp (1984) have found that workers discussed new and innovative ideas in an unstructured group more freely than in a structured group or in a hierarchical role relationship.

Networking is characterised by the following features:

- It is an ongoing process;
- It is a purposeful interaction;
- It is an act of cooperation;
- It is a set of relationships;
- It is people-centred;

- It is a group of complex and diverse interconnections; and
- It is a means for open-ended and flexible progression.

It is essential to approach networking systematically. If you want to develop a good network you should be able to answer the following types of questions :

- In which organisations / events do you need to be visible?
- What kinds of referral sources do you need, and where / how can you meet them?
- Who can influence potential people to choose you, and how can you meet them?
- Who are already your advocates and can introduce you to others?

11.2.3 Networking Components

There are two important elements involved in networking. These are attitudes towards networking and strategies for networking

a) **Attitudes to Networking:** Different people have different attitudes to networking. All persons are not natural net workers nor all net workers have sufficient skills required for networking. Some can develop strong networking skills with a little help, and others are really not comfortable meeting strangers especially in new cultures. We find different attitudes towards networking among different types of net-workers, which include the following.

   i) *Passive Net-workers:* They have title interest in meeting new people, instead, they will gravitate to people they already know, wasting the chance to expand their contacts.

   ii) *Inquisitive Net-workers:* This type of people takes initiative but behave like a detective interrogating suspects. They draw out other people and may learn a lot, but sooner or later the fact that they do not share any information will make others stop trusting them.

   iii) *Social Net-workers:* This type of net-workers take appropriate initiative in meeting new people but keep the conversation on a social level. They may be very popular and receive many social invitations – and so can be very valuable to adult educators in networking strategy. However, they need to understand how to engage them in adult education information exchanges as well.

   iv) *Dedicated Net-workers:* They take appropriate initiatives and are constantly looking for ways to be helpful to others. In return, others often share with them valuable market information and intelligence. These staff members are the heart of the networking team and should receive active support and be rewarded for their efforts.

Even some of those who have strongly supported the view that effectiveness of networking centres around the objective to further ones' own interest, have started seeing the limited scope of this self-serving framework. They say that knowing how to network is practically knowing how to be helpful to the people with whom we work and ask for help in return. In reality, interdependence not independence is the key to getting somewhere in the world of work. Such attitude expresses what is best about networking ability to create an effective support system for oneself which also works to the advantage of others.

b) **Strategies for Networking:** Networking is now becoming an emerging style of functioning within an organisation. People are increasingly learning from one another horizontally; everyone is becoming a resource for everyone else; and each person is receiving professional support and assistance from many directions. In this scenario, we can identify the following as strategies for successful networking (McHale, 1987):

- Finding right track to multiple sources of information related to a project;
- Bridging information flow between functions such as finance and marketing;
- Communicating by both formal and informal means to accomplish projects;
- Doing things and / or gathering information without overpowering others;
- Managing give and take of information flow within an organisation or between organisations, often outside formal organisation lines; and
- Facilitating interchange among individuals who serve as resources to obtain a specific goal.

It has been found that networking can be a decisive factor in working of a successful organisation. Research has proved that workers are more likely to talk about new ideas with those colleagues with whom they also discuss work and personal matters. And those who are well integrated into networks of social relationship at work are more likely to participate in decision making. They can see clearly how they contribute to group performance and share in the rewards of group performance. It has also been found that highest number of innovations has taken place in those organisations where collaboration, free flow of information and coalitions built of supporters are the dominant characteristics.

Check Your Progress

Notes: a) Space given below the question is for writing your answer.

b) Check your answer with the one given at the end of this unit under "Answers to Check Your Progress".

2) i) Why has networking become so important?

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ii) What are the characteristics of networking?

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iii) What do you understand by attitude to networking and what are the characteristics of a good net-worker?

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11.3 NETWORKING THROUGH INFORMATION AND COMMUNICATION TECHNOLOGY

Now a days, organisations are investing in Information and Communication Technology (ICT) that create intra-organisational electronic network. The purpose is to have "bridging ties" between geographically dispersed organisational members. The main objective is to provide a platform for communication through which individuals working on similar problems may quickly ask each other for help on task-related problem. Educators and policy makers need to stay alert to the needs for programmes that maintain the principle of providing a positive, useful, and quality service. New technologies, though helpful in certain key ways, also create new problems, the foremost of which is training individuals (learners and teachers) on how to implement these technologies in a cost-effective manner. Sometimes, the training process becomes very expensive, and nearly counter-productive, but at the same time, the Internet promises, in some respects to be relatively easy to train on and with. Using on-line networking technology and the Internet not only provide adult learners with new opportunities for literacy and basic skills but also provide them new technological literacy skills in the work place for additional lifelong learning at a higher level. In sum, the Internet-based network technology is one of the most promising areas for literacy work in the world. The benefits of this technology seem well matched with the following problems in the literacy field:

a) The dispersed and diverse population of adult learners,

b) The limited and thinly distributed expertise to learning diagnosis, and

c) The need to connect learners and instructions interactively in an asynchronous manner that takes advantages of learners' needs for independence along with their unavailability for formal classroom instruction.

11.3.1 Technology, the Internet and Adult Literacy

We can argue that in theory, electronic-based technologies are a source of exponential growth in the field of adult literacy. All things being equal, that is, inexpensive access to broad bandwidth of Internet facility, uninterrupted supply

of power and clear link between literacy and poverty alleviation, it is possible to effectively work on the interface between technology, the Internet and adult literacy.

a) **Electronic Technologies:** Computers, wireless communications, videotapes, and the like – are now being incorporated into elementary, secondary, and college level education, among others. Adult literacy programmes, in contrast, still lag far behind in using the latest technologies for instruction. Earlier studies show that many adult literacy programmes have a foothold in technology, but this was mainly in the use of microcomputers for administrative purposes, not instructional ones. Economic considerations clearly were a major impediment to technology implementation in adult literacy programmes. Besides that there is also inadequate staff training and lack of information on effective implementation of technologies and its specialised uses. But, now because of the development in ICT on the one hand and cost reduction on the other, its usage has grown.

Benefits of ICT in Adult Literacy: These technologies hold enormous promise for the future of adult education, because they can:

- Reduce the isolation that many adult literacy providers and learners experience,
- Facilitate communication among staff and learners within and between programmes,
- Increase access to high quality materials and emerging research,
- Streamline administrative and reporting processes, and
- Help to provide a delivery vehicle for innovative instructional and staff development approaches.

b) **Advantages of Networking and Adult Literacy:** There are some clear advantages of networking and Internet technology both for adult learners and for adult literacy programmes.

For learners, these include:

- reaching learners outside of the classroom,
- using learning time more efficiently,
- sustaining motivation,
- individualizing instruction, and
- providing access to information tools.

For adult literacy programs, these include:

- improved recruiting and training of learners,
- improving curriculum,
- meeting staff development needs,
- enhancing assessment and curriculum, and
- streamlining coordination, management and administration.

Check Your Progress

Notes: a) Space given below the question is for writing your answer.

b) Check your answer with the one given at the end of this unit under "Answers to Check Your Progress".

3) i) How can networking and Internet Technology be of advantage for adult learners?

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ii) What are the problems one may face while using the Internet for adult education?

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11.3.2 Internet Services

The internet allows each of us to access and share information and resources such as government documents, electronic publications, online books, media publishing, human anatomical images, computer software, bibliographic and full-text databases, speeches, live concerts, animal sounds, and motion videos. The Internet's dynamic nature is delivered from world citizens contributing their time, resources and energies to each other. Users consult electronic resources at libraries; download computer shareware and software upgrades. Even the trade is conducted on Internet which is known as e-commerce. To access information on the Internet we need a computer, internet connection, and a browser. The examples of browser can be Internet Explorer, Mosaic, Netscape, etc.

The Internet is a network of networks. It connects millions of computers and thousands of computer networks throughout the world. The Internet Society (ISOC) defines the Internet as a "global network of networks" which enables computers of all kinds to directly and transparently communicate and share services throughout the world. It provides for both communications' capabilities and information services. It also constitutes a shared global resource of information, knowledge and means of collaboration and cooperation among

countless diverse communities. For communication on the Internet it uses standard protocol which is called Transmission Control Protocol (TCP) or Internet Protocol (IP).

The different services of internet provide different benefits to its users, depending upon the various tools and technologies it makes available to them.

a) **Benefits of Internet:** The Internet supports and encourages the new learning environments which are based on principles of active learning — reflecting the change in the culture of education from teacher-centred to learner-centred. The Internet can be used for a variety of purposes from a library. Some of them are:

1) to exchange e-mail instantly with institutions in India or abroad;

2) to participate in teleconferences with people on topics of interest or research problems in adult education;

3) to find out educational information from universities' libraries and book-stores all over the world;

4) to search on-line library catalogues for bibliographic data and other databases for textual data; and

5) to have access to electronic journals, newsletters and in-house information of many organisations and institutions.

b) **Variety of Technologies:** There are various tools or technologies to access the information on Internet and these are changing rapidly. Like e-mail, telnet, FTP (File Transfer Protocol), the Internet shifted its emphasis to navigation aids such Wide Area Information Servers (WAIS), Archie, Mosaic, Usenet, Gopher and the consumer oriented home pages of the world wide web (www or simply the web). Gopher, Archie and WAIS were popular before the advent of www which provides most of these facilities and hence these are less used now.

i) *Electronic Mail (E-mail):* It is the quickest, means of two-way communication of the text, etc. Using e-mail is cheaper than the surface mail. It allows communication of words, documents, programmes, photos, images and sounds with anyone who has e-mail account on Internet. E-mail facilities available from Microsoft Network, Netscape Communications, Hotmail, Rediff, etc are free, while as this facility put up by Compu Serve, American Online, Delphi is subscription based. In India NICNET offers electronic mail facilities only to Research and Educational Networks (RENNIC) .

Using e-mail, a letter/document typed on a computer is sent as a message to an electronic mail box with a specified destination address. A typical address may look like abc@icssr.org In this 'abc' specifies local part giving the name of mail box on a destination computer and 'icssr.org' is domain name. 'abc' is known as mail-id or mail identification number.

ii) *Bulletin Board Service (BBS):* It is more than an e-mail system. It is a medium for posting and discussing announcements and messages of interest to a community of online users. Bulletin Boards are of two types: moderated and non-moderated. There are thousands of bulletin boards covering a number of subject fields and sub-fields available over

the Net. In India, there are about 22 BBSs (14 of them are from Delhi online).

iii) *Discussion Forums / Groups / Lists / Listservs:* A mailing list or list server on the Internet permits people to discuss different issues concerning a topic. A list server has two e-mail addresses, viz. the list serve address and the list address. Any message sent to the email list address will be distributed to every member of that list. There are plenty of e-mail lists related to adult education e.g. bit.listserv.edtech, misc.education.adult. Both are adult education discussion groups.

iv) *Newsgroup:* In a newsgroup, a query or a message on any topic or subject is posted / to entire newsgroup. Other interested members of the group can reply to them. Each newsgroup is confined to one subject and an individual can be a member of more than one newsgroup.

v) *File Transfer Protocol (FTP):* This facilitates transfer of text or binary files between an FTP server and client.

vi) *Telnet:* It allows Internet users to log in to a remote computer and browse its files as if their own computer was actually connected via a local area network to the remote computer host.

vii) *World Wide Web (WWW):* World Wide Web or WWW web is the most popular and highly used service on the Internet. It can be defined as a hypertext, multimedia, distributed information system. www provides links to hypertext documents, Internet tools and databases. It is a system of Internet servers that supports hypertext to access several Internet protocols on a single interface. Internet services could be e-mail, telnet, FTP, Usenet, HTTP (Hyper Text Transfer Protocol).

Other Internet services are: Gopher, VERONICA (Very Common Rodent–Oriented Network Index to Computerised Archives), WAIS, Archie, Mosaic, Chat and Instant Messaging.

11.4 ELECTRONIC NETWORKS OF PRACTICE (ENoPs)

In an effort to replicate traditional social networks electronically, organisations are now investing in computer-mediated communication technologies to facilitate knowledge sharing regardless of time and space constraints. These emergent virtual communities are referred to as electronic networks of practice (ENoPs). Needless to say, communication within this network of practice occurs primarily through computer-based communication technologies such as bulletin boards, list-serves, etc.

One of the main characteristics of an ENoPs is that the participants in the network interact with one another to help each other to solve problems. By posting a message, individuals seeking help can reach out others who can provide valuable knowledge and insight in response to it. The posting of messages and responses is recorded like a conversation between participants. This shows active mutual engagement in problem solving; and the characteristic of mutual engagement distinguishes it from more static form of electronic knowledge exchange, such as document repositories and other types of databases.

Another characteristic of an ENoP is the fact that the technology supports any number of participants. As a result, knowledge seekers are not limited to asking only experts whom they personally know or are able to identify. This increases the possibility of connecting with someone willing and able to help. In addition, knowledge in an ENoP is typically archived and available to all participants in the network. This ultimately creates an on-line repository of questions and answers that can be referred to later by any individual regardless of the fact whether he or she had participated in the original discussion. The value of an ENoP increases dramatically as the number of participants rises.

Moreover, in an ENoP, participation is open to anyone with a desire to interact. The electronic links created by the Internet and related technologies that enable individuals to communicate are practically ubiquitous, thus membership is open to anyone with a desire whether to participate or not, or how often they participate. They have the choice to determine what they want to contribute, choosing what knowledge they are willing to disclose as well as the length of the message they contribute influencing the quality and helpfulness of the knowledge exchanged. The characteristic of discretionary choices regarding participation and knowledge sharing differentiates an ENoP from other form of virtual network, such as virtual teams in which the members of participants are expected to coordinate effects to deliver a specific outcome.

In addition to these, participants in an ENoP are strangers. Knowledge exchange in an ENoP occurs between people regardless of personal acquaintance, familiarity of location. Since participation is voluntary, knowledge seekers have no control over who responds to their questions. On the contrary, in a traditional social network, people typically know one another and interact overtime creating expectations of obligations and reciprocity that are enforced through social sanctions.

Check Your Progress

Notes: a) Space given below the question is for writing your answer.

b) Check your answer with the one given at the end of this unit under "Answers to Check Your Progress".

4) What is meant by ENoP?

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11.4.1 Why of Electronic Networking?

Electronic Networks of Practice (ENoP) is an excellent means of improving one's own level of technical competence. Additionally, it helps to keep current with technical developments as well as to know who is actively working in what different areas. Technically or otherwise, people gain competitiveness. There seem to be a variety of reasons as to why people help each other. There is a saying, 'nothing comes free'; in order to receive help from the network, individuals feel obligated to help others in return, a strong sense of reciprocity.

In some organisations, like knowledge management companies, helping others is a part of their job. Through their participation they are able to improve level of technical competence of network as a whole and ultimately enhance organisation's competitiveness in the market. The participants of ENoP gain exposure to critical new ideas. They get help and advice not available locally. Some individuals who participate in ENoPs outperform those colleagues who primarily rely on their colleagues for knowledge and advice. A database of all the postings/questions can be made. This will help individuals to find previously discussed topics as well as a means to educate people on how to use e-mail or list-serve technology.

11.4.2 Problems Associated with Electronic Networking

In case of List-Serve mailing lists, even though mail is received in the mail box, yet there is much unsolicited mail. The receiver has to go through that. It wastes much of his/her time which otherwise could be utilised in some other productive work. In a discussion forum the participants are required to enter forum actively; otherwise, he/she gets no postings of the network. An on-line Community of Practice (CoP) may be ephemeral and the knowledge created may be lost, unless proper infrastructure is in place to sustain what has been learnt.

11.4.3 Participation in ENoP and Helping Others

Higher levels of participation and tenure in the ENoP are associated with both acquisition of knowledge from participation in the network and contributing knowledge to others. In addition, both knowledge acquisition from and knowledge contribution to the network are positively related to individual performance. Level of participation in the network is more important for supporting positive knowledge outcomes than the length of time an individual has participated. This implies that newcomers to the network can reap the same benefits of participation as long standing participants.

ENoPs are a type of community in which the knowledge exchanged and created is the community's public good. Mutual engagement in an ENoP is open and voluntary. Participation typically results in the creation of a knowledge repository of archived messages available to all individuals regardless of their original participation.

11.4.4 Knowledge Sharing and Electronic Networks

Tacit knowledge is shared relatively easily between individuals within the community, often without ever being made explicit. Furthermore, these tightly knit social structures facilitate the creation of a shared identity through the development of a common language and social capital (such as norms of behaviour, trust, and obligation), resulting in strong social ties between

individuals. These characteristics have been argued as essential for continuous incremental improvements in the community's practice and thus the *Communities of Practice* (CoPs) are centres for learning and innovation within organisations.

In contrast, as mentioned above, interactions in an ENoP are limited to text-based, asynchronous, computer-mediated communication. As a result, the ability of members to develop a shared identity and common language through narration, collaboration and social construction is hampered. However, ENoPs have a greater reach than CoPs and support the creation of weak electronic "bridging ties" between unlimited numbers of like minded others from across the globe. Due to the extensive reach of these networks, individuals benefit from ENoPs, since they gain access to new information, expertise, and ideas that are often not available locally.

Check Your Progress

Notes: a) Space given below the question is for writing your answer.

b) Check your answer with the one given at the end of this unit under "Answers to Check Your Progress".

5) How is an ENoP different from conventional social network?

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11.5 ROLE OF NETWORKING IN RELATION TO LIBRARY AND INFORMATION SERVICES

Networks connect people on different themes. Networks are beneficial for entrepreneurs, medical professionals, library and information professionals, and many others. Application of networking in library and information field are discussed below.

In recent decades due to the escalating cost of library materials, shrinking library budgets and the vast amount of literature generated, no librarian in the world can serve better with the collections in his/her library. Recourse to world resources is a must and this is possible mostly through library networks and the Internet. Library Network is a group of willing libraries to participate in similar activities of libraries. This leads to sharing of resources among all the participating libraries in the network. Resource sharing among libraries has been practised from the

beginning of library culture, as library cooperation, but it has now become library network. In order to highlight the idea of the importance of library networking, an important example, is that of OCLC, which is catering to 37,000 libraries in 65 countries.

11.5.1 Resource Sharing in Library Network

Library networks allow a number of ways to share resources. Some of them are:

- Union Catalogue.
- Collection Development.
- Cooperative Cataloguing.
- Inter-library Loan and Document Delivery Service.
- Consortium.
- Exchange of Resources.

a) **Union Catalogue:** The functions of library networks can be best served by creating mechanisms that facilitate sharing of resources available in the participating libraries of a network. This is done by creating union catalogues of library resources such as books, periodicals, articles, CDs, video recordings, sound recordings, theses and dissertations, grey literature, etc., in the digital form and making them available to the participating libraries on-line. The network facilitates sharing of these resources among the libraries at a much reduced expense to each library. Union Catalogue is a list of publications of a group of participating libraries. It also gives details of holdings, meaning what volumes of which periodicals are available in which library. The union catalogue will help scholars to find out in which library particular book/journal issue/CD ROM, etc., is available and then go to that library instead of going from pillar to post to find out the same in all the libraries. A few examples of union catalogue of an electronic network are: Union Databases of INFLIBNET (www.inflibnet.ac.in), IGIDR (www.igidr.ac.in), Delnet (www.delnet.nic.in), etc.

b) **Collection Development:** Another important activity is that the participating group should coordinate their collection development. It means there should be no duplication of documents in the network. It can be taken further by asking a particular library to specialise in a particular subject or a format. That way, a scholar has to go directly to that library instead of wandering to many sites. This can save time and energy of scholars. The statistical data for selection of publication can be collected from circulation, inter-library loan, and user-profile of Selective Dissemination of Service (SDI).

c) **Cooperative Cataloguing:** Libraries spend a lot of professional time and energy on organising its collection by way of cataloguing its resources, be it books, journals, grey material, etc. This costs money. Once the publication is catalogued by any member library, it will be available in its Online Public Access Catalogue (OPAC). In a library network, the participating libraries should check the OPACs of other libraries and download the data and merge that in its own OPAC. This way there will be standardisation of the catalogue, and professional time will be saved which can be utilised in other productive work.

d) **Inter-library Loan and Document Delivery Service:** This is the most important and popular service of library network. A library cannot possess

each and every book in the entire universe of knowledge. But, demand of scholars/readers can be varied. For example, if a reader comes to a library 'A' to get a particular book of his/her interest and the library 'A' does not have it. The library 'A' gets this book on loan basis from other library 'B' which has it. This is known as inter-library loan (from one library to another library). If the library 'B' cannot loan out the book to library 'A', it (i. e. 'B') can at least provide photocopy of the required pages. These photocopied pages (document) are delivered to the library 'A' or to the scholar. This is document delivery service.

e) **Consortium:** Consortium is a group of libraries which are endeavouring for the same goal. There is always price escalation. By simple economics or in our daily lives we can see that if we purchase multiple copies of the same product, we get heavy discount. Same applies here. Under library consortium several libraries get together to purchase site licenses for electronic journals or databases, etc. The publishers of these journals or databases give heavy discount to these libraries. Examples can be INDEST, Infonet from INFLIBNET, ICSSR Consortium for JSTOR, etc.

f) **Exchange of Resources:** Each library maintains its resources, be it publications, or staff, or information technology-based products. No library can be self-sufficient in these bad economic days. The participating libraries of the network can exchange their skilled manpower among themselves for a short duration. This way there will be an exchange of ideas and the staff will learn to work in another culture. Sometimes, a library has duplicate issues of various journals. These can be sent to the libraries which have missed or have lost these journals, so that those libraries will be benefitted.

Check Your Progress

Notes: a) Space given below the question is for writing your answer.

b) Check your answer with the one given at the end of this unit under "Answers to Check Your Progress".

6) What are the areas of networking in libraries?

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11.5.2 Network Impediments and Solutions

In a library network, the major issues that need to be addressed are as follows:

- Administrative – The role and importance of managers of the institutions committing their organisations to the networks and to sharing their resources;
- Norms and Standards – Identifying the minimum norms and standards to be employed by the network libraries;
- Hardware and software issues.

Possible Solutions: The above issues could be solved by following measures.

- The Library networks should first compile detailed rules and procedures. and then ensure their proper implementation by the participating libraries.
- The Government and the funding agencies must provide financial support for database creation in libraries and library networks.
- The network managements must organise practical-based training programmes.
- The database development contractors must be encouraged to come up in large numbers to create databases on contract including retrospective conversion. This would speed up the time-consuming task of data conversion.

The network managements must also provide a common software on a cost-to-cost basis for use in libraries on request. For example, INFLIBNET has developed SOUL, DELNET has developed DELSIS (now defunct), etc.

11.5.3 Library and Information Networks: Indian Scene

Currently because of technological advancements and shortage of funds, the libraries instead of building huge collections of books, journals, databases, etc. they provide access to these resources on network basis. There are several library and information centre networks at international level e.g. OCLC, USA (Online Computer Library Centre), JANET (Joint Academic Network), UK; at national level INFLIBNET (Information Library Network), India; DELNET (Developing Library Network, Delhi, India); at city level e.g. CALIBNET (Calcutta Library Network); MYLIBNET (Mysore Library Network), etc. Here, we present only two national on-line networks, viz.- INFLIBNET and DELNET.

a) **INFLIBNET**: Information and Library Network — http:// www.inflibnet.ac.in. It was set up by UGC as one of its autonomous Inter-university Centres. Its major function is to create state-of-art infrastructure for sharing of library and information resources and services among academic and research institutions, i. e., among colleges, universities, etc. Its major objectives are:

   - To promote and establish communication facilities, and to improve capabilities in information transfer and access.
   - To establish Information and Library Network (INFLIBNET), a network for linking libraries and information centres in universities, deemed to be universities, colleges, UGC Information Centres, institutions of national importance and R & D institutions, etc., and avoiding duplication of efforts.

The **main functions or activities** of INFLIBNET include:

- To implement and promote computerisation of library operations and services in the country, following a uniform standard.
- Database Management: To create on-line union catalogue databases of serials, theses/dissertations, books, etc., of various libraries in India. The INFLIBNET databases are compiled by gathering bibliographic records from 142 participating universities in different formats and then merged into a single union database. Each record gives information about holdings of universities. The databases are made available free of cost through Internet at http://www.inflibnet.ac.in. Major union databases and number of records are as follows:

Name of the Database	No. of Records
Books	75,46,314
Theses	1,75,206
Current Serials	13,881
Subject Experts (University)	15,500
Subject Experts (NISSAT)	14,000

- To provide access to indigenously created bibliographic information databases by NISSAT, UGC Information Centres, city networks.
- Establishment of gateways for online accessing of national and international databases held by national and international information networks and centres respectively.
- Optimise resource utilisation through shared cataloguing, inter-library loan service, catalogue production, and collection development. This in turn helps in avoiding duplication.
- To train and develop manpower in computerisation of library operations and networks.
- *Soul Software:* INFLIBNET has designed and developed SOUL software for automating libraries of the universities and colleges. It is a state-of-the-art library management software consisting of six integrated modules, viz. – Acquisition (for book procurement), Cataloguing (for organising book collection), Circulation (for issue and return of books), Serials Control (for periodical acquisition), OPAC Online Public Access Catalogue (for searching) and Administration. The software has been installed in more than 1384 libraries.

  i) *UGC Infonet Internet Connectivity Programme:* Under this programme Internet connectivity within the range of 256 kbps to 2 mbps has been provided to 149 universities.

  ii) *UGC Infonet Digital Library Consortium:* The consortium provides access to 5,000 core and peer reviewed journals and 9 bibliographic databases from 23 publishers and aggregates in different disciplines. So far, 125 universities have been provided access to electronic resources from all the domains of knowledge like arts, humanities, social sciences, physical sciences, life sciences, etc.

b) **Developing Library Network (DELNET):** DELNET was started in 1988 at India International Centre and was registered as a Society in 1992. It is a conglomerate of 1286 libraries all over India and abroad. There is annual membership fee for library to join DELNET. Its objectives are:

- To promote resource sharing among libraries in India and abroad through the development of a network of libraries.
- To collect, store and disseminate information, besides offering computerised information to users.
- To coordinate efforts for effective collection development and reduce unnecessary duplication wherever possible.
- To coordinate with other regional, national and international networks and libraries for exchange of information and documents.

i) *Union Database/Catalogue:* For resource sharing DELNET has been engaged in creation of union databases / catalogues from the beginning. It has developed databases. These are: 1) Union Catalogue of Books (62,36,888 records), 2) Union List of Current Periodicals (31,358 periodicals), 3) Union Catalogue of Periodicals (20,235 records), 4) Database of Periodical Articles (8,88,342 records), 5) CD ROM Database (2,281 records), 6) Union List of Video Recordings (5000 records), 7) Union List of Sound Recordings (748 records), 8) Database of Theses and Dissertations (44,304 records), 9) Union List of Newspapers (70 records), and 10) DEVINSA (Development Information Network for South Asia) database (20,000 records). All these databases have been developed in DELSIS software. Online access is provided to all these databases.

ii) *Services :* It provides following services: 1) Inter-library loan and document delivery service, 2) Professional Training, and 3) Technical Support and Other Services.

- *Inter-library Loan and Document Delivery Service:* DELNET provides this service to its member libraries. At present there are about 1286 member libraries from India as well as outside India. The requests for documents listed in its union databases or photocopy of articles are received by e-mail as well as by correspondence. It is a paid service @Rs.4000/- per year, plus actual photocopying charges.
- *Professional Training:* It conducts tutorials, lectures, workshops and training programmes every year. It also organises National Convention on Knowledge, Library and Information Networking (NACLIN) annually.
- *Technical Support and Other Services:* It provides e-mail facility to its member libraries. Besides these services, it provides technical guidance to libraries. This helps the libraries to adopt latest technologies in their libraries and information centres. The technical guidance relates to hardware, software, communication links, database creation, etc. It also takes up retro-conversion projects of other libraries from time to time. It brings out publications like : NACLIN proceedings, Newsletter, Director's report and other publications. DELNET has developed a few software: 1) DEL-DOS, 2) DEL-MARC, and 3) DEL-PLUS.

Check Your Progress

Notes: a) Space given below the question is for writing your answer.

b) Check your answer with the one given at the end of this unit under "Answers to Check Your Progress".

1) Name a few major library and information networks in India.

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11.5.4 Recent Trends in Social Networking and Libraries

While the term social networking may be new, the concepts behind it – creating community, sharing content and collaborating with others – are not. What is new, however, is the digital medium, which makes connecting links with other people faster, easier and more accessible to a wider population than it has ever been before. The challenge is how to apply social networking in a digital age to enhance and extend the public service mission of libraries. A few tools for social networking are : social software, screen casting, photo sharing, podcasting, instant messaging, message boards, music taste sharing, blogs, wikis.

Some Useful Sites for Social Networking for Libraries:

If we are performing the roles of a librarian and want to be able to share information with clients / readers and students in the easiest way possible, social networking offers a way to do that. With social networking tools, we can create bookmark collections, share notices, etc. There are many sites which can be used for the purpose. Most popular ones are given below:

1) **Blog:** By creating a blog we are able to disseminate information to lots of people at one time. Whether we are updating students on new collections, or just conversing with library staff, blogs are a powerful tool, especially when combined with RSS. Blogs can be used to coordinate multiple libraries / internal communication; RSS can be used to teach in open session.

2) **MySpace:** If a librarian wants to go where the students are, one of the best places to find them is MySpace. Its biggest advantage is its calendar and libraries blog features to improve their presence. The libraries can also include custom catalogue search tools.

Another social media site frequented by students is Facebook. It is librarian friendly. Many libraries have put a series of outreach projects using Facebook to directly promote library programmes and services to select members. Links to the library can be put. A search box which pops up can be put for the library catalogue. Even JSTOR and Worldcat applications can be put.

4) **LibraryThing:** This social cataloguing network is good for librarians. A librarian can catalogue alongwith Amazon, The Library of Congress and more than 200 other libraries around the world.

5) **YoutubeandLibraries:** Youtube is a social site. It has put up many videos, viz. – library promotion, Calegory Public Library, Library Lovers Day, Victorian Police Literacy, Library Events, Information Literacy, For Librarians – New ideas, For Librarians – Staff Development, Training for Librarians on working with Special Needs Patron, etc.

6) **TeacherTube:** TeacherTube is a YouTube for teachers. It presents an excellent opportunity for instructor-librarian collaboration. Instructors can guide students to helpful library resources, and vice versa.

7) **Wikipedia:** Wikipedia is an online encyclopaedia updated by users. We can use this tool to share our knowledge by editing, or simply point library patrons in the right direction. There wikis are used to organise collection of articles.

8) **AskLibrarian:** It is a link in most of the library's websites in developed countries. It is making its presence felt in India. The readers can contact librarians through email, post the query and receive the reply to that through e-mail, thereby saving the reader's time.

Check Your Progress

Notes: a) Space given below the question is for writing your answer.

b) Check your answer with the one given at the end of this unit under "Answers to Check Your Progress".

8) i) What are the tools for social networking in the Internet era which can be used for libraries?

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ii) Name a few websites which are useful for social networking for libraries.

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11.6 LET US SUM UP

In this Unit we have discussed different aspects of networking that are useful not only to adult educators but also to any individual in the society or at work. We know that an individual has always been associated with a network (a group). It can be a network of friends, a family or colleagues or business associates and so on. As a part of a network he can interact with other participants, share ideas, increase his knowledge, help each other, etc. With change of time these networks have become more theme oriented. These can be purely social networks, networks of medical professionals, of charted accountants, of engineers, of librarians etc. There are different types of net-workers like passive net-workers, inquisitive net-workers, social net-workers, and dedicated net-workers. Advancement of information and communication technology has added up a new dimension to networking. It has now crossed language, geographic, social, economic and other cultural barriers. Internet is one of the major developments. Because of this, it is possible to work effectively on the interface between technology, the Internet and adult literacy. The uses of technology for adult literacy and adult education have been growing exponentially in recent years, from computer-assisted instruction to the information highway and to the simple improvements engendered by the use of personal computers in management and information systems. Application of these technologies (ICT) in adult education can do the following: 1) reduce the isolation that many adult literacy providers and learners experience, 2) facilitate communication among staff and learners within and between programmes, 3) increase access to high quality materials and emerging research, 4) streamline administrative and reporting processes, and 5) help to provide the delivery vehicle for innovative instructional and staff development approaches. Development of Electronic Networks of Practice is due to use of ICT in networking. All said and done, there are a few problems as well like unsolicited mail; and the participants are required to participate actively otherwise he/she does not receive any postings of the network. It also requires proper infrastructure.

Networking is an important activity in the field of library and information management. The 21st century has witnessed explosion in the field of Information and Communication Technologies (ICT) and we need to explore ways and means to use the newly available ICT facilities to establish effective communication through networking for sharing ideas and infrastructures. This would in turn create an atmosphere conducive for spreading education and knowledge to adult population. Survival without networking is quite impossible now-a-days. Knowingly and unknowingly, we all network in our social circles and at the organisational level. In adult learning setup, it is important to network to facilitate teaching-learning process, to know and implement new innovations in the field, to implement plans, programmes and policies and to streamline coordination, management and administration. Increasingly, knowledge sharing and resource building in adult education centres is catching up with time. Hence, for every adult educator networking is an area which cannot be overlooked.

Development and management of library networks involves high commitment and tenacious work, particularly in the Indian environment where majority of the libraries do not have qualified and skilled manpower and also the financial resources to introduce automation and the current information technologies.

Cooperation, not only among libraries, but also among library networks is essential for the success of these networks in the country. In view of the discussion in this Unit on different aspects of understanding networking in adult learning, the network managements have to make considerable efforts for detailed planning, implementation, and successful operation of networks in adult education. These efforts call for full-time work; part-time efforts may not only affect the quality, but also delay the implementation of the networks.

11.7 ANSWERS TO CHECK YOUR PROGRESS

1) i) A network is an interconnected group or system of things or people. In a network, information is shared between two nodes or entities, e. g. Network of friends (social network), network of computers, a railroad network, library network, etc.

   ii) Networking is an institutional arrangement intended to break information isolation. Networking involves a set of skills and activities relying heavily on effective interpersonal communication for gathering, processing and moving information in an organisation.

2) i) Network helps the participants to learn technology skills, creativity, and new or diverse views and communication skills. It offers opportunity to create a positive self-image. Networking allows professional groupings, easy sharing of information and resources, and cooperation among participants. It helps in career building by meeting people and building mutually beneficial business relationships. There can be exchange of students or faculty or other resources in a network of libraries or organisations.

   ii) The characteristics of networking include: a) participation, b) openness, transparency and disclosure, c). conversation, d) community driven, e) facilitation, f) common intentions (i.e. an orientation towards a common topic), g) orientation towards a person (i.e. a person is included, not a function or a role. Therefore, the participation in the network cannot be delegated), h) participation on a voluntary basis, and i) principle of exchange as a basis for relationship among the involved persons.

   iii) Network attitude or attitude to networking means behaving according to a belief that everyone (and every organisation) has something to give, and everyone needs something. This process is more about "farming" than it is about "hunting". Following are the characteristics of a good net-worker: a) Follow-up on referrals, b) Positive attitude, c) Enthusiastic/ motivated, d) Trustworthy, e) Good listening skills, f) Networks allows, g). Thanks people, h) Enjoys helping, and i) Sincere.

3) i) Some of the newest methods of Distance Learning (DL) use the Internet and the World Wide Web. DL on the Internet usually takes one of the following forms: electronic mail; bulletin boards/newsgroups; downloading course materials or tutorials; interactive tutorials on the Web; real time, interactive conferencing; "intranets" (internal, limited-access websites); or informatics. Advantages of delivering adult education through the Internet include the following : Time and place flexibility; potential to reach a

global audience; no concern about compatibility of computer equipment and operating systems; quick development time; easy updating of content; and usually lower development and operating costs. On-line courses often feature consensus building and group projects, through which learners can develop skills in collaborating with distant colleagues and cooperating with diverse individuals. These skills are increasingly needed in the global workplace.

ii) Some of the problems are limited bandwidth and slow modems that hamper delivery of sound, video, and graphics; reliance on learner initiative; information overload; access; and social isolation. Computer discussion also requires and facilitates learning-how-to-learn skills. To help learners make effective use of DL methods, skilled facilitation by teachers is essential.

4) ENoP is Electronic Network of Practice. In ENoPs, communication occurs through computer-based communication technologies such as bulletin boards, listservers, etc. In an ENoP: a) participants interact with one another to help each other to solve problems, b) there can be any number of participants, c) participation is open to anyone with a desire to interact, and d) participants can be strangers.

5) Electronic networks allow people to interact, coordinate action, and access and exchange information, all from their desktop computers. These make use of services like electronic mail, electronic publications, bulletin boards, conferencing, on-line information services, digital libraries, electronic transactions and computer playground.

Difference: It is possible to move large amounts of electronic information rapidly from one place to another. Although electronic networks share many of the properties of other communication media (e.g. postal mail, telephones, radio and television), they provide individuals and organisations with communication tools that are faster and more efficient than postal mail, less controlled than radio and television, but are more capable than the telephone or fax machine of supporting large distribution. The traditional media / network operates under more uniform and centrally formulated policy guidelines.

Unlike social networks, electronic networks transcend barriers such as geographic as well as political boundaries. It can bring together people with radically different points of view, moral persuasions and interests.

6) The areas of networking in libraries are: a) union catalogue, b) cooperative cataloguing, c) inter-library loan and document delivery service, d) consortium, e). exchange of resources.

7) A few major library and information networks are: a) INFLIBNET (Information and Library Network), b) DELNET (Developing Library Network), c) CALIBNET (Calcutta Library Network), and d) MYLIBNET (Mysore Library Network).

8) i) The tools for social networking in Internet era which can be used for libraries are: a) Wikipeda, b) RSS, c) Blogs, d) Podecasting, and e) Screencasting.

ii) Few web sites which are useful for social networking for libraries are: MySpace, Facebook, and LibraryThing.

11.8 REFERENCES

Albrecht, T.L. and Ropp, V.A. 1984. Communicating about innovation in networks of three U.S. organisations. *Journal of Communication.* 34(3) pp.78-91.

A Survey of New Media. *Economist,* April 22, 2006, p.7.

Barnes, J. A. 1954. Class and Committees in a Norwegian Island Parish. *Human Relations,* Vol.7, No.1, pp.39-58.

McHale, J. P. 1987. *"Professional Networking",* in R. L. Craiq (Ed) *Training and Development Handbook* (3rd Ed.). New York: McGraw Hill.

Stark, P. B. 1985. Networking: The Brilliant Art of the 1980's. *Vital Speeches of the Day.* 51: 743-745.

Suggested Readings

Bedi, K., Singh, P.J. and Srivastava, S. 2001. Government@net: *New Government Opportunities for India.* New Delhi: Sage.

Berkman, L. F. 2001. "Social integration, social networks and health", in Neil J. Smelser and Paul, B. Baltes (Eds). *International Encyclopaedia of the Social and Behavioural Sciences.* Vol. 21, pp.14327-14332.

Cambridge University Online Dictionary. http://dictionarycambridge.org/define.asp?key=53450&dict=CALD.

Dagron, Gumucio. 2001. *Making Waves: Stories of Participatory Communication for Social Change.* New York: Rockefeller Foundation.

FarmNet Asia (http://farmnetasia.nic.in).

FID News Bulletin. Vol. 46 (11), November 1996, pp.366-374.

Harris, R. 2003. "Information and communication technologies for rural development in Asia", in S. Marshall, W. Taylor and X. Yu (ed.). *Closing the Digital Divide, Transforming Regional Economics and Communities with Information Technology.* Westport, CT: Praeger.

Indira Gandhi Institute for Development Research (See www.igidr.ac.in).

Jackman, R. W. 2001. "Social Capital" in Neil J. Smelser and Paul B. Battes (Eds.) *op.cit.,* Vol.21 pp.14216-14219.

Kaul, Indra. 2004. "Internet Services for Library and Information Centres", pp.725-734 in Vashishth, C. P. and Satija, M.P. (Ed). *Library and Information Profession in India,* Vol.1, part II: *Reflections and Redemptions,* Delhi: B. R. Publishing.

Kohler, H.P. and Buhler, C. 2001. "Social networks and fertility", in Neil J. Smelser and Paul B. Baltes (Eds). *op.cit.,* Vol.21, pp.14381-14384.

Moch, M. K. 1980. Job Involvement, Internal Motivation and Employees' Integration into Networks of Work Relationships. *Organisational Behaviour and Human Performance,* Vol.25, pp.15-31.

Riddle, Dorothy. (1999). Networking successfully. *Information Technology.* October, pp.31-33.

Tarahaat (http://www.tarahaat.com).

UNIT 12 COMPUTER NETWORKS: INFORMATION NETWORKING, PRODUCTION AND DISSEMINATION

Structure

12.0 INTRODUCTION

In Unit 11, we mentioned about electronics based networking. In order to understand fully the concept of networking, Unit 12 provides details about various types of computer networks and also how they are beneficial in day-to-day life. It explains different components of computer network, the Internet, its importance, benefits and advantages, and some e-mail lists of sites related to adult education. It presents different case studies that highlight the use of instructional technology in reaching out to those whom we cannot easily reach, and in generating and disseminating information at the local level. The case studies show that it is

always beneficial to generate locally relevant information and make a database of this information. As an adult educator you need to relate education to development and work on livelihood issues of adult learners. The creation of a rural knowledge repository helps in many ways starting from farming and weather information to awareness about health and developmental programmes. Participation in application-oriented networking provides resources, services and possibilities of improvement in livelihood. In this context, networking helps in bridging the gap between adult educators and adult learners.

You will realize that with the greater use of computers in every field, the use of the computer could not be restricted to a particular place. Networking has revolutionized the use of computer in more cost- effective and productive manner. It allows computers and their users to share information and resources. Its other uses are database server, computer server, email, chat, the Internet, etc. You will find all these discussed in detail in this Unit.

12.1 OBJECTIVES

It is expected that after going through Unit 12 you will be able to:

- Understand the basics of various types of network technologies in the area of computers;
- Explain different components of computer network;
- Familiarize yourself with the Internet and its terminologies, web addresses, advantages, disadvantages and its use in the field of adult education;
- Acquaint yourself with needs and demands of creating demand-driven information, rural knowledge repositories, importance of local websites, databases, bulletin boards, e-mail lists, etc., in adult education from different case studies;
- Appreciate the importance of participation in application-oriented networks and community education.

12.2 NETWORKING THROUGH COMPUTERS

In Unit 11 you have studied how networking through computers is emerging and no one could keep himself/herself away from it any longer. But, there are various types of computer networks, which are not known to many adult learners and adult educators. According to Tanenbaum (2007) these networks include LAN, MAN and WAN. Not only this, there are certain topologies associated with it and there are certain components which carry out these functions. We need to acquaint ourselves with these technical terms and their usage when we move into the area of networking through computers and extend its use to adult learners. Let's discuss in detail about these terms and their everyday applications.

12.2.1 Types of Network

Based on geographical dispersion of computers there are mainly three types of network (Tanenbaum, 2007).

- Local Area Network (LAN).
- Metropolitan Area Network (MAN).
- Wide Area Network (WAN).

Local Area Network (LAN): Computers and other communication devices in this type of network are in a small area and are interconnected together (i. e. networked) through cables. The area can be single building, cluster of buildings in the same campus (See Figure 12.1). Examples can be Local Area Network of Lab in which many may be working or a library which they may be using.

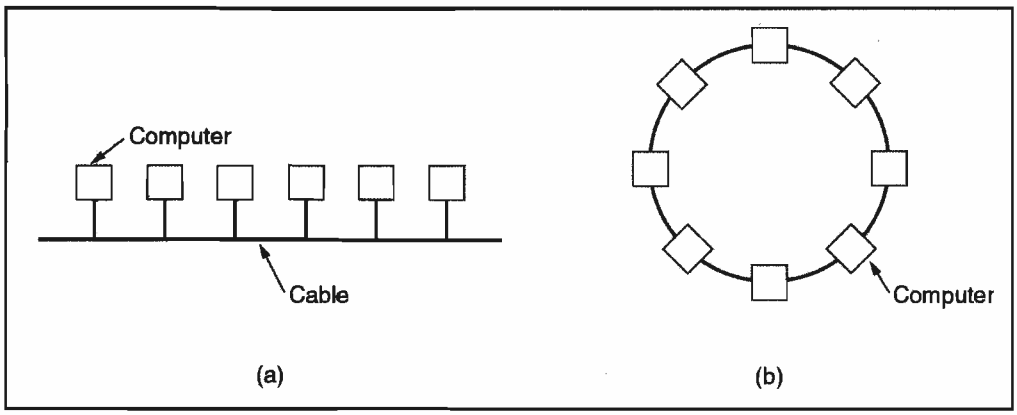

Figure 12.1: Local Area Networks (Tanenbaum, 2007)

Metropolitan Area Network (MAN): As shown in the Figure 12.2 a Metropolitan Area Network (MAN) is basically a bigger version of LAN and normally uses similar technology. It might cover a group of nearby corporate offices or it can be in a city. It can be a private or a public network.

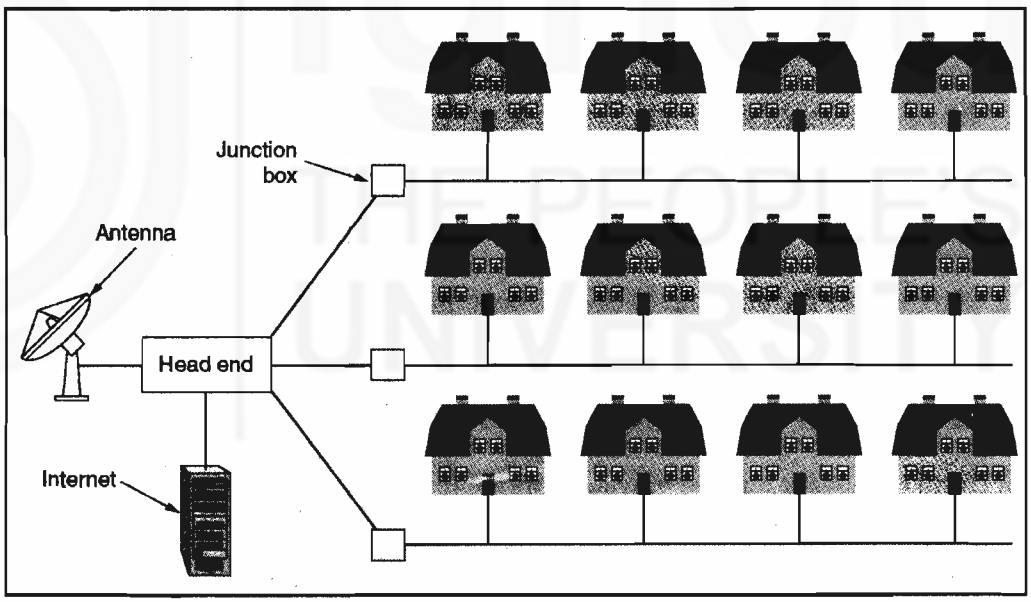

Figure 12.2: Metropolitan Networks (Tanenbaum, 2007)

Wide Area Network (WAN): Computers can be farther apart like covering cities, countries or even continents. The computers are connected by telephone lines or radio waves or optical fibres (See Figure 12.3).

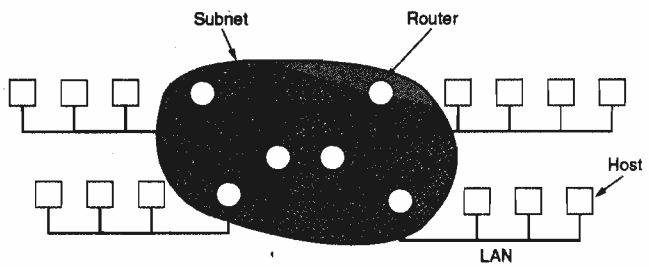

Figure 12.3 Wide Area Network (Tanenbaum, 2007)

12.2.2 Network Topologies

Topology refers to the shape of a network or network's layout. How different nodes in a network are connected to each other and how they communicate is determined by the network's topology. There are four most common network topologies, namely :

- Bus Topology,
- Star Topology,
- Ring Topology, and
- Mesh Topology.

See Figure 12.4 for Bus, Star and Ring typologies.

Bus Topology: All devices are connected to a central cable,, called the bus or backbone.

Star Topology: All devices are connected to a central hub. Nodes communicate across the network by passing data through the hub.

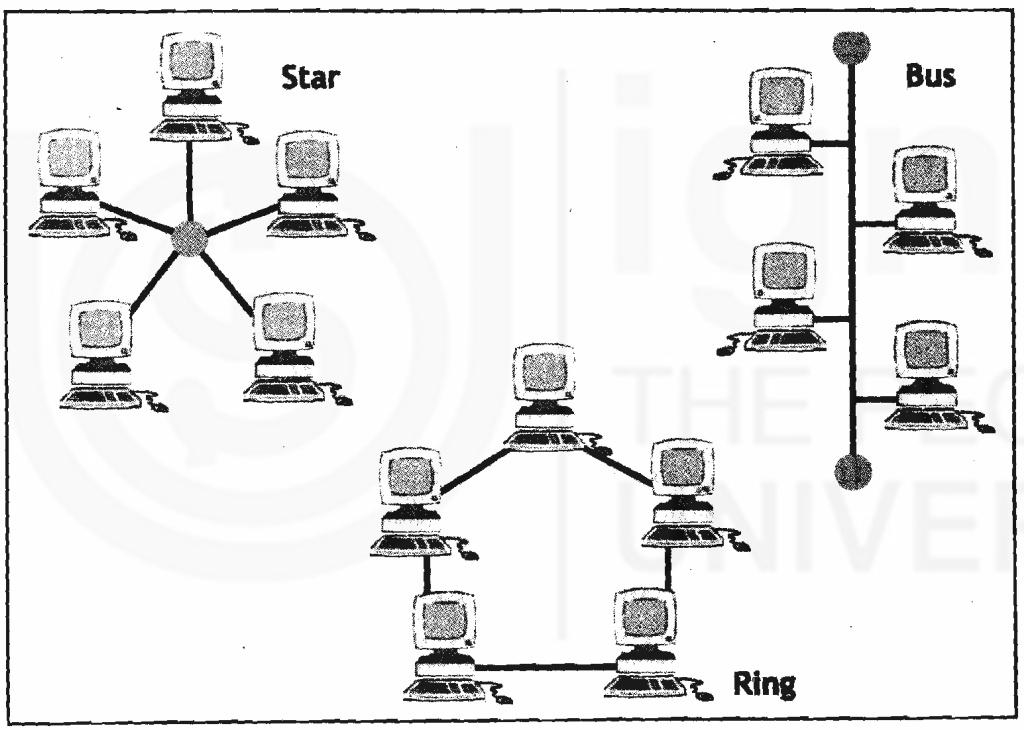

Figure 12.4 Network Topologies – Star, Bus and Ring

Ring Topology: All devices are connected to one another in the shape of a closed loop, so that each device is connected directly to two other devices, one on either side of it.

Mesh Topology or Point-to-Point Network: Devices are connected with many redundant interconnections between network nodes. In a true mesh topology every node has a connection to every other node in the network.

12.2.3 Network Components

The following are the essential components of computer networking.

a) Network hardware.

b) Transmission media.

c) Network operating software.

Let us discuss each of these components in some detail.

a) **Network Hardware:** The basic component of computer network hardware is a computer. Computers in a network can be divided into two categories:
   i) Server, and
   ii) Clients or nodes.

Server is the computer of higher power, and speed. It costs more. Resources are attached to this computer. And the clients, also known as nodes, access the resources which are attached to the server. In peer to peer computer networks, there are no servers. But hardware also needs to be connected. Let us discuss some of the components required for connecting the hardware.

Network Card: Most important part of connection is the network card. This is the middle part of connection. These cards are available as 8 bit cards, 16 bit cards and 32 bit cards. Each card has its own method of sending information (network protocol) through the cable. The most commonly used one is Ethernet Protocol. A network card is called Interface card, network adapter, a NIC etc. It is a circuit board or chip which allows the computer to communicate to other computers in a network.

Figure 12.5: Network Card fixed inside the computer

Modem (MOdulator/DEModulator): A modem converts digital signals (computer signals) from the computer into analogue signals for transmission and vice versa for reception over a telephone line. There are four basic types of modems for a PC: i) External, ii) USB, iii) Internal, and iv) Built-in. External and USB are set on your desk outside the PC, whereas Internal and Built-in are installed inside the PC. Present day modems have a speed of 56 kilobytes (Kb) per second. ISDN (Integrated Services Digital Network) circuits are digital. In this conversion from digital to analogue is not required.

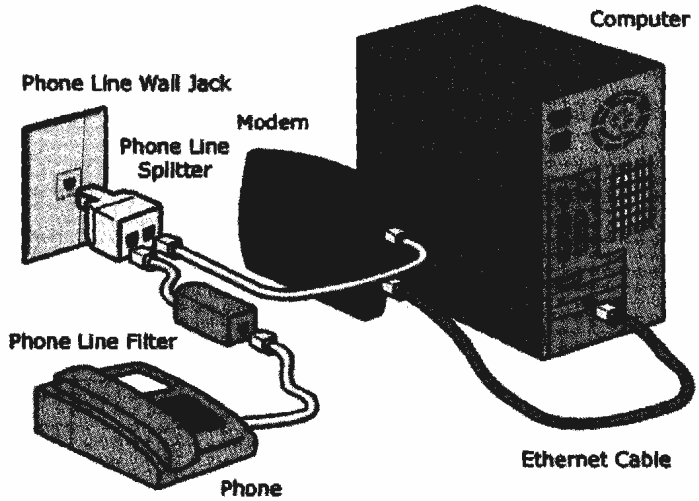

Figure 12.6: MODEM attached to the computer and telephone line

Switch: Switches are basically bridges, but usually have multiple ports. Switches connect network segments, using a table of addresses to determine the segment on which a packet needs to be transmitted.

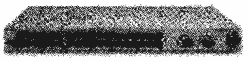

Figure 12.7: Switch

Hubs: A hub is used to connect multiple computers and devices via a dedicated cable. It is cheap and connections are easy. It generally has 4, 8, 16, 24 ports.

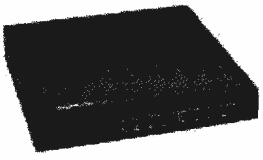

Figure 12.8: A typical example of 8 points hub

Router: The routers are used to connect networks and to determine the optimal path along which the network traffic should be forwarded. They are occasionally called gateways. There are other network devices like repeaters, bridges, ports, etc. Nowadays wireless routers are very popular.

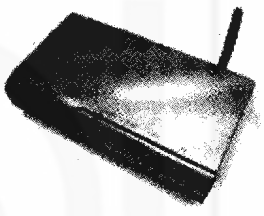

Figure 12.9: An example of Wireless Router

b) **Transmission Media:** Communication of data propagation and processing of signals is called transmission. Signals travel from transmitter to receiver via a path. This path is called medium. Medium can be guided or unguided.

Guided Media: In guided media, data is sent along a physical path i. e. cables. There are several types of cables used in network. The type of cable chosen for a network is related to the network's topology, protocol and size. Different types of cables are: a) Coaxial cables, b) Twisted pair copper wire, and c) Optical fibre cable.

a) Coaxial cable looks like cable that brings the cable TV signal to television.

b) Twisted pair copper wire cable looks like a phone cable. Twisted pair cables come in two varieties, namely, i) shielded, and ii) unshielded.

c) Optical fibre cable is a thin, flexible cable containing a bundle of very fine, highly transparent, tubular glass fibres made of pure silicon dioxide designed to transmit information encoded in pulses of laser light at very high speed by means of internal reflection.

Unguided Media: Here no wire is installed. The data communication is predominantly sent by radio waves and microwaves.

c) **Network Operating Software:** Network operating software (NOS) is a collection of software and associated protocols. NOS allows a set of autonomous computers, interconnected by a computer network, to be used

together in a convenient and cost-effective manner. It is similar to any other operating system like windows, DOS, etc., except that it operates over more than one computer. It controls operation of the network system, including who uses it, when they can use it, what they can access to, and which network resources are available.

At a basic level, the NOS allows network users to share files and peripherals such as disks and printers. They provide data integrity and security. The examples can be categories of NOS: The NetWare, LAN Manager, Solaris and Windows 2000, etc.

The main categories of network software are: i) Peer to peer software, and ii) Client / Server-based.

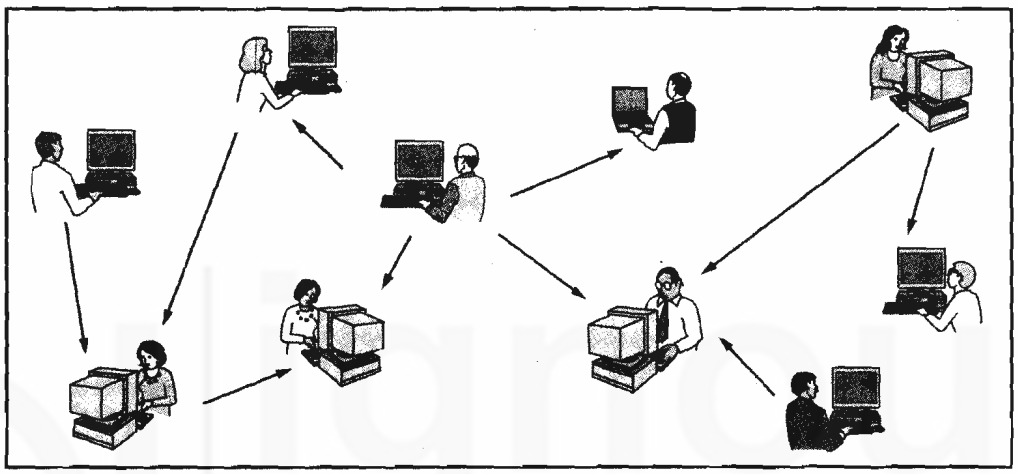

Figure 12.10: Peer-to-peer system (Tanenbaum, 2007)

Peer-to-Peer Software: In peer to peer networking operating software, users can share resources and files located on their computers and can access shared resources on other computers. There is no central server. All computers in the network are equal. They have similar capabilities and resources. Examples of Peer to peer network software are Windows XP, Windows 98. When we are working in Microsoft Office Word under Windows environment, we can share the shared documents. It is possible because Windows XP is a peer-to-peer networking software.

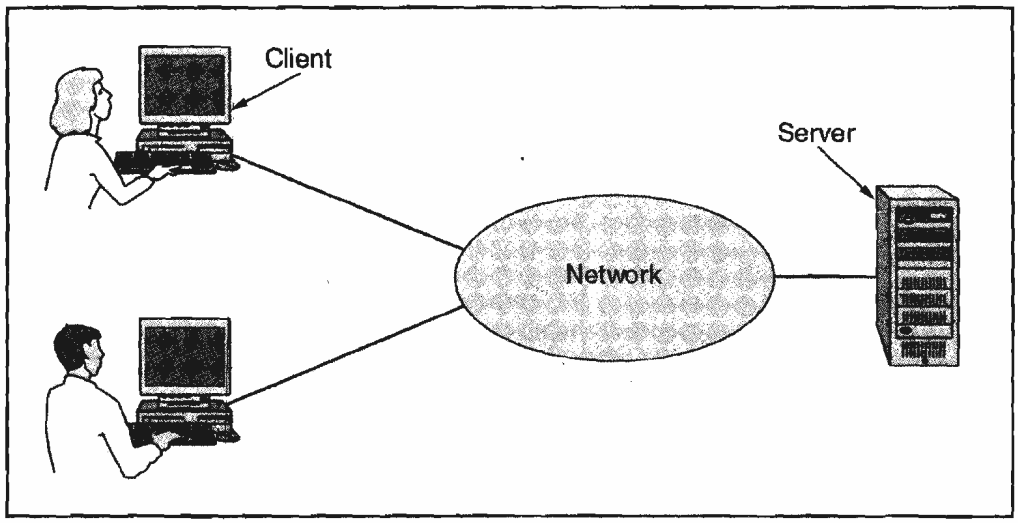

Figure 12.11: A network with two clients and one server. (Tanenbaum, 2007)

Client-Server Based (Two-Tier): This software is in two parts. One part which includes functions and services resides in one or more dedicated computers. This part is called server. It provides security and access to resources. Another part is called 'client' resides on other computers (nodes/client). They access resources on the server. The network operating system allows multiple users to simultaneously share the same resources irrespective of physical location. Examples of Server-based networking software are: Novel Netware, Windows NT, UNIX, Window 2000, etc (See Figure 12.11).

Client-Server Based (Three-Tier): Here a client-software is split into two parts, viz.,

- Browser (user-interface)-thin client, and
- Logic.

Thus, two-tier client-server becomes three-tier architecture. The logic which describes how to access and process data is moved to a new server. This new server is a server for thin client. Nothing changes in the server side.

Reflect and do it for yourself

If there is a computer in an adult learning setup, try to identify the type of network it has and its topology or the shape of its layout. Then with the help of a computer expert, try to find out the type of its network hardware, transmission media and network software. Finally, write a short account of 500 words on the information you got about the computer in the adult learning setup.

LAN: Standards for LAN are Ethernet, Local Talk (for Macs), Token Ring, the most popular in Ethernet Protocol. It allows for linear bus, star or tree topologies. Data can be transmitted over twisted pair, coaxial or fibre optic cable at a speed of 10 mbps.

Check Your Progress

Notes: a) Space given below the question is for writing your answer.

b) Check your answer with the one given at the end of this unit under "Answers to Check Your Progress".

1) i) What is the basic difference between LAN, WAN and MAN?

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ii) How does two-tier client server become three-tier client server?

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12.3 INTERNET

The Internet is a network of networks. It connects millions of computers and thousands of computer networks throughout the world. The Internet has revolutionized our society, our economy and our technological systems. The Internet represents one of the most successful examples of the benefits of sustained investment and commitment to research and development of information infrastructure (See Figure 12.12).

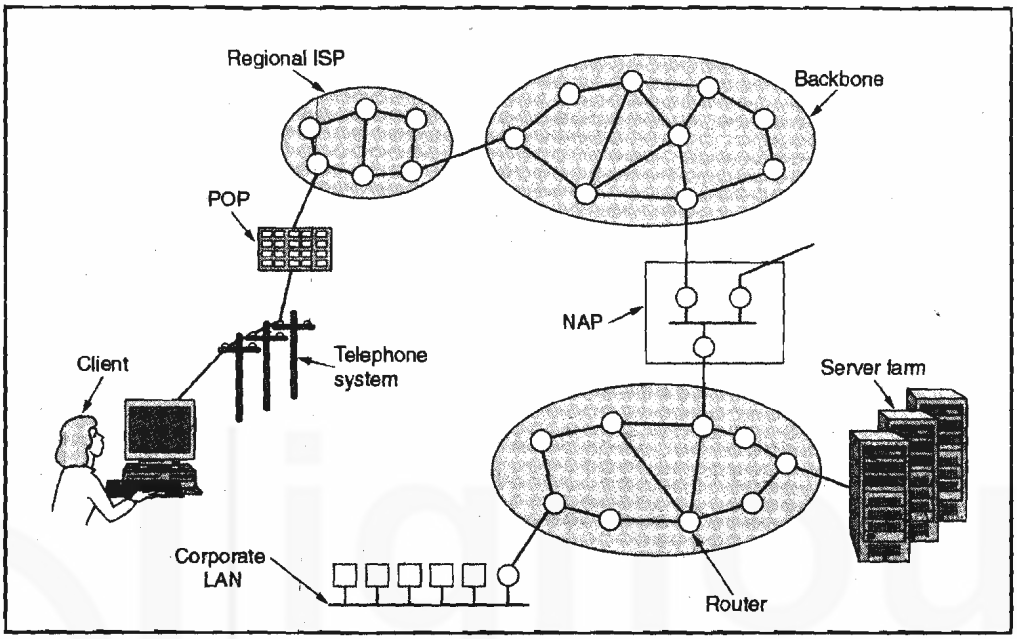

Figure 12.12 : Internet Architecture (Tanenbaum, 2007)

The Internet Society (ISOC) defines the Internet as a "global network of networks" which enables computers of all kinds to directly and transparently communicate and share services throughout the world. It provides for both communication capabilities and information services. It also constitutes a shared global resource of information, knowledge and means of collaboration and cooperation among countless diverse communities. For communication on the Internet, it uses standard protocol called Transmission Control Protocol, Internet Protocol or TCP/IP. Standardized communication protocols allow similar, dissimilar, near and distant computers to communicate with one another. The Internet protocols and standards are re-defined from time to time by various international organisations and committees after rigorous testing and reviewing.

12.3.1 Trends

You may like to know about Internet 2 and Internet 3, which reflect future trends in computer networks.

Internet 2: It is a consortium led by 200 universities working in partnership with industry and government to develop and deploy advanced network applications and technologies, accelerating the creation of tomorrow's Internet.

Internet 3: It includes the US Government's initiative to provide high bandwidth network service.

12.3.2 Adult Education

There are discussion groups and e-mail lists relating to adult learning. You may try to access some of the following resources.

Discussion groups

- *alt.education.distance* - is a group that focuses on learning over the Internet, a form of distance education.
- *bit.listserv.edtech* - is an adult education discussion group.
- *misc.eeducation.adult* - is an adult education discussion group.

E-mail Lists

- ADNET is the adult education network.
- URL: listserv@alpha.acast.nova.edu.
- DEOS-L is the international forum for distance learning.
- URL: listserv@psuvm.psu.edu.
- DISTED is an online chronicle of Distance Education and Communication.
- URL: listserv@alpha.acast.nova.edu.

Your Reflection and Action

i) Have you ever used the Internet? If yes, write briefly about the contexts in which you generally use the Internet. Do you find it an enabling technology? If yes, write a short paragraph, as to how it has enabled you and in what respect.

ii) Have you ever witnessed or participated in an application-oriented network? If yes, share your experience with your colleagues. If not, you open the Internet and browse through some website address given in the unit, search for any information you want. Write down the information you received. Design, propose or encourage others to develop such an application-oriented network keeping in view the needs and demands of adult learners in your region. Try to create a Rural Knowledge Repository in your area by including some of the points given below.

- Major crops of the area and its cultivation.
- Pest and disease management by farmers.
- Names, addresses and information of various occupation-holders of the village.
- Heath centres, their timings, etc.
- Various developmental programs, their contact persons and help lines, if any.
- Loan facilities from bank and the name and address of their contact persons.

12.4 IMPORTANCE OF INTERNET

The Internet is an "enabling technology". When its introduction is sensitive to local values and committed to local capacity building, it offers important opportunities adult educators and learners to:

- **Open dialogue:** Low cost networking facilitates knowledge sharing, awareness of alternative perspectives, more open exchange.
- **Improve governance:** Raising efficiency, transparency, participatory systems.
- **Improve social and human rights conditions:** Expands access to better quality education, healthcare, disaster relief capacity and other services.
- **Reduce poverty:** Opens new opportunities for women, children, rural populations, the poor, and other disadvantaged groups.
- **Introduce economic opportunities:** E-commerce, ICT-sector development, etc.
- **Improve environmental management, GIS:** Food security, early warning systems, etc.
- **Support indigenous knowledge:** Communities document their knowledge.

12.4.1 Disadvantages of Internet

Advances in communication media (VoIP, Instant messaging, e-mail), based on the Internet technology have made computer mediated communication more rich and cheap. Yet, today, this potential for knowledge sharing is not fully realised. Indeed, the internet is by nature an anonymous medium in which people find it hard to repose their faith in it. As a result, people who have had few or no face-to-face meetings are not likely to share knowledge.

12.4.2 Benefits of Internet

It supports and encourages a new learning environment, which is based on principles of active learning-reflecting a change in the culture of education, from teacher-centred to learner-centred.

The Internet can be used for a variety of purposes in a library. Some of the purposes are:

1) to exchange through e-mail instantly with institutions in India or abroad.
2) to participate in teleconferences on topics related to the Internet or research problems in adult education.
3) to find out educational information from university libraries and book stores all over the world.
4) to search on-line library catalogues for bibliographic data and other databases for textual data.
5) to have access to electronic journals, newsletters and in-house information of many organisations and institutions.

Check Your Progress

Notes: a) Space given below the question is for writing your answer.

b) Check your answer with the one given at the end of this unit under "Answers to Check Your Progress".

2) i) What is the definition of the Internet as per the Internet Society?

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ii) Define TCP/IP?

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iii) What is DEOS-L?

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Let us now look at some case studies in order to learn from the practice of computer networking.

12.5 CASE STUDIES-I

Here, we will discuss one network that focuses on teachers and another network that focuses on learners. Then, we will discuss a network that links literacy efforts and future trends.

12.5.1 ALTIN: Focus on Teachers

The gradual increase in use of instructional technology and on-line communications in the field of adult literacy is creating new opportunities on the one hand and reviving old challenges on the other.

Adult Literacy Technology Innovation Network (ALTIN), a technology training programme, was begun in the mid-1990. Its purpose was to provide basic instructional technology staff development for adult literacy teachers, including the basics of instructional technology and electronic on-line communications in a useful and user friendly way. At the same time, it aims at building a network of practitioners who can, after the six months of training, assist other literacy programmes and practitioners by means of a mentoring process. ALTIN has shown

that an electronic training network works best when participants have established a human network among themselves based on their common of interests and needs, have established a level of trust and commitment among themselves for one another, and have identified areas of collaboration and communication that will result in mutual benefit. Face-to-face meetings appear to make such a people-to-people connection easier, helping to increase the level of trust, facilitating the identification of areas of mutual interest and concern among participants, and increasing the accountability and commitment that participants have to each other on-line.

12.5.2 SHELCOM: Focus on Learners

The Shelter Communications Literacy Network (SHELCOM) was an experimental Internet-based computer writing project for homeless adults living in shelters in Philadelphia, USA. The project began in 1993 and was completed in 1995. These poorly educated adults also suffered from a variety of problems associated with drug and alcohol use. SHELCOM showed that such underprivileged populations can be reached effectively through the Internet, in spite of the initial low level of literacy among many participants.

12.5.3 Literacy Link

Literacy Link, funded by the U.S. Department of Education has been designed to serve the large number of Americans who required instruction of additional basic skills. It provides distance education for learners and teachers. As an Internet-based lifelong learning system, Literacy Link has two major goals: a) to increase access of adults to learning opportunities that will enable them to obtain their high school diplomas, and b) to improve the quality of instruction available to individuals and adult literacy providers nationwide through enhanced resources and expanded staff development. Literacy Link is one of the first and most comprehensive initiatives to harness the power of the Internet to provide instruction to adult learners, as well as communities, libraries, schools and homes.

Using ICT for Adult Education Network: Keeping the above in mind, it is possible to establish an adult education workers network. In order to communicate with each other adult educators can create an ENoP based on Listserv Technology. This can also encourage knowledge sharing among them. There is listserv-software available, like SWS. Or alternatively using "Yahoo mail" they can form "Yahoo group of adult workers". Or they can use "gmail" or some other mail, and accordingly form respective group of adult educators. A mailing list of resource people has to be made. If a person needs help to know how to perform a particular task or availability of some information he/she can post a question to the whole network through mailing list. Members of mailing list will reply to his/her question and his/her problem shall be solved.

12.5.4 Conclusions and Future Directions

The above case studies illustrate only a few of the opportunities that have become available through Internet. Some of them are staff development, reaching out to the disadvantaged, and taking advantage of the convenience of learning in the home or the community. In the ALTIN case study, it was found that human networks are an essential component to the electronic networks that are now easily and cheaply available on the Internet. The SHELCOM project demonstrated

that new technologies can be implemented for even the most difficult to reach and difficult-to-retain populations, using fairly simple networking and word-processing techniques. Literacy Link deals with how distance education can provide a cost-effective and comprehensive self-learning system for adult education in the home and the community.

Check Your Progress

Notes: a) Space given below the question is for writing your answer.

b) Check your answer with the one given at the end of this unit under "Answers to Check Your Progress".

3) i) What are the full forms of ALTIN and SHELCOM?

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ii) What is "Literacy Link"?

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12.6 CASE STUDIES-II

Production of information and its dissemination through network can be most effective if it comprises local content. We will discuss here the importance of local content and its creation in India. Then, we will look at the creation of information which is demand-driven. There will be short pieces of information on creation of rural knowledge repositories and local websites, databases, bulletin boards and e-mail lists.

12.6.1 Information Production and Dissemination through Network

Let us discuss information production and dissemination through network with an emphasis on the following:

a) how important is local content, and

b) generation of local content in India.

a) Importance of Local Content: An education centre can provide the members of a community with access to computers for sending and receiving

information. Centre should translate the need to provide people with access to content that they can use in their daily lives. Persons may need such practical content as adult literacy programs, information on public benefits, information on health, consumer goods and credit and loans, employment, training, etc. If a woman in the village has access to the Internet, she will not necessarily be able to use the information to improve her child's health since she may not be aware of the sources of information on health.

Local content is a big challenge for an adult education centre. A multi-nation study by the International Institute for Communication and Development or IICD (2002) suggests that "easier access to globalize knowledge is fast turning us into 'consumers' of distant and potentially irrelevant information". Local content, the report says faces intense competition because big content initiatives by other groups tend to push their external content onto local communities. Thus, developing countries are being invaded by foreign ideas and values that may undermine or overwhelm local cultures.

b) **Generation or Creation of Local Content in India:** Here is a case study of a village knowledge centre (VKC). It shows how staff dealt with the issues of local, relevance and barriers of language. The VKCs established in Pondicherry on the south-east coast of India by the M.S. Swaminathan Research Foundation (MSSRF) demonstrated ingenuity, creativity and sensitivity in developing their information products. In one case, coastal villages were highly dependent on information related to weather and tides. Many fishermen were not literate. Village Knowledge Centre downloaded weather reports from digital network information and converted that to audio. The audio versions were then played on loudspeakers in the open air. In addition, project volunteers in the villages built their own information resources in the center to complement the external databases, thereby providing local and localised information on agricultural, health and government programmes for low-income people. For example, a directory of general and crop insurance schemes; a list of about 130 schemes available as entitlements to rural families; a directory of hospitals and medical practitioners in Pondicherry – grouped according to their specialisations; bus and train schedules covering Pondicherry and two nearby towns; and pest management information for the sugarcane crop. Information must be locally relevant and respond to the information needs of the potential users. In such ways these services contributed to social and economic development of the community and to sustainability of the adult education setup (Harris, 2003).

12.6.2 Demand-driven Information Production in the Warna Wired Village Project

The project area is a cluster of 70 villages in the Sangli district of Maharashtra, India. The project has been jointly implemented by the Government of India through the National Informatics Centre, the Government of Maharashtra and the Warna Cooperative Society. This project was initiated to serve the information needs of the farmers for different crop cultivation practices of major crops, including sugarcane cultivation practices, pest and disease control, marketing information, dairy and sugarcane processing information, and other agriculture-related services.

Apart from information retrieval, there are two client based applications to serve the farmers' needs through the computer booths installed in each village: a) the Dairy Information Centre; and b) the Sugarcane Information System.

In the Dairy Information Centre, information on all farmers who are part of the dairy system is maintained. Other details available to members of the dairy co-operatives include the quantity of milk supplied by each farmer, fat content, billing information and credit details. This information is maintained and updated at the central database on a daily basis.

In the Sugarcane Information System, information on shareholders is maintained. There are about 200-350 shareholders in each village for the sugarcane crop. This system maintains details of the cultivation schedule, the quantity harvested and supplied to the society, the deductions effected by the society, the credit, and the net income due to the farmers. This data is available with respect to each shareholder.

Booth operators of Paragoam, Bhairwadi, Kuralap and Panhala report that an average of 20-25 farmers visit the computer booths every day for information on crop cultivation practices and disease control, marketing, dairy and sugarcane billing details, etc (Bedi, Singh and Srivastava, 2001).

12.6.3 Creating Rural Knowledge Repositories

Tele-centers in Kannivadi and Samiarpatty developed a database on indigenous knowledge on issues such as livestock management, integrated pest management, practices of the farmers in cultivating 42 crops focusing on pest and disease management.

A database on the local expertise has been developed in the form of a rural yellow page. The information consists of names, addresses and information of various village professions such as blacksmiths, carpenters, plumbers, masons, nurses, traditional healers, etc. Similarly, a local consultant has been employed to gather information about all the development programmes in the region. This database provides the information regarding the objectives of the programmes, eligibility for participation, etc. Details of experts in agriculture and health are also kept in the tele-centers.

Camps are organised where experts and villagers meet and discuss various issues of specific subjects. These discussions are captured in audio cassettes and video photography. In a form of questionnaire, the discussions are kept in a database. Camps such as livestock management, credit management, and women's health are also organised. The activities of the region are captured in *Thagaval Thinnai* (information courtyard), where information on agriculture and horticulture prices in the regular local markets, weekly markets and informal markets, social and cultural events, training programmes, visits of experts, local entertainment, weather reports, local employment opportunities, and news from regional newspapers are regularly transmitted through local area network. Moreover, prints-out of some of the location-specific and very vital information are displayed at the public places every day. Thus, *Thagaval Thinnai* is available both in 'on-line' form as well as in print-form. The animators collect information through formal channels such as websites and informal channels i. e. contacting the traders. Some of the main sources of information are the agricultural extension agencies,

the block development officers, commission agents of the flower market at *Nilakotai* (a market town), Gandhigram, a deemed university, etc. The information is collected and disseminated on daily basis. (Thamizoli and Balasubramanian, 2001)

a) **Local Websites:** A local website is developed to help users of adult education centre and guide them to relevant information. On the one hand, the website serves as a medium for introducing/rendering information to the community. On the other hand, the website provides links to useful information sources and present information that has been interpreted into the local languages. The website further links to on-line distance learning material and/or local databases. An example of a community-based website is available at www.tarahaat.com.

b) **Tele-centre Databases:** The tele-center manager, in collaboration with project volunteers, can build databases. These shall be locally generated and, hence, include locally and personally relevant information such as details of government programmes for low-income rural families; local market prices for grain; local farming families; a directory of insurance plans for both crops and input prices; pest management plans for local products; a directory of local hospitals, medical practitioners and their specialities; a regional time-table for buses and trains; and a directory of local veterinarians, cattle, and animal husbandry programmes, etc.

   Databases could further include a collection of application software and reference material such as CD ROMs relevant for responding to local needs. Most software producers donate licence for their software to NGOs or community groups upon request, so if a NGO is in need of software, it can contact the producer.

c) **Bulletin Boards:** Bulletin boards present an easy-to-realize method of presenting gathered information to a wide number of community members. Bulletin boards could be placed outside the adult education centre building and/or different focal points within the community and be updated regularly.

d) **E-mail Lists:** E-mail lists allow the posting of questions, receiving of news updates, and sharing of experiences via e-mail within a group that you define. An e-mail list is identified by a single name, such as mail- list@server.com. A message is sent to the mailing list name and it is automatically forwarded or broadcast to all the addresses in the list.

These mailing lists can be extremely helpful in connecting users of adult literacy programmes to share experiences. For example, Chasquinet, an Ecuador-based NGO, hosts a telecenter in Latin America and the Caribbean.

Check Your Progress

Notes: a) Space given below the question is for writing your answer.

b) Check your answer with the one given at the end of this unit under "Answers to Check Your Progress".

4) i) What do you gain from participation in collaborative networks?

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ii) What is the goal of the TARAhaat project?

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12.7 PARTICIPATION IN APPLICATION NETWORK

The participation in collaborative networks enables information to flow from and to rural communities, facilitates dialogue between communities, intermediaries and development organisations, fosters coordination of national and local development efforts, and overcomes physical barriers to knowledge and information sharing. Networks provide information and help regarding particular topics, as well as access to the Internet, mail connections, radio connections, and e-mail. Generally, these applications use inexpensive store-and-forward systems to provide information on agriculture, public health, medicine, and the environment.

12.7.1 Examples of Different Application Networks

In this Section we will have a brief look at some application networks.

a) **Farmer Information Network (FarmNet):** Farmer Information Network (FarmNet) is a network of rural people and supporting intermediary organisations, such as extension services, using ICTs and conventional communication media to facilitate generation, gathering and exchange of knowledge and information. Operated by farmers and their organisations, FarmNet links farmers to each other and to the resources and services; they need to improve their livelihoods. Design of a FarmNet with the Uganda National Farmers' Association found that the best approach was to enhance existing communication efforts (face-to-face, local radio, publications) with the use of simple e-mail based communication system for information on markets, improved agricultural technologies and weather conditions.

FarmNet Asia (China, India, Indonesia, Nepal, Philippines, Sri Lanka, Thailand and Vietnam): The FARM approach has successfully demonstrated that it can bring the farm households to the centre of decision-making. The approach also builds the capacity of farm households to collectively assess, decide, plan, implement, manage and be responsible for their own development on a continued "doing and learning process". The approach also enhances the relationship of all stakeholders involved in rural development. It includes the cooperation and collaboration of government and non-governmental organisations with the farm communities.

b) **TARAhaat:** TARAhaat is a project with the goal of bringing information and marketing services using e-business to rural India. TARAhaat acts as a social enterprise to promote effective e-commerce. Users are able to buy seeds, machinery, spare parts, and even household items. TARAhaat puts a special focus on responding to people's needs, making the network highly participatory and responsive.

12.7.2 Community Education

As adult educators, you may be interested in encouraging increased use of community resources and seeking the volunteers to augment the basic educational programme. They may like to develop educational partnerships among schools and public and private service providers, business and industry, and civic and social service organisations.

By organising programmes and activities that serve all sections of populations, a community school encourages disparate elements of the community to come together to work for common goals. It provides a physical setting as well as an organisational structure for school-community collaboration.

Do it and experience yourself

Visit a community-based website: www.tarahaat.com and find out if it contains information provided by the community. Does it provide links to useful information sources and present information in the local language? Also look out if the website provides link to on-line distance learning material. Write a short note of 200 words on what you have discovered after visiting the website: www.tarahaat.com.

12.8 LET US SUM UP

In this unit, we have presented an overview of the concept of computer networks. We have provided a detailed conceptual framework of computer networks, and its role in adult education. We have also discussed some of the benchmarks of ICT applications in sustainable development projects. The basic purpose of the overview presented is not only to explain and distinguish the above terms and concepts but also to read and understand further the materials on these concepts with more clarity.

12.9 ANSWERS TO CHECK YOUR PROGRESS

1) i) The basic difference between these networks, namely, Local Area Network (LAN), Metropolitan Area Network (MAN) and Wide Area Network (WAN) is based on geographic dispersion of computers.

   ii) The logic behind two-tier client-server conversion to three-tier client-server depends on how one can access and process data when we moved to new server. This new server is server for thin client. Nothing changes technologically inside the server.

2) i) The Internet Society (ISOC) defines the Internet as a "global network of networks" which enables computers of all kinds to directly and transparently communicate and share services throughout the world.

ii) For communication on the Internet, standard protocol which is called Transmission Control Protocol, Internet Protocol or abbreviated as TCP/IP is essential. Standardized communication protocols allow similar, dissimilar, near and distant computers to communicate with one another.

iii) DEOS-L is the international forum for distance learning.

3) i) ALTIN stands for Adult Literacy Technology Innovation Network. SHELCOM stands for Shelter Communications Literacy Network

ii) Literacy Link is an Internet-based distance education platform for learners and teachers. It has two major goals: a) to increase the access of adults to learning opportunities that will enable them to obtain their high school diplomas, and b) to improve the quality of instruction available to individuals and adult literacy providers nation-wide through enhanced resources and expanded staff development.

4) i) The participation in collaborative project enables information to flow from to rural communities, facilitates dialogue between communities, intermediaries and development organisations, fosters coordination of national and local development efforts, and overcomes physical barriers to knowledge and information sharing.

ii) TARAhaat is a project with the goal of bringing information and marketing services using e-business to rural India.

12.10 REFERENCES

Bedi, K., Singh, P. J., and Srivastava, S. 2001. *Opportunities for India: Strategies and Models.* Reading, MA: Addison-Wesley.

Harris, R. W. 2002. "Information and Communication Technologies for Rural Development in Asia: Methodologies for Systems Design and Evaluation", in S. Marshall, W. Taylor & X. Yu (Eds). *Closing the Digital Divide, Transforming Regional Economics and Communities with Information Technology.* Westport, CT: Praeger.

International Institute for Communication and Development (IICD). 2002. *A Multi-nation Study.* The Hague: IICD.

Tanenbaum, Andrew S. 2007. *Computer Networks.* New Delhi: Prentice Hall of India.

Thamizoli, P. and Balasubramanian, K. 2001. Information Management and Knowledge Empowerment: MSSRF Tele-centers in South India. *The Journal of Development Communication,* December.

Suggested Readings

Ahuja, Vijay. 1985. *Design and Analysis of Computer Communication Networks.* New Delhi: McGraw-Hill.

Gaines, Brian R. 1984. *The Art of Computer Conversation: A New Medium for Communication.* Eaglewood Cliffs: Prentice-Hall.

West, Anthonoy. 1981. *Local Networks for Computer Communications.* Amsterdam: North Holland.

UNIT 13 ALADIN: CASE STUDY OF A NETWORK OF NETWORKS

Structure

13.0 INTRODUCTION

In Unit 13 we will introduce you to a network that has come into being as a result of networking among key stakeholders in the area of adult learning documentation and information. This will enable you to establish useful links with resources that are helpful to analyse and develop your skills and to build and cultivate your professional network. In this unit you will not only learn about a global network but also get to know how to access resources that link you with the wider world of knowledge and information about adult learning. The inputs obtained from such sources are likely to enhance your professional skills as an adult educator and in turn enable you to carry out your responsibilities in adult education more effectively and efficiently.

13.1 OBJECTIVES

In Unit 13 you will learn about the Adult Learning, Documentation and Information Network (ALADIN). Through this case study, we hope to serve a dual purpose. One purpose concerns your familiarity with the concept, objectives, approach and activities of ALADIN, and the other concerns your skills to network, access and link with various resources that are integral parts of ALADIN. For the first purpose you will need to simply go through the contents of Unit 13, and

for the second purpose you will need to complete all the exercises given in the unit.

It is expected that after going through Unit 13 you will be able to:

- Gain information about ALADIN as a global network;
- Acquire skills of using it for your activities in the field of adult learning documentation and information services and for networking in order to excel in your profession;
- Consider possible options for making your contributions to augmenting the qualities of this useful resource; and
- Make the network more useful for policy-makers, researchers, and programme developers in adult learning.

13.2 ALADIN: A GLOBAL NETWORK

The Adult Learning Documentation and Information Network (ALADIN) is a global network, setup by the UNESCO Institute for Education (UIE) and several adult learning documentation and information centres. It is coordinated by the Head of Documentation Centre at the now called UNESCO Institute for Lifelong Learning (UILL), in co-operation with the ALADIN Task Force. The following description of ALADIN is entirely based on Lisa Krolak's (2003) *Energizing ALADIN* and it is, thus, fully acknowledged that we have, at times, even used her own words in this Unit without quotations marks.

This network has been established for facilitating the access to adult learning resources. Its current membership comprises 130 members spread in more than 40 countries. It was initiated in July 1997 as a follow-up action of CONFINTEA - V (Fifth International Conference on Adult Education). For more information on various aspects of the network please visit its (ALADIN's) website, http://www.unesco.org/education/aladin.

A general and broad definition of adult learning network characterizes the philosophy and activities of ALADIN, which binds in one network the practitioners of adult learning located in such diverse environments as university, research institutes, national, regional and sectoral centers, community-based organisations and providers of services and on-line information. In this sense ALADIN makes possible an access to resources from different parts of the world. While respecting the diverse character of adult learning in various regions of the world, ALADIN endeavors to construct a coherent network with the aim of linking theory with practice, improving research, programme development and planning, and supporting advocacy for policy-making in adult learning.

You can access the network through its website given above or by entering the ALADIN e-mail listserv, which is an e-mail link between friends of ALADIN or through google search. You can click at its various icons for finding further information under each head. You can also contact the ALADIN coordinator for any further information. Try to click some of the icons so that you can answer the Check Your Progress questions given below.

Check Your Progress

Notes: a) Space given below the question is for writing your answer.

b) Check your answer with the one given at the end of this unit under "Answers to Check Your Progress".

1) i) What steps should one take to find the home page of ALADIN website?

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ii) Do you find its design attractive and appealing to your sense of aesthetics?

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iii) What is the name of the ALADIN Coordinator?

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13.2.1 Objectives of ALADIN

ALADIN's objective is to network and build the capacity of adult learning documentation and information services. The network makes it possible to access relevant documentation on adult learning and in this sense it facilitates informed policy-making, research and programme development in the field of adult learning. Further, ALADIN endeavors to continuously update information on adult learning and therefore its members are always well-informed about the latest developments in the field.

In a nutshell, we can say that ALADIN acts like an information provider for researchers, practitioners and policy makers in the area of adult learning. It presents a platform to share relevant information on adult learning and to provide training in adult learning and knowledge management. The network aims to set right the uneven access to adult learning documentation and information resources.

13.3 ALADIN: YEAR-WISE ACCOUNT OF ACTIVITIES

ALADIN is only a less than ten-year old with a history of very active life. Let us look at its birth and growth that its coordinator has chronicled in a report on a Workshop, held in 2003 at the CONFINTEA-V mid-term review conference in Bangkok, Thailand. The following year-wise account of ALADIN activities is based on this report.

13.3.1 The Year of 1997

As mentioned earlier, ALADIN came into being in July 1997 as a result of a CONFINTEA-V workshop on adult learning documentation and information. Taking into account the then prevailing state of unequal access to documentation and information regarding adult learning, a group of representatives of adult learning documentation and information centres felt a strong need of organising an interactive knowledge management system in the field of adult learning. The Head of the UIE Documentation Centre coordinated the initiative.

13.3.2 The Year of 1998

The year of 1998 saw major events for ALADIN, including a worldwide survey of adult learning, publication of the first annotated Directory of ALADIN Network Members, a fellowship programme and an expert seminar.

- The Directory of Members provided the profiles of 89 adult learning documentation and information services providers located across the world. The most recent Directory, published in November 2005, carries an updated list of ALADIN members.
- During autumn 1998, under a fellowship programme, five research fellows from Africa, the Arab states and Eastern Europe drafted proposals for regional ALADIN action plans.
- A three-day experts' seminar on "Adult Learning Documentation and Information Network" took place in Hamburg. Its 25 participants not only shared their experiences but also drafted an action plan that reflected the principle of free and global access to information on adult learning.

13.3.3 The Year of 1999

The events of the preceding year led to the launch of the ALADIN website in 1999 and convening of the ALADIN Task Force through an e-Mail seminar.

- The ALADIN website provides detailed information and on-line access to all ALADIN members.
- The ALADIN Task Force has members, forming the international steering body of ALADIN. Its on-line seminar was coordinated jointly by the UIE's Documentation Centre and the ERIC Clearing House on Adult, Career and

Vocational Education. Along with updating on ALADIN activities and stating its administrative functions for the Task Force members, the on-line seminar collected information from the members to set the future agenda of ALADIN.

In the year 2000, there were no activities for the reason that the Coordinator of ALADIN fell seriously ill.

13.3.4 The Year of 2001

An ALADIN workshop, "Adult Learning Documentation and Information: Building the Network" was held in August 2001 at the International Council of Adult Education (ICAE) World Assembly in Jamaica. Aimed at strengthening ALADIN, this workshop identified the need for a comprehensive training approach for its members and made a case for supporting grassroots documentation efforts.

13.3.5 The Year of 2002

In January 2002 the ALADIN e-Mail listserv was launched to enable the ALADIN members and friends of ALADIN to regularly get in touch with each other. This is now a platform where the ALADIN members and friends of ALADIN can share ideas, comments, concerns and requests. We very much hope that you will take advantage of this facility to augment their stock of information and knowledge as well as share their own experiences in the sphere of adult learning.

In April 2002, seven members of the ALADIN Task Force held a meeting at the Coady International Institute in Antigonish, Canada, to discuss general ALADIN issues, including the specific issue of approaches for capacity-building. This meeting resulted in a flow of ideas on upgrading the ALADIN website and turning it into a comprehensive knowledge forum for information and research on adult learning. At this meeting the Task Force members decided to focus on training information specialists to help ALADIN members that require institutional support. This means that the mid-term agenda of ALADIN network is: i) to prepare a training manual (in English, Spanish and French) on documenting and organising information in the field of adult learning, and ii) to formulate a training strategy at the regional level.

In November 2002, ALADIN Task Force member (Eva Kupidura) collected, annotated and added as many as 200 adult learning links to the ALADIN website.

Check Your Progress

Notes: a) Space given below the question is for writing your answer.

b) Check your answer with the one given at the end of this unit under "Answers to Check Your Progress".

2) After considering carefully your access to resources that you require for your work as an adult educator, answer the following:

i) What kind of resources do you need most for your everyday work as an adult educator?

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ii) Have you ever felt that you have little access to resources available to adult educators in other parts of the world for developing or documenting adult learning programmes?

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iii) As an adult educator, do you find that ALADIN website is a useful resource for your work in the field?

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iv) If you had ever accessed any resource from any website for your research /programme development in adult learning, documentation and information, share your feelings or opinion about visiting a resource?

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13.3.6 The Year of 2003

The Coady International Institute in Antigonish, Canada organised in May and June 2003 a four-week certificate course on "Managing NGO Resource Centres" and five ALADIN members received full scholarships to attend it. For some details of the four-week certificate course and its methodology see Box 13.1.

Box 13.1: Managing NGO Resource Centre and its Methodology

Development organisations around the world recognise the power of information to raise awareness and mobilize action for social change. They also recognise the need to develop their own capacity to access, organise and use information effectively. The rapidly growing focus on technology is causing many NGOs to look at how they manage their development information. They need methods that are both locally appropriate and globally connected. To meet this challenge, many NGOs have established — or planned to establish — information resource centers. Well-managed resource centers are a valuable component of learning organisations, and can help reduce unproductive duplication of efforts both within and among NGOs. They can also serve as centers of community learning and participation in civil society initiatives.

The Certificate will provide participants with the opportunity to gain or improve skills in managing information, as well as to analyse the dynamics of indigenous knowledge, appropriate media, information-sharing and networking. During the programme, the participants will develop an action plan for their resource center's contribution to the community-based development, and the information and education strategies of their organisation. (For the content, objectives, target group and methodology of the programme, you need to visit the website and gather further information).

Source: website http://www.coady.stfx ca.library//MRClinkshtm.

In September 2003, twenty members of the ALADIN Task Force and various friends of ALADIN representing 12 countries attended an ALADIN thematic workshop in Bangkok. The workshop was held in the context of the CONFINTEA-V mid-term review conference with the aim to review ALADIN network's growth and achievements since 1997. Besides revisiting ALADIN's objectives and finding them still relevant, this review included discussions on future ICT developments in ALADIN and capacity-building initiatives. In group sessions, the participants identified emerging trends, challenges and innovative practices in adult learning. The entire exercise helped the participants to identify ALADIN's priorities and to state its vision for the activities to be carried out before CONFINTEA-VI (to be held in 2009).

This significant workshop paved the way for concentrating on the following five areas up till now.

1) ALADIN ICT and Standardisation developments.

2) The ALADIN Toolkit for capacity building.

3) The pilot country study on adult learning in India.

4) A bibliography on adult learning in Latin America.

5) ALADIN membership.

The workshop in Bangkok recognised the growing importance of developments in information and communication technologies for ALADIN. The ICTs enable and support networking, connection of information services, sharing of knowledge and e-learning at different levels. A networked community requires standardisation of knowledge management tools, such as the cataloguing software, the indexing rules and a consensus on method and form of data transfer. In order to concentrate on these specific issues, ALADIN formed a sub-group called the ALADIN Information and Communication Technology and Standardisation (ALADIN ICT&S) group.

13.3.7 The Year of 2004

The year 2004 proved to be a phase of extremely engaging activities for ALADIN. In the beginning of 2004, two members of the ALADIN ICT and Standardisation group held discussions with the ALADIN Co-coordinator at UIE on ALADIN related ICT issues. A by-product of this meeting was the coming into being of a new e-mail listserv.

The newly created e-mail listserv was then at the University of the Western Cape (UWC) in South Africa, with its mirror site at the Norwegian Association of Adult Learning (NAAL). The new format of the ALADIN e-mail listserv uses a moderator (the first moderator was Glen Arendse of UWC) on a rotating basis. The moderator collects all messages and analytically organises them before sending them out. This has resulted in systematic and high quality presentation of each ALADIN message.

A by-product of this innovation is a message archive that all members can access via normal web interface. In this way each ALADIN member can maintain her/ his own personal information and work out the way one wants to receive the messages.

In May 2004, the work began on redesigning the ALADIN website. The vision is to create the most comprehensive platform on knowledge and information on adult learning. It is meant to be an interactive site with links to the existing information services and to the resources of the ALADIN members and other key actors in the adult learning community. Besides search functions and on-line fora for members and visitors, the website offers regularly updated news. The ALADIN website can be a very powerful tool in the hands of those engaged in policy making, research, programmes development for adult learning documentation and information. You are most likely to find the ALADIN website an interactive meeting point.

Six Latin American ALADIN members met in July at INEA (i. e. National Institute for Adult Education) in Mexico and discussed common information issues with particular reference to guidelines and necessary steps for preparing an ongoing Joint Bibliography on Adult Learning for Latin America. For details on this project see Box 13.2.

Box 13.2 Joint Bibliography on Adult Learning for Latin America

Bibliography on Adult Learning in Latin America, April 2005

OREALC/UNESCO Santiago has published: La Educación de Jóvenes y Adultos en América Latina y el Caribe. Hacia un Estado del Arte. (The Education of Young People and Adults in Latin America and the Caribbean. Toward a State-of-the-Art). The work presented here was motivated by the lack of studies on what is being done in the field of education for young people and adults. It presents the general analytic and policy framework for education of young people and adults in Latin America and the Caribbean; and provides a compendium of best practices in literacy training and adult education carried out in the region.

Source: website http://www.unesco.org/education/aladin.

During the International Adult Learners' Week in September 2004, an ALADIN lecture was held in Cape Town, South Africa on the topic, "Overcoming Barriers: Reaching Out to Excluded Learners".

An ALADIN Toolkit workshop followed the lecture. The University of the Western Cape (UWC) South Africa hosted the workshop, which focused on development of an ALADIN Toolkit for setting up basic information services on adult learning. Various meetings of ALADIN had raised the concern about a need for ALADIN to support training and capacity building in the sphere of knowledge and information management and to set up documentation and information centers on adult learning in regions where no such centers exist. This felt need of ALADIN members emanated from the realisation that: i) library and information management has globally received little attention, and ii) there is hardly any material that supports documentation and information centres on adult learning in information management. The ALADIN Task Force expressed deep concern about both issues and took upon itself to develop the material to support information management that will: a) assist non-professional information workers in their everyday work, and b) establish general guidelines for facilitating electronic networking of the ALADIN members.

The ALADIN Toolkit will contain information management tools (cataloguing rules, keywords, indexing rules and possible classification systems) focusing on adult learning issues. It will also include standardised database software based on the free UNESCO.CDS/ISIS database software that many ALADIN members worldwide already use to access information on various issues. For details of the toolkit see Box 13.3.

Box 13.3 ALADIN Toolkit, for setting up basic documentation centers for adult learning

The ALADIN Toolkit is ALADIN's response to member requests for assistance in managing information and setting-up documentation centres. We hope that it will prove useful to a wide range of new and existing adult learning *libraries, documentation and resource centres.* Its primary goal, however, is to assist adult learning organisations and community-based groups that are wishing to organise their information resources or to improve efficiency of existing information centers, and having staff with limited or no training in information management.

You can visit the source website to obtain further information on each of the sub-sections of the toolkit.

Source: http://www.unesco.org/eduation/aladin/atkToolkit.htm.

In the first half of 2004 an ALADIN member (S. Y. Shah) carried out an ALADIN Pilot Country Study for India. The rationale and purpose of the country study was in terms of: i) the assumption that an effective documentation and information network plays a key role in strengthening adult and lifelong education, ii) the realisation that documentation is not taken to be a core activity within adult learning programmes, iii) the assumption that while larger organisations employ professional documenters, smaller organisations lack such expertise, and iv) that very little information is available on the existing documentation centres in South Asian countries. It came as a revelation that the 2003/2004 ALADIN Directory included 89 documentation centres in 41 countries and listed only two centres in India and one each in Nepal, Bangladesh and Sri Lanka. Since the available directories of libraries and documentation centres in India provide very little information on adult education documentation, the UIE decided to sponsor a pilot country study on the current status of adult education documentation centres in India.

13.3.8 The Year of 2005

The ALADIN Pilot Country Study for India resulted in March 2005 in an international workshop on ALADIN India in New Delhi. For details of the country study and the international workshop see Box 13.4.

Box 13.4 The Country (India) Study and International Workshop

ALADIN-India, National Directory of Members 2005, September 2005
ALADIN member Prof. S. Y. Shah, Honorary Director of the International Institute of Adult & Lifelong Education (IIALE, India) carried out an ALADIN Pilot Country Study for India during the first half of 2004. The study collected in-depth information on adult learning documentation centers from 207 organisations spread all over India. By May 2004, 47 centres have responded and Prof. Shah has listed and evaluated the results in an extensive country study. The study was published as the ALADIN-India Directory of Members 2005.

Source: http://www.unesco.org/education/aladin/news.

13.3.9 The Year of 2006 and Beyond

ALADIN is an ongoing project proceeding from strength to strength. For the duration preceding CONFINTEA-VI in 2009, ALADIN network will expand itself in the area of information exchange and capacity building for adult learning documentation and information services. ALADIN's long-term vision is to achieve balanced global access to information and documentation in the field of adult learning. For achieving this vision, ALADIN is striving to have a balanced global representation of adult leaning documentation and information services.

In 2006 and beyond, ALADIN's activities continued on projects such as:

- the ALADIN Toolkit.
- constant improving and updating of the ALADIN website.
- organising training and capacity building initiatives in different regions of the world.
- building up regional structures, supported by ALADIN regional meetings, e.g., there was held an international workshop in New Delhi in March 2006

for developing a framework for a professional development programme of study in Participatory Adult Learning, Documentation and Information Networking (PALDIN) in March 2006.

- identifying documentation and information centres in adult learning in need of support with particular reference to the least developed countries.
- identifying and supporting those partners who would engage in setting up adult learning documentation and information centres in countries and regions where none or a few exist.
- Establishing collaborations with, expanding cooperation and extending support to organisations interested in capacity building activities and strengthening country network. For example, a National Workshop was organised by the Indira Gandin National Open University (IGNOU) in Delhi in November, 2007 with the cooperation of UILL and S.Y. Shah to review the PALDIN material with a view to explore the possibilities of developing it further into a capacity building and professional development programme leading to Certificate. Subsequently, since January 2008, due to relentless efforts under the coordinatorship of a senior faculty member from IGNOU (M.V. Lakshmi Reddy) the 12 creadits worth PALDIN draft material, as per IGNOU standards, grew into 34 credits Diploma Programme. The result is that IGNOU has systematically expanded, developed and transformed it into a Post-Graduate Diploma in Adult Education: Participatory Adult Learning, Documentation and Information Networking (PGDAE: PALDIN). It is simply coded as PGDAE Programme while launching it from July 2009.

13.4 PALDIN: LEARNERS' NETWORKING ON THE NETWORK

In order to project your professional persona – a way for people to know that you are a member of the profession (adult learning, documentation and information) — you need to think of building relationships through a web of networking. One way of starting the process is by creating your own home page through the Internet. You can learn how to do it through the Internet itself. Your home page needs to include four elements.

- Complete contact information (paper mail and e-mail addresses, work phone, fax numbers, etc.).
- Links to organisations you are associated with (your department, project, professional associations, classes you teach, events that you are involved in organising, etc.).
- Full references to the publications/programmes you have developed and you want people to know about.
- Links to other web-based facilities that you maintain, e.g., a page of links to resources that are relevant to your profession.

It is not advisable to include personal information or goofy stuff on your professional web-page. You need to deliberately try and design your professional web-page in a non-frivolous format. By creating your web-page with links to on-line resources that are specific to your professional interests, directories of research projects in your field that people might have built on the Web, and the home pages of university departments of adult education and other research

institutions dealing with adult learning, you will save yourself and other people the trouble of looking for them again. You can also use on-line discussion groups to become familiar with current debates in the area of adult learning, documentation and information. Before taking such a step, you need to participate in a listening on a discussion group for a while and become familiar with its customs and conventions and then only consider responding or chatting. One good method of entering a discussion group is that you write an intelligent, self-respecting, low key, less than one page message that reflects a single, clearly stated point about a topic that is of interest to you and others in the discussion group. This strategy offers you a chance to either withdraw or enter the ongoing discussion.

Your professional life as an adult educator demands you to construct and maintain a professional persona that entails largely your research, writings and other professional activities. It is important to remember that network-building takes time. It is a long-term investment of time and efforts. The above discussed case-study of ALADIN shows that a number of committed stakeholders have been proactive for nearly a decade to make possible the existence of an adult learning, documentation and information network. ALADIN members use various tools of a larger ecology of communication media, each with its own role to play. If you pay attention to the relationship among media, you can use the right tool for each task.

13.5 PROFESSIONAL IDENTITY OF AN ADULT EDUCATOR

The professional community of adult educators is a public arena and you as an adult educator have to develop an identity for locating yourself in this arena. Through the case-study of ALADIN, we have attempted to present before you some tacit rules of establishing your professional identity. Socialising as an adult educator amidst professional adult educators is a normal activity that we expect you to appreciate and practice.

Having initiated the process of networking, you would like to consider what to do with it. If you like to do well in your field, you will try to organise something like a workshop, a journal issue, an e-mail discussion group, an approach to a funding agency for a grant for your project, etc. You will either create your own home page or become a member of ALADIN or you have both the avenues open to you for undertaking any of the above activities. In this context, if you remember the norms of humility that operate in most spheres of social life, you will engage in the activity of your choice with extensive constraints on your public persona. Here, you are basically attempting to get a public voice. Learning about ALADIN has paved the way to knowing about insides of networking process. We feel that your own experience of networking at the grassroots level can give you impetus to try and make use of ALADIN for boosting your professional identity.

Of course, you may not always be successful with the process of networking. There are, many times, several pitfalls in the process of forging links because some networks work beautifully while some others do not, and pose problems. So, it is a very good idea to be on one's guard while networking. There are risks involved in the process that you need to be aware of. For example, as Krolak (2003) has mentioned in her handout on networking, network may face the following serious risks.

- Lack of concrete activities that are interesting and beneficial to members.
- Neglect of training and capacity building.
- Lack of focus, clear roles, objectives and vision.
- Restricted access to communication tools such as e-mail.
- Lack of financial resources, time and human resources.
- Language can be a barrier.
- Dilution of organisation's objectives and distraction from daily work when spending too much time on networking.
- Arriving to consensus can be time consuming.
- Network may be too large or too small and become ineffective.
- Lack of regular opportunities to meet face-to-face in meetings, conferences etc.
- High expectations and limited patience resulting in disappointment.
- Network has just one project and when the project is finished the network deteriorates.
- The network is artificially created and not really needed or wanted by its members.
- Passive membership or low commitment or interaction of members.
- Hidden and conflicting agendas.
- Danger of centralisation and domination, if one network co-ordinator or an organisation is leading the process.
- Networks suffer if the co-ordinator is not in close contact with the members in the field, whom they claim to represent.
- Dependency on personalities or conflicts and competitiveness between strong personalities and organisations.
- Lack of appropriate leadership.
- Failure of individuals to carry out agreed actions.
- Neglect of monitoring and evaluation of the network - evaluation is made difficult through the iceberg and snowball effect.

Indeed we do not want to end Unit 13 with the thought of possible risks to be encountered in the world of networking. Therefore, we will make a brief mention about the features of successful networks.

13.5.1 Criteria for Successful Networks

We can say that a network is successful if it meets the following list of criteria. The list of criteria for successful networks has been taken from Krolak (2003).

- a realistic strategy for working together with clear objectives.
- members have the capacity to contribute financial resources, time or information.
- efficient communication.
- mechanisms that allow for two-way communication.

- regular meetings and conferences take place.
- skills are developed through collective training, information sharing or informal mentoring within the network/ and there is transparency, trust and a willingness to actively co-operate.
- members see the benefits of joining the network, have a stake in the general objective(s), an interest in specific activities, a sense of belonging and a confident feeling of achievement and future possibilities.
- a committed core of active members will take initiatives for co-ordination, management and logistics.

13.6 LET US SUM UP

In Unit 13 you have learnt about ALADIN as a global network of networks. It is expected that you might have accessed some links to support and enrich your own professional work as an adult educator. You may also know about other networks in your personal or professional life. We would now like you to carefully go through the criteria of successful networks once again and identify criteria that are met by ALADIN and/or by other networks that you know. Please choose at least three criteria to justify your selection.

Hopefully, having completed this Unit, you have become well aware of the good and the bad aspects of networking. So, much will now depend on your sound judgement to find out as to which links provide you with the support that you are seeking as a professional adult educator. Best of luck!

13.7 ANSWERS TO CHECK YOUR PROGRESS

1) i) One could either go through a search engine to reach the ALADIN website or type directly the website address in search column and reach the website.

   ii) Its design is both attractive and user friendly.

   iii) Name of ALADIN coordinator is Lisa Krolak who is the Head of Documentation Centre at the UNESCO Institute for Lifelong Learning (UILL), in co-operation with the ALADIN Task Force.

2) i) As an adult educator one would require a well-equipped documentation centre that is to serve on a daily basis as a community resource for adult population of an area. It will be an added advantage if the documentation centre has ICT-related facilities for users to access latest information in their chosen fields of interests.

   ii) It is often the case that the adult educators in most of the developing countries have limited access to resources, and in comparison, the adult educators in developed countries have far more resources to deploy. This state of affairs has a negative impact on developing/ documenting adult learning programmes.

   iii) ALADIN website is a useful resource for adult educators in India, though not many adult educators appear to use its services.

iv) It would be a good strategy to access resources from websites dedicated to adult learning resources. This will help adult educators to augment their efforts for developing efficient and effective adult learning programmes.

13.8 REFERENCES

http://www.coady.stfxca.library//MRClinkshtm.

http://www.unesco.org/education/aladin/news.

Krolak, Lisa. 2003. *Energizing ALADIN.* (A pamphlet-paper circulated among the ALADIN members).

Shah, S. Y. (Ed.). 2005. *Adult Learning Documentation and Information Network: India, National Directory of Members.* Hamburg: UNESCO Institute of Education.