

Professional Development Program for Adult Educators

Learning Package on
PARTICIPATORY ADULT LEARNING,
DOCUMENTATION AND INFORMATION
NETWORKING (PALDIN)

**DOCUMENTATION
DISSEMINATION
AND
NETWORKING**

Course 02

An ALADIN-India Initiative

Project Team

- Senior Consultant :** Prof. Shobhita Jain, (Group of Adult Education, JNU)
- Research Associate:** Dr. Manasi Mishra, (Group of Adult Education, JNU)
- Course Coordinators:** Dr. Anita Dighe, (Former Director, Campus of Open Schooling, University of Delhi, Delhi)
- Dr. P R Goswami, Director, National Social Science Documentation Centre, Indian Council of Social Science Research, New Delhi
- Course Writers:** Dr. Anita Dighe
- Dr. Ajay Kumar, (*Associate Professor, Group of Adult Education, JNU, New Delhi*)
- Dr. B K Sen, (*Retired Scientist, Indian National Scientific Documentation Centre, New Delhi*)
- Prof. Ila Patel, (*Institute of Rural Management, Anand*)
- Ms. Indira Kaul, (*Documentation Officer, National Social Science Documentation Centre, New Delhi*)
- Dr. John A Joseph, (*Vice President, Vintech Solutions, Chennai*)
- Dr. Mandakini Pant, (*PRIA, New Delhi*)
- Ms. Malini Ghose, (*Nirantar, New Delhi*)
- Prof. Pramila Aggarwal, (*George Brown College, Toronto, Canada*)
- Dr. P.R. Goswami
- Prof. Shobhita Jain
- Prof. S. Ganguly, (*Indian Institute of Management, Lucknow*)
- Prof. S.M. Dhawan, (*Retired Scientist, National Physical Laboratory, New Delhi*)
- Ms. Shalini Joshi, (*Nirantar, New Delhi*)
- Dr. Tariq Ashraf, (*Deputy Librarian, University of Delhi, Delhi*)
- Dr. Usha Reddi, (*Former Director, Commonwealth Education Media Centre for Asia, New Delhi*)
- Project Director:** Prof. S Y Shah, Director, Group of Adult Education, JNU

Participatory Adult Learning,
Documentation and Information Networking (PALDIN)

DOCUMENTATION, DISSEMINATION AND NETWORKING

Course 02



Group of Adult Education
School of Social Sciences
Jawaharlal Nehru University
New Delhi

Please Note

It is important that the learner completes all activities mentioned in PALDIN units because much of the learning content is incorporated in 'learning by doing' type of activity sections of each unit of a course. It will not be useful to simply read the various sections of the unit and leave out Reflection/ Activity. Interactivity through all such sections of each unit is meant to give impetus to participatory learning whereby all learners get also the opportunity to contribute to construction of knowledge content of PALDIN units. In addition, learners' feedback to each unit will go a long way to help the revision of the course material.

Participatory approach to learning adopted in PALDIN courses brings home the point that adult educators' training is itself a demonstration of sound adult learning practice. In other words, PALDIN learners need to take participatory approach to their interaction with adult members of the communities during their work situations.

Another point to note is that PALDIN courses and their activity exercises stress in equal measure conceptual understanding of the field, practical skills of participatory learning and not easily perceivable but equally important personal qualities of empathy and rapport. While completing activity exercises of PALDIN units, its learners will find plenty of occasions to discover that adult learning is a social process and adult educators' reflection on social reality influences how they perform their roles in work situations.

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Preface

Notwithstanding the expansion of Adult Education as a field of practice and a discipline of study, very little attention has been paid to the professional development of Adult Educators. Unlike School Education, which has in India a well designed professional program of one year duration for the preparation of school teachers, there is no such provision in the field of Adult Education. Hence, a large number of organizations employ untrained personnel or those with minimum training. The attempt to provide on the job training to the staff has been found to be limited in scope. Several research studies have traced the ineffectiveness of Adult Education programs to the poor quality of training of the program staff. Therefore the need for building and strengthening the capacities through appropriate professional development programs for adult educators has been repeatedly highlighted in several forums of the UNESCO, especially Adult Learning Documentation and Information Network (ALADIN) which has about two hundred members in fifty countries.

A Country Study (2004) sponsored by the then UNESCO Institute for Education on *the Status of Adult Learning and Documentation Centers in India* revealed that most of the organizations in India were neither networked nor have the expertise in documenting their activities or dissemination. The majority of the Staff members working in these organizations expressed a desire to acquire relevant training. This idea was seriously pursued by a group of five members, namely, Dr. Mohan Kumar, Additional Director, Directorate of Adult Education, Government of India; Dr. P. R. Goswami, Director, National Social Science Documentation Center, ICSSR; Shri K. C. Choudhury, Chancellor, International Institute of Adult and Lifelong Education; Dr. Madan Singh, Secretary, Indian Adult Education Association and Prof. S. Y. Shah, Jawaharlal Nehru University, New Delhi, who formed ALADIN-INDIA. They organized an International Workshop (2005) with the support of the National Literacy Mission of Government Of India, Indian Council of Social Science Research, International Institute of Adult and Lifelong Education and the UNESCO Institute of Education. The participants at the Workshop discussed several issues related to capacity building of the staff members and stressed the need for designing a short duration program of study through open and distance learning mode. Accordingly, the ALADIN-INDIA prepared a proposal. Consequent upon the funding support from the University Grants Commission of India, the work was initiated at Jawaharlal Nehru University. The project team began with a survey of the existing courses in Adult Education and Information Management. Subsequently an International Workshop (2006) was organized and a curriculum was framed and well-known scholars were commissioned to prepare the course material.

The development of a professional programme for Adult Educators is a challenging task not only because of the wide variety of jobs undertaken by them, but also the varying expectations of the different types of organizations which employ them viz., government agencies, NGOs, universities, libraries and information centers.

It has been observed that in most of the adult learning organizations, especially in small organizations, one person is expected to undertake various types of work, such as project management, project documentation, information management, networking and dissemination of information. While those who work in libraries and information centers may have some knowledge and expertise related to information organization and management, they often lack the knowledge and skills required to plan, manage and document adult learning activities. In the same way, most of the adult educators, while possessing relevant knowledge and skills related to their area of work, may lack the expertise related to the classification and cataloging of documents. Invariably, it has been observed that many adult educators have very little idea of process documentation and how to manage information. Although there are separate courses of 6-12 months duration either in Information Management or in Adult Education, there is no comprehensive short term professional program of study for adult educators, covering adult learning, project documentation, information dissemination and networking.

The present learning package on *Participatory Adult Learning, Documentation and Information Networking* (PALDIN) is an attempt in this direction.

S.Y. Shah



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Professor Shobhita Jain (Senior Consultant) deserves special thanks for helping me in coordinating the project and shouldering the main responsibility of finalizing the draft by meticulously going through the entire manuscript, copy editing, rewriting certain portions, putting them in ODL format and checking again and again several versions for errors. Dr. Manasi Mishra (Research Associate) provided excellent academic support throughout the project. I would like to acknowledge the services of Ms. Arvinder Chawla and Mr. Kamal Kumar, who designed the book and its cover.

My heart-felt thanks are due to all the participants of the International Workshop, held in March 2006 at the India International Center, New Delhi, for finalizing the syllabi of the two courses of PALDIN. Annexure 1 on the next page gives the names of the participants. Finally, I would like to acknowledge the support of the authorities of Jawaharlal Nehru University for granting me permission to undertake this project and providing all the facilities.

S. Y. Shah

List of Participants

- Mr William Evans, Advisor, Norwegian Association for Adult Learning, Oslo
- Ms Sue Adams, Librarian, Coady International Institute, St. Francis Xavier University, Canada
- Prof Gajendra Verma, Former Dean, Research & Graduate Studies, School of Education, The Manchester University, UK
- Prof R.D. Pathak, Director, School of Social & Economic Development, University of South Pacific, Fiji
- Dr Usha Mehta, Consultant, State Department of Health, New York, USA
- Prof Pramila Aggarwal, George Brown College, Toronto, Canada
- Mr Sharad Babu Shrestha, Country Director, READ, Kathmandu, Nepal
- Ms. Saloni Singh, Didi Bahini, Kathmandu
- Dr K. Gopinath Pillai, Director, Department of Adult Education, University of Kerala
- Prof N.V.R. Kapali, Head, Department of Adult Education, University of Madras
- Dr S.C. Jhansi, Assistant Director, SNTD Women's University, Mumbai
- Prof Ashok Bhattacharya, Director, Department of Continuing Education, Jadavpur University, Kolkatta
- Dr Poonam Dhawan, Director, Department of Adult Education, Jammu University, Jammu
- Dr Jyrwa, Director, Department of Adult Education, North-East University, Shillong
- Dr L. Raja, Assistant Director, Department of Adult Education, Gandhigram University, Madurai
- Dr S.K. Kejariwal, Department of Adult Education, Poona University, Pune
- Dr Sansar Chand, Director, Department of Distance Education, G.J. University, Hissar
- Dr Madan Singh, Former Director, Literacy House, Lucknow
- Shri K.C. Choudhury, President, Indian Adult Education Association, Mhow, Indore
- Dr Yaswantsingh Rana, Department of Adult Education, H.P. University, Shimla
- Prof Surendra Singh, Vice-Chancellor, Kashi Vidyapeeth, Varanasi
- Prof A. Sundararajan, Tirupati University, Tirupati
- Dr Usha Reddi, Director, Commonwealth Education Media Centre for Asia, New Delhi
- Dr R.K. Chauhan, Additional Secretary, University Grants Commission, New Delhi
- Dr H.K. Chauhan, Joint Director, University Grants Commission, New Delhi
- Dr S. Bhatnagar, Adult Education Bureau, University Grants Commission, New Delhi
- Dr P.R. Goswami, Director, National Social Science Documentation Centre, ICSSR, ND
- Prof. N.K. Ambasht, former Chairman, NIOS, New Delhi
- Dr A. Mathew, UNESCO, New Delhi
- Dr Rajesh, Senior Lecturer, Department of Adult Education, University of Delhi
- Dr Asraf Ali Khan, Training Expert, Prerana, New Delhi
- Shri K.L. Sharma, Documentation Officer, Indian Adult Education Association, New Delhi
- Dr Shahazad Hussain, State Resource Centre, Jamia Milia Islamia, New Delhi
- Prof Anita Dighe, Former Director, COL, University of Delhi, Delhi
- Prof Tapas Majumdar, Former Dean, School of Social Sciences, JNU
- Ms Kalpana Kaushik, Programme Coordinator, International Institute of Adult & Lifelong Education, New Delhi
- Dr Joseph Bara, Editor, Educational Research & Record Unit, JNU
- Dr Koganuramath, Chief Librarian, JNU
- Prof Shobhita Jain, Senior Consultant, Group of Adult Education, JNU
- Dr Manasi Mishra, Research Associate, Group of Adult Education, JNU
- Dr M.C. Paul, Associate Professor, Group of Adult Education (GAE), JNU
- Shri O.P. Swamy, GAE, JNU
- Prof S.Y. Shah, Director, Group of Adult Education, JNU



Introduction to the Professional Development Program of Study in Participatory Adult Learning, Documentation and Information Networking (PALDIN)

Shobhita Jain

The project team of PALDIN courses development extends a warm welcome to PALDIN learners. This introduction to PALDIN, a professional development program of study consisting of two courses, familiarizes you with its target group, aim and objectives and provides a brief description of its courses and their relevance to your profession. Next follows an account of the special features of the courses' contents that have been developed with the help of a wide range of academic resources.

Let us clarify at the outset that our attempt to build capacities of adult educators and thereby value of their profession does not in any way refer to professionalism that gives rise to exclusiveness, elitism and all too familiar gap between educators and learners. PALDIN courses have been prepared in the spirit of discourse between equals, with no sense of compulsion and encumbrance of examination and grading. This is a self-transforming learning package, advancing belief in participation and open dialogue. In our perception every adult is an adult educator as well as a learner.

Target Group

PALDIN courses will be of interest to the program staff of different types of adult learning setup, namely, State Resource Centers (SRCs), University Departments of Adult Education, Documentation Centers, and NGOs-run Centres. They will be able to use PALDIN courses developed in open and distance learning format as per their convenience of time and place.

Aim and Objectives of PALDIN

PALDIN is an innovative open learning program with the aim of capacity building of adult educators.

Objectives of the program are to

- ❖ Provide its learners a conceptual understanding of the various roles of adult educator in the context of contemporary socio-economic life that requires a continuous stream of lifelong learning for adults.
- ❖ Offer the learners the ways to learn various skills pertaining to documentation, dissemination and networking.
- ❖ Give adult educators opportunities to apply what they learn in each course so that they are both reflecting on their new learning and applying the same in their day-to-day work situations.

Duration and Delivery of the Courses

As mentioned above the learning package on Participatory Adult Learning, Documentation and Information Networking (PALDIN) comprises two courses, each

of which would notionally require a minimum of four hundred and eighty hours of study and practical work. In terms of open and distance learning mode, you can say that this much of workload completed will entitle you to earn sixteen credits of an advance level learning. You work out the same in terms of months and visualize the workload of 2 months @ 8 hours work each day or of 4 months @ 4 hours each day or of 8 months @ 2 hours each day. This is only a notional scheme. You can, of course, work two hours one day and four hours another day and take a break of few days to resume the work later. As per availability of time you can complete the courses at your own pace. You can study both simultaneously or one after the other. The flexibility available to learners includes the facility of going through the course material any time of day or night and at any place of your choice. If you prefer to read the printed text, you opt to use the books. In case you like to read it on you personal computer, you can use the single compact disc that contains the entire course material.

Brief Description of the Two Courses of PALDIN

The two courses of PALDIN come to you in the form of two books. The book on *Participatory Adult and Lifelong Learning and Information and Communication Technologies* outlines the global, regional and national scenario on literacy and discusses policy on adult and lifelong learning. Then it traces the philosophical roots of current forms of adult learning and sensitizes its readers to the need of critically looking at them for acquiring conceptual clarity. This leads to the concept of and working with the community. Focusing on the processes of participatory learning the book dwells at length on participatory training and evaluation. Finally, the book provides very useful inputs on the role of information and communication technologies in education and development and ends with their uses in literacy and lifelong learning. For further details of the book see the introduction to the course.

The book on *Documentation, Dissemination and Networking* deals with the processes of documentation and dissemination of information and then it elaborates with the theme of networking for obtaining better linkages between those documenting and disseminating information relating to adult learning. All this culminates in knowing how to manage adult learning setup, including its library-related resources. Communication and organizational behaviour are two pillars of management strategies explained in detail so that adult educators may apply the same to their work. Introduction to the course provides more details about the various themes discussed in the book

PALDIN course material is now ready for pilot testing in the field. Feedback from the first batch of its learners will be the basis of its final version that will go to the larger community of adult educators.

The two courses will also be available in a compact disc (CD). Each book has a certain number of units, which sensitize learners to critically approach the various themes and sub-themes. The course material is designed to facilitate learners to increase efficiency and effective functioning in their work situations because each unit of both courses requires application of what has been learnt. Thus in a cumulative manner, step-by-step learners increase their skills to obtain better outputs in their professional work.

At all levels in your career, understanding your roles enables you to hold on to your

job, to succeed in getting further promotions and above all to effectively take part in decision-making processes that exist in your profession. There is currently a growing demand for professional adult educators to carry out lifelong learning programs. The reason for such a demand is linked to the fact that the global spread of industrialism coupled with information and communication technologies has vastly expanded the scope of lifelong learning by all adults. Such programs of study as PALDIN strive to upgrade knowledge and skills of adult educators and thereby empower them to carry out their roles in an efficient and effective manner. For pilot testing of the two courses, some select adult learning institutions will accept to run them and the first batch of learners will basically study as well as evaluate the course material.

Special Features of the Presentation of PALDIN Course Material

A reading of the special features of designing lay-out of the course material will help PALDIN learners to devise their own strategies to go through the course content according to their particular interests and choices.

Language and Style of Writing

PALDIN course material has been consciously prepared in gender-sensitive language, that is, it addresses equally both women and men learners. Further throughout the courses there is use of clear and simple language and captions appear to indicate systematically numbered figures, tables, boxes and activities etc. Style of writing reflects a learner-friendly conversational format that indicates a relationship of equality between the learner and the developer of the course content. All efforts have been made to avoid the use of words like ‘should’ or ‘must’ because such words reflect a tendency of offering commands to learners.

Aide-memoir

Each unit comes to you with a clearly stated structure that informs in advance its coverage and the order of discussion of each theme and sub-theme. Similarly stating clearly the learning objectives prepares you to systematize your reading of the contents in terms of outputs of your efforts. The learning objectives spell out what you would achieve after reading the unit and completing all its activities. You can use the learning objectives as study tools to review your preparation for problem-solving situations at work.

The introduction of each unit states the theme and elaborates how the theme develops. It outlines the roadmap of your learning of a particular theme. The introduction also links the particular theme with the unit that precedes and succeeds the unit you are reading so that you keep a firm grip on how the subject matter develops through various units. At the end of reading each unit, you are hopefully ready to apply in practical life what you have learnt. This is the main objective of PALDIN. So you are advised to take this part of learning seriously and systematically if you wish to derive full advantage of this learning package.

Additional Information

In systematically numbered boxes, you will find additional information about concepts/ processes/ events mentioned in the text. Serial numbers of boxes pertain to the unit they belong to. Similarly, illustrations, elaborating the points made in the text,

have systematic numbers and captions. We have avoided the practice of inserting footnotes to the main text. Our practice is to explain the term or concept when it appears for the first time in the text.

All references to the works cited in the text of each unit appear in alphabetical order at the end of the book. We have followed the Harvard system of referencing both in the main body of the text and the list of references at the end of each book of PALDIN. References include all the sources that developers of the units have cited in the text. They include also the books suggested as Further Reading. References help those learners who wish to explore further into a particular theme or sub-theme discussed in PALDIN course material.

Experience-based Learning through Reflection and Activity Exercises

Through reflection and activity exercises, PALDIN units have incorporated the constructivist principles of learning in the design of your learning environment. Often formal classroom teaching is not embedded in learners' everyday experiences and this is why learning tasks do not carry much meaning and relevance for them. Most learning is often confined to the sole aim of passing the examination and obtaining a degree. Our aim in PALDIN is to make learning tasks embedded in adult learning-based contexts and here the learner's situation requires her/ him to possess the knowledge and skills for solving day-to-day problems in adult learning setups. The reflection and activity exercises encourage you to hold discussions with other learners and thus experience the benefits of collaborative learning. These exercises offer you the choices to identify issues of your interest and relevance. The focus is on situations wherein you experience interaction through authentic tasks and thus you go through the process of knowledge construction. In this approach the emphasis is on how to learn, how to construct and rebuild new meaning that is more important than the outcomes in terms of knowledge for its own sake. Our expectation is that PALDIN learners would take this approach to learning to their field and apply it while dealing with adult learners. We have endeavored to include a higher order of thinking about one's own thinking and problem-solving ways. You may call it a process of reflexivity that has a strong potential for problem-solving. This approach allows the scope for generating alternatives with more effective strategies. In a nutshell, the whole process involved in reflection and activity exercises is to facilitate PALDIN learners' movement from their initial state of understanding to the abstract levels of understanding. We take the so-called "mistakes" as steps in learning through a natural and productive process. Our attempt is to build this dynamic process of learning into the reflection and activity exercises of PALDIN units.

Evaluation Methodology

As per the above learning process, this learning package has a system of continuous assessment of its learners' performance. PALDIN learners need to complete all exercises and the process of completing the exercises comprises the act of learning by doing. Each PALDIN learners is to submit to the institution that runs PALDIN courses a written proof of completing all exercises in a systematic and neat fashion with clearly stated the learner's name, date and place of the work, serial number of the activity etc.



Introduction to Course 02: Documentation, Dissemination and Networking

P R Goswami

Need and Rationale

The processes of lifelong learning including the process of acquiring the skills of literacy are all over the world taking place through a wide variety of adult learning programs. Apart from certain specialized agencies, NGOs, social science institutions and special wing of government departments; such as rural development, women and child development, agriculture, health etc. also carry out such programs. The centers of adult learning can be conveniently called as adult learning setups (ALSs). In India, they are spread all over the country; a number of state agencies as well as civil society organizations administer them.

The basic purpose of the ALS is to promote adult learning related activities; which include entire body of organized educational processes that are involved in development of capabilities, enrichment of knowledge, and improvement in technical or professional skills of adults; or turn them in a new direction and bring about changes in their attitudes or behaviors (UNESCO 1977). ALSs deals with art and science of helping adults to learn (in contrast to pedagogy as the art and science of teaching children); and the expectation is that all ALSs promote policy-driven and action-oriented research and studies in adult learning. Training of adult educators and preparation of learning material for neo-literates form an important part of their activities.

As a corollary to the above tasks, ALS is engaged in various information related activities such as sharing of relevant information on adult learning, and making accessible updated data and research papers on the subject. ALSs receive a large number of print and non-print material in the form of monographs, research reports, statistical compendia, pamphlets, posters as well as primers for adult learners. However, mostly ALSs do not efficiently maintain these materials due to the lack of skills in information management or documentation system among those responsible for running them.

Target Group

The course is meant for the persons working in ALS in a supervisory capacity or those responsible for running their resource centers. Often such persons do not have a formal training in library science and/ or information management. These adult educators are also expected to manage a small library in their setups. Course 02 of PALDIN would benefit such adult educators.

Objective

The general objective of the course is capacity building of adult learning documentation and information services. The course includes the basics of library and information science, documentation and networking in jargon-free and simple language; elucidating various tools and techniques that you would use to carry out these activities. The specific objective of the course is to upgrade managerial skills

of those working in ALSs. Most significantly, the basics of human communication, group dynamics and behavioral pattern in an organization and library management have been included in the last six units of the course for the purpose of enabling adult educators to run adult learning set up in an efficient and effective manner.

Course Design

Keeping in line with the aim and objectives of PALDIN, the Course 02 on Documentation, Dissemination and Networking has been designed for the purpose of imparting training on identification, acquisition, processing, storage, retrieval and dissemination of various types of knowledge artifacts in an ALS. As the target group of the course comprises mature professional adult educators, its design is in an interactive and participatory learning mode. An interactive mode of learning combines contents found in traditional books with active learning components possible in an open learning environment. In fact, interactive learning process provides an opportunity to expand, explore and capitalize on new ways to interact with information. Participatory learning is a learner-centered model in which all curricular, pedagogic and evaluative decisions are shaped by what we know about the groups' experience of learning. The model advocates the integration of learners' experiences into the curriculum with an emphasis on the learners' self-directed control over the process of learning. Let us now take a look at the structure of Course 02 and then go through content-brief of each unit of the course.

Thematic Structure

The Course 02 on *Documentation, Dissemination and Networking* has four sub-themes, that is, Documentation, Information Dissemination, Networking and Management of Adult Learning Setup. Seventeen units cover the entire subject matter of these four sub-themes. Unit 1 and Unit 2 discuss the first sub-theme of documentation, while Unit 3, Unit 4, Unit 5 and Unit 6 deal with the issue of dissemination of the information documented. Unit 7, Unit 8, Unit 9 and Unit 10 concern the process of networking.

The contents of Unit 1 to Unit 10 provide us the nuts and bolts of activities that take place in an adult learning setup. Unit 11 has a place of privilege in this course. It provides the necessary ground for PALDIN learners to apply universally recognized standards for managing an ALS. Without a certain measure of universally acceptable standards of the activities of documentation and dissemination it is not possible to achieve a sensible pattern of networking that would give mutual benefit to all in a network. Unit 11 provides us very useful information on standards and enables adult educators to follow a path that is recognized everywhere. In a sense Unit 1 to Unit 11 arm adult educators with various skills to effectively manage an ALS.

Keeping in mind this particular responsibility of professional adult educators, the last six units (Unit 12, 13, 14, 15, 16 and 17) of the course give in detail inputs on communication skills, organizational behavior and library management for effectively and efficiently managing adult learning setups.

Before proceeding to read each unit of the course, let us familiarize ourselves in brief with the broad contents of the units and the expected outcomes of the course.

Content Briefs

Unit 1: Documentation provides an insight into the term ‘document’ and assesses the importance of documentation and discusses various aspects of its management, relevance of evaluation in documentation, and documentation systems and services.

Unit 2: Process Documentation discusses the aims and objectives of the activity of documenting all processes of developing an adult learning setup, methods and tools used in it; such as process narration and flow charts. It also tells us how to conduct process documentation.

Unit 3: Knowledge Management (KM) distinguishes between, data, information and knowledge, and tells us how to manage them. It deals with various other facts like, tacit knowledge, technologies in KM, and pre-requisites for KM; and major challenges before this activity.

Unit 4: Knowledge Management in a Library and an Adult Education Setup deals with the application part of this concept. It explains about how to create a knowledge base in an organization like ALS and how information service can be provided from this base.

Unit 5: Basics of Information Dissemination assesses the importance of this activity and also tells how to customize information for dissemination. It elaborates various preparatory measures for information dissemination such as searching indexed and non-indexed sources, establishing information centers and creation of databases.

Unit 6: Information Dissemination Services deals with information search strategies, retrieval performance, and various types of information services including document delivery systems and services that are presently available.

Unit 7: Networking answers the question “What is meant by networking?” so that besides documentation and its dissemination, an adult educator can improve the facilities and services of the adult education setup by networking. The contents of this unit help to understand the significance of networking for your profession.

Unit 8: Computer Networks is about electronics-based networking. It introduces you in detail to computer networks. With the greater use of computers it has been realized that the use of the computer can not be restricted to a particular place and the concept of computer networks has become very popular among professional adult educators.

Unit 9: Networking and Adult Learning provides insight into theoretical understanding of the concept of networking and tells us about fundamental principles of networking that is necessary for professional growth of adult educators.

Unit 10: ALADIN: Case study of a Network of Networks provides a summary of the aims, objectives and activities of Adult Learning Documentation and Information Network (ALADIN) and presents it as a ‘case study’ of a successful network.

Unit 11: Standards for Information Management and Networking is about performing adult educators’ tasks so that they match with the specified standards used both nationally and internationally. For this purpose it is necessary that adult educators are familiar with such standards relating to different procedures or systems or practices at your workplace. In addition, Unit 10 explains about

relatively 'open standards' as they are applied in the management of digitalized information.

Unit 12: Managing Adult Learning Setup is about the various aspects of human communication in the context of managing adult learning. Beginning with explanations of the concept, forms and methods of communication, the unit talks about the art of effective communication and oral and non-verbal communication. As a professional adult educator, you will appreciate the value of learning about communication process and the skills for effective communication.

Unit 13: Communication Media, Systems and Strategy elaborates that the evolution of different means of communication technology has opened up a vast potential for transforming sounds and gestures to produce speech, videos, films, posters, theatre. With a plethora of tools and methods to use, the communicator may find it difficult to choose an appropriate one. How is this choice to be made? Unit 12 explains that the answer to this question depends on our understanding of the impact of information technology on our everyday life.

Unit 14: Organizational Behavior discusses that managing an adult learning setup involves some basic principles of organization that an adult educator has to keep in mind and follow while performing various functions. For example, most types of adult education setup have staff members who need to be trained, motivated, satisfied and well-informed.

Unit 15: Dynamics of Working Together emphasizes that since adult learning setup is mostly run on the principles of formal organization, it is paramount for adult educators to have the knowledge of the processes of team building, managing organizational change and negotiations so that they are able to work together for better running of various programs at adult learning setups.

Unit 16: Managing a Library explains the role of facilitating access to information for learning. It discusses the procedure for managing library collection and services.

Unit 17: Building Library Resources and Services deals with library skills and techniques for building library collection for access and retrieval.

Expected Outcomes

- ❖ This course will enable the practitioners in the area of adult education to manage their setups in a better way with a proper system of information storage, retrieval and dissemination.
- ❖ It will also help the ALS play two distinct roles, namely, to serve as a local center of information and knowledge and to be local gateway to national and global knowledge.



1 DOCUMENTATION

JOHN A JOSEPH

Structure



- 1.1 Introduction
- 1.2 What is a Document?
 - 1.2.1 Understanding Documentation and its Importance
 - 1.2.2 Documentation Management and its Cost
- 1.3 Evaluation as a Part of Documentation
 - 1.3.1 Process Evaluation and Outcome Evaluation
 - 1.3.2 External Evaluation
- 1.4 Documentation System and Services
 - 1.4.1 Documenting an Event
 - 1.4.2 Documenting Celebrations Organization
- 1.5 Conclusion
- 1.6 Apply What You Have Learnt

Learning Objectives



After going through Unit 1, it is expected that you would be able to

- ❖ Describe the meaning, relevance and cost of documentation
- ❖ Carry out evaluation of documented material
- ❖ Plan and implement the exercise of documenting an event or a celebration.

1.1 Introduction

Most adult education setups (ALSs) carry out important activities but due to lack of their documentation, information and experience generated from such programs fail to reach others. Proper documentation of events is essential for providing the contemporary professionals and future generations the opportunities to know, learn, and benefit from the past knowledge and experience. Unit 1 is about basics and concepts pertaining to event documentation. Documentation for events involves two-way process of communication, and drawing upon all actors together in building records of

events. Hence, the term documentation in this Unit refers to the way an adult educator would carry out documentation. Please note that it does not here refer to the conventional context of building information systems for access and retrieval.

All adult educators are expected to carry out documentation work during their career but have no exposure to learn what is documentation and how does one undertake process documentation. Unit 1 and Unit 2 deal with the two questions and we hope that going through them will help PALDIN learners to consider

documentation a relevant and enjoyable activity. It is enjoyable mainly because all documentation involves a two way process of communication that draws all actors together in recording events that they

have been part of. Such a team work is always an enjoyable activity because it includes all educators and learners in a common activity and makes them share a common experience of documenting all that they have performed together.

1.2 What is a Document ?

A “document” is a collection of data, regardless of the medium on which it is recorded, that generally has permanence and can be read by humans or machines. Documents include both paper and electronic documents. A document is an amount of information on one or more related topics prepared for a specific purpose and presented as a unit. A document may be used in a printed form, online form or a combination of the two. Examples of documents include: manuals, reports, proposals, letters, faxes and emails.

Document, from Latin “documentum” and “doceo” literally refers to “an example meant to teach, both for giving instructions and for warning purposes” A document comes from “somewhere and leads towards somewhere else”. It is a support for decision making based upon information coming from different sources, which is meant to produce new information to be reused.

Documentation users may be viewed as information consumers, who may later on produce further documents and derivative information packages.

A documental unit is the end result of information assimilation and condensation processes and it is the result of a whole set of selection and transformation processes, which are meant to make information presentation effective.

A documental unit may easily be indexed and classified. By classification we mean

adopting the notation system of a specific classification model covering a whole range of documents.

1.2.1 Understanding Documentation and its Importance

In general terms, documentation is any communicable material (such as text, video, audio, CD, DVD etc., or combinations thereof) used to explain some attributes of an object, system or procedure. It is often used in today’s information era to mean engineering or software documentation, which is usually paper books or computer readable files (such as HTML pages) that describe the structure and components, or on the other hand, operation, of a system/product. In adult education we refer to documentation in the sense of keeping a record of activities undertaken by an adult education organization/ project. The documented material becomes a useful resource for its creators as well as for others interested in carrying out similar activities.

Good documentation is crucial to a data collection’s long-term vitality; without it, the resource will not be suitable for future use and its provenance will be lost. Proper documentation contributes substantially to a data collection’s scholarly value. At a minimum, documentation should provide information about a data collection’s contents, provenance and structure, and the terms and conditions that apply to

its use. It needs to be sufficiently detailed to allow the data creator to use the resource in the future, when the data creation process has started to fade from memory. It also needs to be comprehensive enough to enable others to explore the resource fully, and detailed enough to allow someone who has not been involved in the data creation process to understand the data collection and the process by which it was created.

Documentation amplifying processes, such as reformulation, revision, cataloguing and indexing, have proved to be most useful to support learning and information acquisition and absorption. Documentation (from Latin 'documentum': to be taught) is the output result of a whole set of packaging and repackaging operations performed ideally by individuals working collaboratively in groups, within the same organization structure. Daily events, current interactions, occasional conversations as well as planned meetings establish the conditions for information to flow through different media and in many and various ways and created the context for an accurate understanding of the organizational culture by en large.

Information may be coming in various flows and waves, to be filtered, categorized and organized as to be accessible and reusable for different purposes at different times. As soon as some information is found to be of relevance as to become stabilized and be turned into a document, then the need to store information in ways, which is to be made fully transparent, becomes a major issue. Information packaging based upon both topic continuity and context consistency is a most fundamental process, upon which

accurate and timely decision-making resides.

Availability and accessibility of packages of information in document formats needs to be supported by an enhanced labelling system, which may help speed up efficient retrieval. In other words, each document or piece of document will have to be labelled according to qualitative reasoning upon the nature of information.

Reshuffling scattered pieces of information coming in textual forms and formats, as to turn them into thoroughly organized documentation packages, according to a diversified set of needs and priorities and depending upon continuously changing scenarios, entails a specific competence and cannot be subject to arbitrary and occasional decision making.

Documentation organised and built up according to such view, does also constitute a tremendously rich repository for collective memories within an organization and does create the context for interpretation and understanding of present and past conditions.

The maintenance of comprehensive documentation detailing the data creation process and the steps taken involves a significant but profitable investment of time and resources. It is more effective if documentation is generated during, rather than after, a project. Such an approach will result in a better-quality data collection, as well as better-quality documentation, because the maintenance of proper documentation demands consistency and attention to detail. The process of documenting the process of documentation of a project can also have the benefit of helping to refine research

questions and it can be a vital aid to communication in larger projects.

Through documentation we create and provide evidence and we convey information. Documentation is meant to provide an interpretive infrastructure to a whole organization. Referring to the various definitions of the term “documentation” provided by Webster’s Dictionary, Third International Edition, let us especially focus on the following ones: “documentation is the provision

of footnotes, appendices or addenda referring to or containing documentary evidence in verification of facts or in support of theory in a piece of writing” and “the assembling, coding and disseminating of recorded knowledge, comprehensively treated as an integral procedure utilising semantics, psychological and mechanical aids, techniques of reproduction for giving documentary information maximum accessibility and usability”.

Activity 1.1

Read the above paragraphs carefully and write on a separate sheet of paper answers to the following simple questions.

1. What are documentation amplifying processes?
2. Who performs the packaging and repackaging operations of documentation?
3. What establish the conditions for information to flow through different media?
4. Why should information storing be transparent?
5. Why are topic continuity and context consistency major issues in information packaging?
6. Why is labeling system important in documentation?
7. Why does reshuffling of documented material require special competence?
8. How collective memories are important in documentation in an organization?
9. Should documentation be generated during or after a project implementation?
10. Keeping in mind the dictionary meaning of documentation, what is, in your opinion, the main concern of documentation in the field of adult education?

Good documentation is crucial to a data collection’s long-term vitality; without it, the resource will not be suitable for future use and its provenance will be lost. Proper documentation contributes substantially to a data collection’s scholarly value. At a minimum, documentation should provide information about a data collection’s contents, provenance and structure, and the terms and conditions that apply to its use. It needs to be sufficiently detailed to allow the data creator to use the resource in the future, when the data creation process has started

to fade from memory. It also needs to be comprehensive enough to enable others to explore the resource fully, and detailed enough to allow someone who has not been involved in the data creation process to understand the data collection and the process by which it was created. For the range of documentation related activities, see Box 1.1.

Reflection

Are there more documentations related activities than mentioned in Box 1.1? If yes, then include those in your range of documentation.

Box 1.1 Range of Document-related Activities

The range of documentation-related activities is

- ❖ Document design and development on paper and/or online
- ❖ Project management for documentation projects
- ❖ Proofreading, editing and related document quality assurance activities
- ❖ Indexing
- ❖ Considerations on software tools for document development and publication.

1.2.2 Documentation Management and its Cost

Documentation is defined as the process or specialty of accumulating and classifying documents and making them available to others. Management is the application of skill and care in the manipulation, use, treatment or control of things or persons, or in the conduct of an enterprise, operation and so on.

Beside and beyond information retrieval and knowledge dissemination, documentation management includes knowledge discovery, capturing and

creation, as well as knowledge classification and representation.

Documentation management is bound to accuracy, motivation and responsibility shown by individuals involved in the process of the document creation and further development throughout a whole set of transitional states. Lack of those elements radically affects the way information flows are perceived, monitored and channelled within an organizational structure. See Box 1.2 on lifecycle of documentation.

Box 1.2 Documentation Lifecycle

A sequence of tasks that comprise the process of developing and maintaining documentation is called Documentation lifecycle. The term 'lifecycle' is used to indicate that, as for living things, any human activity repeats after a period of time.

Documentation Cost

Documentation costs money so it must be included in your event budget. How much you actually spend depends on the methods that you choose. If you want a

professional to document your event it is a good idea to get a number of quotes and be clear about what it is you want documented. Remember to look for ways of making it cheaper. (See box 1.3)

Box 1.3 Tips for Ways of Making Documentation Cost Effective

Here are a few tips for you to bring the cost of documentation down.

- ❖ A local camera shop or photography student may be interested in photographing the event. The camera shop could display some of the photos in the store and sell copies to the community.
- ❖ Local colleges or schools who have access to audiovisual equipment may wish to video the event as part of a project or they may be willing to supply equipment.
- ❖ If you do have to pay for documentation, look locally. A local professional will probably do it a lot cheaper if there is a chance that they may get some free advertising for their business.

Activity 1.2

Describe the process of documentation that has existed in your workplace and discuss how you can improve it. Explain as to what will be the benefit of the improvement suggested by you?

1.3 Evaluation as a Part of Documentation

Evaluation is an important aspect of any event in your organization or project because it allows you to reflect on what has taken place and think about future planning. It is important to provide all those who participated with an opportunity to comment on the event once it is over. This will be a chance to review the event, its highlights and its shortcomings and should be an aid to future planning.

Evaluation can provide a chance to make a critical assessment of the event, to state lessons learnt, to identify the outcomes, to review the aims and objectives, to identify problems and to debrief the workers, participants and the community.

Ideally as many people as are involved in the event should be involved in the evaluation. This will guarantee a more realistic account of the event. It should involve monitoring all the processes of the event from the beginning to the end. The task of monitoring particular aspects of the event can be delegated to committee members. For example, the person, responsible for publicity, may collect all press clippings. Coordinating the evaluation may fall into the hands of the event coordinator or to someone from outside.

There are a number of ways in which your event can be evaluated. These will be influenced by your objectives and actions. If, for example, the main aim

of the event is to attract as many people as possible then you would evaluate the event in terms of numbers and audience sizes. Hopefully your evaluation will extend much further than only quantitative judgments and consider the range of experiences that the community gained from the event. For the most comprehensive evaluation use a variety of both quantitative and qualitative judgments.

Evaluation can be approached in a number of ways but there are two main approaches to evaluating a project.

1.3.1 Process Evaluation and Outcome Evaluation

This is a continual evaluation strategy that occurs during the life of the project. This type of evaluation needs to be built in to the regular activities during the lead-up to the event.

Outcome evaluation is an evaluation strategy that occurs upon conclusion of a project. There are advantages in applying either or both of these strategies. The method you choose will affect the type of information you will have at the end. Outcome evaluation is perhaps the most common method and usually takes the form of a general meeting and/or report.

1.3.2 External Evaluation

Another way of evaluating is to get someone not involved in your event to do it. However if you adopt this method

it is crucial that the person is very familiar with the aims and objectives of your event. Provide them with a clear brief so that they can analyse your event in an appropriate way. They should

commence their evaluation before the event starts and attend the event day(s). A consultancy fee may be paid to this person.

Activity 1.3

Describe in terms of method (s) of evaluation if an event in your organization was ever evaluated? If not, then describe if you have ever been an evaluator of any adult education program. In case, you have not encountered either of the above two situations, then construct an imaginary situation in which you are planning evaluation of your current work and state what method of evaluation you will select and give reasons for selecting the same.

1.4 Documentation System and Services

Today, the world is so much flooded with documented knowledge that it requires some system to be followed for locating the exact information at a time when it is actually required. This work involves organization of information in such a way as to make it available for a specific purpose in a readily usable form and in the shortest possible time. The nature of such work varies in different types of documentation centres and is determined by the types and range of the clientele it is designed to serve. Thus the nature of documentation centres serving a research institute, or an industrial enterprise or a commercial organization is entirely different both in the type of documentary collection as well as the range of services offered. In an adult education set-up, it is expected that adult educators carry out documentation of every important event starting from planning to initial survey of target learners to sanction of a project to implementation, its evaluation, success and loopholes/ shortcomings to recommendation by external evaluating agencies, meetings, day-to-day activities, financial expenditure, digital documentation of

successful activities, vocational skill development programs, booklets/ magazines/ newsletters/ publications developed internally and procured externally, manpower and their training and functions, etc. Being a multi-faceted actor in the profession, an adult educator has to perform the tasks requiring knowledge of documentation. Let us now look at two types of documentation, namely, Documenting an Event and Documenting Celebrations. Please note that in Unit 2, you will read about two more types of documentation, namely, Documenting a Digital Event and Software Documentation.

1.4.1 Documenting an Event

Documenting an event is useful for

- ❖ Recording experiences that capture the atmosphere and reflect the experiences of the event.
- ❖ Reusing when organizing your next event.
- ❖ Presenting to funding bodies of sponsors who have assisted your event.

- ❖ Presenting to possible future funding bodies or sponsors, or interested parties evaluation and consideration of the good and bad points of your event.

Most of the recording for documentation will be done on the day of the event. However, it may be useful to document some of the pre-event activities. See Box 1.4 on the list of documents to be recorded.

Box 1.4 Recording of Useful Documents

Using the following documents you can record what happens at the event.

Press clippings: Collect all press clippings from newspapers that have articles about your event. There are services available that will do this for a charge.

Photographs and slides: Photographs are commonly used to document events because they are fairly inexpensive, easy to organise and provide a good result. Slides are useful for presentation to large groups of people.

Video taping/ digital recording: Video taping or digital recording is a great way to document your event. A little more expensive but the extra animation and the inclusion of sound provide much more realistic recording. It is a good idea to edit your video to a short and concise five minutes if you want to use it for future presentations. A longer tape is more interesting and useful to event participants and organisers.

Radio and TV recording: Record radio announcements, interviews and advertisements. If your event is lucky enough to receive television coverage try to ensure it is recorded. Many events have a main stage or area where there is entertainment, whether it is music, comedy, dance or singing. The day's activities can be tape recorded, then edited and tidied up at a later date.

Sound recordings: Sometimes the proceedings of the event are recorded in a cassette or CD. Speeches made and discussions held are recorded so that nothing of importance is missed.

Surveys: Make a collection of comments from people who attend the event as well as those involved with the event (such as participants and volunteers). These comments can be gathered through written evaluations, letters of support or through tape recordings on the day. A written evaluation form, if carefully constructed, is also an opportunity to gather statistics about satisfaction levels at the event which can then be used for sponsor reports, funding applications and so on.

You need to take the following steps during the process of documenting an event.

i) General Meeting

Hold a general meeting about two weeks (no longer if possible) after the day of the event. Invite all those involved in the planning, implementation and participation of the event, including stakeholders, performers, key organizers, sponsors, staff and key community groups. The purpose of the

meeting will be to gather a collection of views on the event as a whole. The form this meeting takes is for the organisers to decide. An informal tone is probably best so that people feel confident and relaxed about being involved in the evaluation process. At this meeting the committee members responsible for a particular area can take notes for their evaluation report.

Discussion of the event can be started by getting everyone to comment on what each participant thought went well or

could have been done better. Problems that were faced should be discussed and solutions suggested and implemented for the future. All opinions and thoughts should be recorded so that they can be referred to when writing up the evaluation report. Avoid backstabbing and personal gripes during this process.

ii) Putting Together an Analysis Report

After gathering people's perspectives on the event, it is a good idea to collect the information and present it in the form of a report. The report needs to contain the following material.

- ❖ aims and objectives
- ❖ successful and unsuccessful aspects of the event

- ❖ people's responses
- ❖ collection of press clippings
- ❖ photographs
- ❖ financial statements
- ❖ event program and other promotional/publicity material
- ❖ future directions/commendations for the future

1.4.2 Documenting Celebrations

Documentation is done to capture important historical moments, to increase awareness and interest in the relationship between past and present and to provide a model for future celebrations. See Box 1.5 on what and who to document.

Box 1.5 What and Who to Document?

All aspects of the celebration should be documented such as:

- ❖ Meetings - organizational and planning
- ❖ Programs and Events
- ❖ Newsletters and Publications
- ❖ Planners
- ❖ Committee Members
- ❖ Sponsors
- ❖ Participants
- ❖ Audiences

Materials documenting celebrations do generally include the following documents.

- ❖ Personal Journals
- ❖ Published and Printed Materials
- ❖ Photographs, Film and Videos
- ❖ Correspondence
- ❖ Oral Histories

Besides paying attention to materials for documentation, you need to put emphasis on where to place documentation and remembering celebrations through

documentation. In addition you may also like to know about "event historian" and time capsule - important aspects of documenting celebrations. Let us discuss in brief each of the four points.

i) Where to Place the Documentation?

The materials documenting an important celebration should be placed in a permanent location or "repository" where the records are kept secure, organized and accessible. The permanent location could be any of the following places.

- ❖ The archives of the sponsoring organization
- ❖ A local historical society
- ❖ With the local government historian
- ❖ A public library local history collection
- ❖ A local government records repository
- ❖ A college or university archive or special collection

ii) Remembering and Documenting Celebrations

Celebrations should be remembered and documented. The depth of documentation will be different for annual events and for special events such as centennials.

- ❖ **Annual Celebrations:** Annual celebrations can be documented with administrative records for the event. There will probably be no need for additional efforts.
- ❖ **Special Celebrations:** Special celebrations that involve a wide variety of community members will need to have specific documentation efforts built in from the very beginning.

iii) “Event Historian”

Someone should be designated “event

historian” to

- ❖ Save all relevant materials.
 - ❖ Label and organize them in such a way that they can be used.
 - ❖ See that they are placed in an organized collection or repository
- Well-documented celebrations will be remembered much more vividly and will remind sponsors and participants of the successful event.

iv) Time Capsules

The creation of a time capsule is often considered during the planning of a celebration. Time capsules are fun, and their appeal is understandable. But the actuality is often disappointing. Most time capsules are buried or placed in cornerstones. When removed after 50 or 100 years, most materials placed in them have deteriorated to the point to where they can’t be handled or read. An alternative is to place the time capsule in an acid-free box in a permanent location or repository that has temperature and humidity controls. The time capsule box could be sealed for the desired time and opened at the appointed hour. Because it would be stored in a protected environment the material would be in relatively good condition when retrieved.

Activity 1.4

As an adult educator you may have across many events/ celebrations in the field of adult education. Have you also observed/ participated in any of them? If yes, describe at least one of them in terms of the details given in subsection 1.4.1 and sub-section 1.4.2.

1.5 Conclusion

Now that you have reached the end of Unit 1 on ‘Documentation’, you have gained the knowledge of the basics of the term documentation to the knowledge of what to document and the different things/ events to document and its importance in an adult education

set-up. Documentation, as we have learnt in this unit, is not only the collection of important data but also a systematic arrangement of those data to substantiate decision-making and support diversified needs and priorities in the context of an ever-changing scenario.

You have also read about documentation management and its lifecycle. Documentation need not be a costly affair and you can discover ways of making it cost-effective. Evaluation as a part of document provides an opportunity for assessment and identifying problems and tightening loose ends. The section on documentation systems and services

gives a broader perspective on why, how and what to document and the efficient ways to carry out documentation in an adult education set-up. As an adult educator, you have a role to play in shaping the future of literate persons in a society. An effective and efficient documentation system helps us in achieving this goal.

1.6 Apply What You Have Learnt

As an adult educator you need to carry out documentation work and Box 1.5 has already mentioned what and who to document.

It is not enough to understand what and who to document. You need some tips about when and how to document and for this purpose you may go through Box 1.6.

Box 1.6 When and How to Document?

Begin with the first organizational or planning meeting. Continue until the celebration or event is over.

One person should be designated to keep the materials together. As soon as possible after taking the photographs or the videos, identify the date, event, people, and location. Meeting minutes, clippings, programs and other papers should have dates.

Try to sort and organize materials for easy use while the celebration is in progress and so the materials are in order for placement in a permanent collection.

Avoid storing the material in basements, attics or garages. Dampness and temperature extremes will damage paper and photographs

When in doubt, **DON'T** throw it out!

Now you are ready to carry out a short application-oriented exercise, dealing with learning points of Unit 1. First, describe the status of documentation in the adult learning set up (ALS), that is, your work place. Second, write in brief about your plans to improve the current status of documentation of your ALS.

Tips for the adult educator for better organisation of documentation

- ❖ Each day, an hour prior to the time of leaving your desk for the day, organise your important materials in
- ❖ a sequential way so as to keep a record of the important happenings of the day and how they are going to affect the running of the AE program. Write down the important points.
- ❖ Date-wise and event-wise arrange and document materials
- ❖ Never mix up materials pertaining to different events, meetings, celebrations, teaching-learning process or vocational training inputs in one single file
- ❖ Always keep a 'to do' list handy and

do it priority-wise to eliminate any confusion and last-minute rush

- ❖ As far as possible finish each day's documentation process as soon as the event/meetings/visits/skill training programs, etc. are over to ensure accurate and attentive data to be documented

Now that you have studied the whole unit, plan the documentation of your adult education set-up based on the following activities.

- ❖ Collection of data to document
- ❖ Assessing those data as per priority, time and reference
- ❖ Calculation of its cost and how to make it cost-effective
- ❖ Self-evaluation of data
- ❖ Documentation of different programs/events/meetings/celebrations, etc.
- ❖ Placement of documentation
- ❖ Future plans and activities



PROCESS DOCUMENTATION

JOHN A JOSEPH

Structure



- 2.1 Introduction
- 2.2 Aim and Importance of Process Documentation
- 2.3 Methods and Tools of Process Documentation
- 2.4 Process Narratives and Flow Charts
 - 2.4.1 Risks and Controls
 - 2.4.2 Proactive Process Management
- 2.5 How to Conduct Process Documentation
- 2.6 Software Documentation
- 2.7 Documenting a Digital Event
- 2.8 Conclusion
- 2.9 Apply What You Have Learnt

Learning Objectives



After going through Unit 2, it is expected that you would be able to

- ❖ Describe the aims and objectives of process documentation
- ❖ Discuss the different methods and tools of process documentation
- ❖ Conduct documentation based on software
- ❖ Document a digital event.

2.1 Introduction

The conceptualisation, evolution, growth and implementation strategies for event documentation differ from one organization/ project to another. Each project or agency has the potential to provide deeper insight into the enigmatic subject of social development, but differently. Each case has something to contribute to the learning process in the field of adult education, as there is no “blue print” approach. Hence, understanding the process documentation (PD) is of immense relevance to strengthen the adult education project implementation.

In adult education programs in India, the information collected during the

evaluation provides insights in post-facto. On the other hand, process documentation provides concurrent insights, since evaluation is a real time ongoing activity during the course of the project. As such, information collected during the course of process documentation is of timely relevance. Information collection on programs is the key aspect of PD

PD in the context of social science research is about finding occurrences of similar events or deviations, causative factors, etc in an ongoing manner. Hence, it results in constant thinking, reflecting and analysing the adult education concepts and implementing strategies.

In adult education projects, generally there are not any hard and fast set of rules, criteria or any one specific model. Methods, models, criteria are situation and context specific. Hence, PD in adult education is a process of collection of authentic data about recurring phenomena on an ongoing basis to provide insights into programs, implementing strategies and organization development mechanisms. In this sense, PD of each organization or project provides a different model.

PD is based on the learning approach. Before undertaking bigger projects, it is useful to apply PD on pilot scale to gain clearer insight into policy formulation and criteria for making bigger projects. PD of another agency on the similar project can be used to gain policy insights, etc. In PD, the key players are managers, supervisors, community leaders etc. The insights and analyses of process begin during the data collection process itself.

Hence, not only PD provides insights into the programs and strategies but also builds the organization capacities. PD provides inter linkages between different agencies, facts, systems, not conventionally thought of in a developmental model. PD also helps in

educating different members who join the agency at different stages on the mission and strategies and serves the purpose of orientation and team building.

Every social set-up, organization operates under its own articulated ideology, mission and perspectives. A variety of processes take place during the articulation and implementation. It is very difficult to capture all processes that undergo in a development organization. PD is a tool, which helps to collect data systematically on various processes. PD is not an evaluation strategy, or a post-facto exercise. It is an exercise to gather all data for continuous reflection and analysis and re-examination of strategies for strategic and operational framework.

The above discussion makes it clear that knowledge and skills about process documentation is a necessary item of acquisition by professional adult educators. Unit 2 is going to focus on explaining what and why of process documentation and what its relevance is for running an adult education program. Most importantly, it provides the learners some key skills to begin process documentation at their end.

2.2 The Aim and Importance of Process Documentation

Process documentation is a method of concisely capturing and sharing critical project concepts, plans and information as they are developed, so that impacted parties can share this information, make informed decisions, and keep the project moving forward without having to revisit old discussions.

The basic aim of process documentation (PD) is to learn from implementation experience and in the light of this modify the strategy and ultimately, policy of a

program, project or organization.

Documentation of processes helps in creating systematic information to articulate the intervention strategies and develop the flow chart of a program. This helps the project or organization to find out more about the needed field intervention methods, coordination, management requirements, financial management and human resource development policies. Not only the project conducting process documentation takes

benefit from this but also other similar projects and agencies can use the outcome as a model in their formulation and implementation methods.

Most of the process-oriented methodologies are meant to record programs as they occur and feed the information back to managers, researchers and policy makers to help them understand the working of the project better.

However, there are several other purposes, equally important, for which processes are sought. They are used by

agencies undertaking new and complex forms as part of expansion of programs, which need understanding about stakeholder participation. Such information is often needed to validate the approach/program and consequent policy formation.

An important aspect of any process is the documentation that accompanies it, such as logging trouble calls, requesting system changes, or executing disaster recovery plans. Let us now discuss the methods and tools of process documentation.

2.3 Methods and Tools of Process Documentation

When we ask the average team member in an adult education organization why he or she has so much documentation, a common answer is, “Because my organization requires me to fill out the templates.” If we ask about the usefulness of such documentation, a typical reply is, “I guess it will provide a trail of what has happened so that management can study my project later.” But almost no one ever goes back and ploughs through “the stack.” With purposes as unclear as these,

it is not surprising that people just “fill out the templates.”

There are many methods and tools available today to aid in capturing information about how an organization performs its day-to-day activities in order to achieve desired efficiencies and cost reductions. A common approach integral to most methods is to develop an end-to-end process flow (See Box 2.1 to understand what an end-to-end process flow is.

Box 2.1 End-to-end Process Flow

An important question to be answered before starting is ‘What does end-to-end really mean?’ For the head of an adult education organization it may mean viewing all its activities from the time the organization has been set up until it has completed its plans. It may mean only those processes initiated and developed by the organization. For a project head, it may include all the activities of the project and may become a means to identify gaps and overlaps to determine improvement opportunities. And yet another perspective is that of the Head or key actors who want to use a process-centric approach to the the organization/ project rather than the typical functional view and achieve a means to assess the impacts of strategic decisions on the activities critical to their Organization.

Centralized support groups such as Information Technology (IT), in addition to their own activities, are responsible for all automated processes used by modern organizations. Therefore, IT may see end-to-end as referring to the execution of specific software processes regardless of who uses them. For the purposes of this discussion, a machine aided by technology performs the software process. It starts when a user initiates a transaction, or triggers an event, and ends when the computer delivers a response or result. An adult education program, on the other hand, is performed by a human being and may or may not be enabled by one or more software processes.

Methods for Documenting the Process

You may find some of the following methods quite useful for documenting the process in your adult education set-up.

- ❖ Use of existing documentary material
- ❖ Records
- ❖ Structured interviews
- ❖ Case studies
- ❖ Reconstruction of events

- ❖ Field diaries of project staff
- ❖ Video and audio recordings
- ❖ Newspaper clippings
- ❖ Software development
- ❖ Participant observation of users
- ❖ None of the above methods is new in itself in the social science methodology, but what is new is the use to which each method is put.

Let us now look at some more process documentation techniques to achieve a common understanding of a process.

2.4 Process Narratives and Flow Charts

Documenting an understanding of a process, related controls, and key roles and responsibilities can be achieved through process narratives and flow charts. Both of these documentation techniques assist internal audit teams and those responsible for the processes to establish a common understanding of a process.

Once the documents are confirmed as accurate, they provide a baseline for performing risk analysis, internal controls testing, and implementing process improvements as necessary.

Narrative and process flow tools allow auditors to organise, describe, and graphically depict the results of

- ❖ Reviewing policy and procedure manuals;
- ❖ Discussing the process with key employees through inquiry;
- ❖ Performing a process walk through of sub-processes using samples, etc;
- ❖ Considering key inputs and outputs to a process;
- ❖ Lines of responsibility for individual employee and departmental roles.

The objective of process narratives and flow diagrams is to generate an accurate representation of how work is actually performed. Audit teams are then positioned to add value to recommend improvements, evaluate segregation of duties controls, and identify key controls (see Figure 2.1).

Process Reviewed: ----- Location: -----

Process Management Rating: ----- Sub-Process: -----

Figure 2.1: Audit Team’s Comments

2.4.1 Risks and Controls

Narratives and process flow maps (see various part of Figure 2.2) are designed to assist the analysis of processing risks and related controls. Although these documentation techniques do not test

the effectiveness of controls, they should promote an agreed upon understanding of how a process is performed, who performs specific duties (roles and responsibilities), and assertions about control activities.

Key risks and controls can be mapped on the process flow diagram to indicate when, by whom, and how controls mitigate risks.

Many organizations or IT companies develop excellent processes but fail to document them adequately. After an initially successful implementation of the process, many of these procedures go

unused due to lack of documentation, particularly as new staff members who are unfamiliar with the process attempt to use it. Methodical process management can identify bottlenecks and inefficiencies that are invisible to the organization and it can find room for improvement even in well-refined procedures.

Process Summary	Yes or No
A Does the process narrative summary have the preparer's name?	
B Does the process narrative summary have the approver's name (where applicable)?	
C Is the process owner name evident on the process narrative summary?	
D Are the relevant policies and procedures (P&P) noted on the summary?	
E Are the P&P in the documentation folder or related application storage facility? Where?	
F Does the summary clearly indicate the financial statement accounts impacted by the process?	
G Does the summary indicate the related COSO assertion (where applicable)?	

Figure 2.2a: Narratives and Process Flow Maps

Process Maps	Yes or No
A Is there a defined start symbol (either start or connector from another map)?	
B Does the map have a legend that describes the various shapes in the map?	
❖ Is each shape in the map appropriate (e.g., database reference shows a database shape)?	
C Does each shape (process) describe ->	
❖ Who is performing the action? <i>Note:</i> Examples include: AP Clerk, Senior Accountant, Controller, etc. This is particularly important when describing authorization/approval controls.	
❖ Are only position titles (not names) utilized in the map?	
❖ What action are they performing [e.g., reconciling, posting, validating, etc.]?	
❖ When are they performing the actions?	
❖ Where is the action being performed (could be externally, internally, systemic application, database, etc., different dept, etc.)?	
D How is the action being performed? <i>Note:</i> describe what is being utilized to perform the action, for example, report name, database, etc.	
E Do the maps indicate inputs, outputs for each activity?	
F Is the input/output specifically identified (i.e., exact name of query or name of report)?	

<p>G Have all FINANCIAL risks been identified? <i>Note:</i> What could go wrong for each shape, keeping in mind a financial impact focus?</p> <p>H Have all FINANCIAL controls been identified? <i>Note:</i> How do we prevent what could go wrong such as a mitigating control?</p> <p>I Are there any estimates or assumptions in the process?</p> <p>❖ Is the methodology explained/documented in the narrative?</p> <p>J Does the process end at the end of the map?</p> <p>❖ Yes - Is there a defined end symbol?</p> <p>❖ No - Is the next process connector on the map instead of an end symbol?</p> <p>K If process map is linked to/from another, have the terminology and common activities been named the same between maps?</p> <p>L Have risks been documented where the risk is occurring?</p> <p>M Have controls been documented where they occur? <i>Note:</i> controls that occur outside of the process (e.g., senior management operational review) should be documented on the map.</p> <p>❖ Does every risk identified on the process map have an associated description in the narrative?</p> <p>N Does every risk identified on a process step have a control and vice versa?</p>	
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Figure 2.2b: Narratives and Process Flow Maps

Information Technology	Yes or No
A Is the specific database referenced where process information exists?	
B Does the narrative indicate which database?	
C Have IT processes within each financial/operational process map been identified?	
D Has IT provided process and control information when computer applications are involved?	
❖ Are all the applications used listed/represented?	
E If the financial process is dependent on other IT processes (e.g., polling, interfaces, etc.), have these IT processes been identified and linked to the applicable IT map(s)?	
F Has IT provided process and control information when computer applications are involved?	
G Do process flow maps or narratives cite specific application controls and related individual users (position associated with access)?	
<i>Note:</i> See the Controls Checklist below for coverage of basic IT control attributes.	

Figure 2.2c: Narratives and Process Flow Maps

<ul style="list-style-type: none"> b. Who approves (what level of management?) c. Existence of an established level of authorization? <p>VI. If a reconciliation control, does the control detail:</p> <ul style="list-style-type: none"> a. Who prepares and performs the reconciliation? b. What is the purpose of the reconciliation? c. Who reviews the reconciliation? d. What is the evidence of the review? (manager approval) e. What reports are used and which systems generate the reports used? f. How are differences investigated / resolved? <p>VII. If a document control, does the control detail that:</p> <ul style="list-style-type: none"> a. Documents are pre-numbered and system generated (e.g., sales orders, invoices etc) b. Documents are safeguarded (e.g., physical controls over checks, contracts, manual journal entry logs, etc.)? <p>VIII. If a physical asset control, does the control detail:</p> <ul style="list-style-type: none"> a. How is the access to the asset and related record keeping appropriately restricted and is it reviewed periodically? b. What procedures ensure the accuracy of the related record keeping (activity logs)? <p>IX. If a system based control, does the control detail:</p> <ul style="list-style-type: none"> a. All key fields for data entry must contain valid information (e.g., current date, established dollar range) in order for a record to be accepted. b. Information is validated against a master table (e.g., customer number, product number, vendor number, PO number). c. Master tables are reviewed and updated regularly to ensure accuracy and table data is safeguarded. d. Duplicate postings/entries are not accepted. e. Accounting period-end cut-off dates are enforced by the system. f. System-based control overrides must be authorized. 	
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Figure 2.2e: Narratives and Process Flow Maps

Additional Considerations	
<p>A Is the methodology explained / documented in the control descriptions for formulas etc?</p> <p>B Is the control frequency documented e.g., quarterly, monthly, weekly, daily, multiple times daily?</p> <p>C The control description adequately explains how it mitigates the risk?</p> <p>D Is the control type (Preventive, Detective, Corrective) listed?</p> <ul style="list-style-type: none"> ❖ Is the control type listed accurate? <p>E Is the control owner listed?</p> <p>F Are only position titles (not names) utilized in the RCM?</p> <p>G Is the control technique (Systemic, Manual) listed?</p> <ul style="list-style-type: none"> ❖ Is the control technique listed accurate? 	

<p>H Is the control level (Primary, Secondary, Tertiary) listed? ❖ Is the control level listed accurate?</p> <p>I Is the COSO component identified? ❖ Is the COSO component identified accurate?</p> <p>J Has the preparer assessed the design effectiveness?</p> <p>K Do you agree with the assessment of design effectiveness?</p> <p>L Has the preparer documented any deficiencies (Control gaps) in the design effectiveness?</p>	
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Figure 2.2f: Narratives and Process Flow Maps

2.4.2 Proactive Process Management

Proactively managing the processes can help an organization to achieve the following benefits.

- ❖ Eliminate flaws
- ❖ Reduce the time spent on specific tasks
- ❖ Decrease costs
- ❖ Decrease resources associated with any task

- ❖ Improve efficiency
- ❖ Improve overall quality
- ❖ Increase customer and employee satisfaction.

Very few techniques are available to quantify the quality and value of Process Documentation. See Box 2.2 for a list of different approaches to understand process documentation.

Box 2.2 Different Approaches to Understand Process Documentation

There are quite a few different approaches to understand process documentation, including

- | | |
|--------------------------|-------------------------------|
| ❖ Field level activities | ❖ Planning |
| ❖ Meetings | ❖ Implementation of decisions |
| ❖ Negotiations | ❖ Resolutions of differences |
| Decision-making | |

Activity 2.1

Note the following steps to take in developing Process Documentation at your adult education setup and describe its relevance for your activities as a professional adult educator.

- ❖ Develop an action plan to manage the creation of a policy and process documentation system that effectively prescribes action and expedites efforts.
- ❖ Design a documentation structure suited to your organization’s needs and its size.
- ❖ Analyse the potential of process documentation versus training material.
- ❖ Learn various ways to organize and express your organization’s goals or its expectations.
- ❖ Examine the merits of various structures and styles to compose/access both policy and process documentation.
- ❖ Discover the key criteria to keeping it simple.

2.5 How to Conduct Process Documentation

Although there are no well-defined methods for conducting PD, some methods can be spelled out in specific context of agency needs. The key steps are:

- ❖ The program or agency needs to articulate the purpose, scope and limits of the PD exercise.
- ❖ Expectations of both the agency personnel and PD facilitator need to be clarified and reach a common understanding on the process of the PD
- ❖ At the outset it is important to establish the focus and frame of reference for PD in which the expected outcome of PD needs to be spelled out.
- ❖ PD needs to result in analysis, reflection, planning, diagnosis and organizational ‘development’ and also address the day-to-day needs of the organization like preparation of an organizational document on its history and programs.
- ❖ Having an organizational framework in mind helps in the systematic identification of processes. This enables in identification of processes that could begin from the results/ outcomes to leadership, policy formulation, strategies and mission or begin from mission and move onto other areas of organizational framework.
- ❖ The key actors’ recalling or narrating the experiences, events, happenings and decisions form a large part of data. Structuring these and putting

them in a proper perspective results in process identification.

- ❖ Analysis need to focus on both desired and undesired processes but also hint at the causes of processes and patterns.
- ❖ The PD process should be defined within a particular time frame. The temporal aspect provides clarity for future use of data that has emerged from the PD process.
- ❖ PD essentially enables the organization to build internal mechanisms for continuous reflection and analysis based on authentic data. It is primarily used for developing appropriate system, structure, perspective and building the institution.
- ❖ PD essentially enables the organization to build internal mechanisms for continuous reflection and analysis based on authentic data. It is primarily used for developing appropriate system, structure, perspective and building the institution.

After our long discussions of merits, methods and tools of process documentation, let us now complete what we began in unit 1. While discussing planning of documentaion system and services in section 1.4 of Unit 1, we had mentioned that in Unit 2 we will discuss two types of documentation, namely, software documentation and documenting a digital event.

Activity 2.2

Read section 2.5 carefully and select some steps from the above list to carry out process documentation at your adult education centre. Explain why the steps selected by you are more appropriate for your adult learning setup.

2.6 Software Documentation

Software documentation is a form of writing for both print and online media that supports the efficient and effective use of software in its intended environment. Software documentation, as many researchers have shown and as technical writers and software documents know from their work in the business, contributes significantly to the value of the software product. In this sense the documentation contributes to the user's efficiency in the workplace and thus has an important role to play in modern business.

Over its evolution, software documentation has expanded to take on the challenge of providing useful and practical information products for users. Whereas documentation once aimed to satisfy the support needs of the experienced user, documentation in the 2000s aims also to make software useful. This means not just teaching features but supporting workplace tasks with step-by-step relevancy.

In changing from the goal of supporting experts to guiding and teaching beginning and intermediate users, researcher looked to a number of resource disciplines, including document design, instructional psychology, cognitive psychology, ergonomics and human factors, and traditional rhetoric. These explorations created a great number of design innovations that, coupled with technological advances in page design and functionality, have given us the exciting world of single-sourced documents (online documents with dynamically generated content and adaptive interfaces) and embedded help files (documents that present information at the point of need through

features of the software interface).

But of all the innovations that span from the rapid rise of computer and software technology during the 1920s and 1990s, task orientation has provided the most dependable and useful tool for manual design. Task orientation, as an organizing principle in manuals and online help and as a goal in their design and writing informs the modern day approach.

Task orientation is an approach to software documentation that presents information in chronological order based on the user's workplace sequence. Task orientation encourages the successful application of software to workplace objectives. Other terms used for task orientation include how-to, step-by-step, procedures, walkthroughs, and tutorials. This approach to documentation is shown in a variety of print and online forms: tutorials, "getting started" booklets, instruction steps, job performance aids, and online help procedures.

A good document should encourage users to learn the program (proficiency) and encourage users to apply the program to problems in the workplace (efficiency). A number of things determine the success of software documentation. Put another way, you can easily find a number of ways to mess up a documentation project. The overriding principle is: Make the software usable. A manual that does this adapts the software to the user's job, rather than making the user adapt to the software.

Software users often need both how-so and how-to information while working with a program.

2.7 Documenting a Digital Event

As the morning of 11 September 2001 unfolded, the media looked at history to provide a sensible reference point for the shocking events it presented to the public. In the heat of the moment, it became all too common to compare the attacks of 11 September 2001 with the attack on Pearl Harbor of 7 December 1941. So successful was this comparison that now, more than a year later, it remains commonplace in both media and popular circles.

The comparison has, however, come under some scrutiny by the historical community. Among other things, historians point out differences in the nature of the targeted communities, public response to the events, the relationship between attacker and attacked, and in the broader cultural and geopolitical circumstances in which the two events were situated. Yet even putting substantive debates aside, it must be admitted that from the historian's perspective there are important practical differences between Pearl Harbor and 9/11 - differences that speak to the nature of sources.

The historical record of 1941 consists almost entirely of paper - government reports, letters from home, photographic prints and newspaper headlines. Not so in 2001 - September 11 was not only the first major event of the twenty-first century, it was also the first major event of the Internet age. For the first time, people experienced a major historical event as it unfolded on their computers - both at work and in classrooms. Much of the record of 11 September 2001 sits on our hard drives and servers - in documents, e-mails, voice mails, digital images, and web sites. Without a

concerted effort by historians and archivists, these fragile materials will surely be lost - even at the touch of a delete key. The September 11 Digital Archive is working to prevent that loss.

Organized by the American Social History Project at the City University of New York and the Centre for History and New Media at George Mason University with funding by a major grant from the Alfred P. Sloan Foundation, the September 11 Digital Archive uses electronic media to collect, preserve, and present the history of the 11 September 2001 attacks and the public responses to them. In particular, the archive works to collect stories, e-mails, digital images and other "born-digital" materials relating to the attacks of September 11. Additionally, the archive organizes and annotates the most important web-based September 11 resources and develops online materials to contextualize and teach about the events. The archive is quickly becoming the premier resting place for the vast digital record precipitated by September 11.

Launched on 11 March 2002, the archive's first year has seen remarkable success. Over 25,000 e-mails, 10,000 first hand stories and 5,000 digital images have been preserved and permanently archived. A wide-ranging series of partnerships has been formed with other institutions, including the Museum of the City of New York, National Public Radio's Sonic Memorial, and the Library of Congress. The archive is especially pleased to have been selected as the Smithsonian Institution's designated repository for digital materials relating to September 11 and its special exhibition, "Bearing Witness

September 11 Digital Archive apart from other historical repositories is the large number of spontaneous grassroots contributions, personal stories of September 11, and pieces of digital artwork. Unlike traditional “brick and mortar” archives, there are no physical limits to the size of the September 11 Digital Archive’s collection. If it needs to be expanded, more disk space is added. This means that no digital object is too trivial for the archive to accept.

Another thing that sets the archive’s collections apart is the large number of e-mail and instant messages that were written during the moments of the attacks. For instance, the archive contains a series of Blackberry wireless e-mail messages written by people

escaping the World Trade Center. Of course, the substance of these e-mails is moving and fascinating and not in itself very different from the substance of, say, letters written by U.S. service people at Pearl Harbor. What is very different about these communications is their media. Unlike Pearl Harbor and other earlier events, witnesses to September 11 connected to the news and to each other in real time. In these exchanges we see the events as they unfolded and the immediate responses of those involved.

Through continuing efforts to collect the digital record of September 11, the archive will insure that future historians do not fail to understand all experiences of that monumental day.

Activity 2.3

Select two digital events pertaining to India and compare their process documentation along the lines attempted in section 2.7.

2.8 Conclusion

After reading the unit, you have learnt how Process Documentation (PD) is an important part of documentation, which not only provides insights into the programs and strategies, but also builds the capacities of the organization. It is equally useful in an adult learning set-up, where you can develop systematic process documentation by following the different methods and tools mentioned in Unit 2. As an adult educator, you need to understand a process, its key roles and responsibilities. Through process documentation, you can create a database of implementing strategies used at different phases of an adult education program, its salient features, goals, etc., budgetary provisions, important events and internal

inventories during the process of implementation. It can reduce the dropout rate and back-log tendencies existing in any adult education set-up as it would provide an insight to future adult educators and would be a substantive measure to reduce flaws and improve quality, efficiency and learner’s satisfaction. Similarly, as an adult educator, you will document and create a list of important e-mails to send instant messages. You can also develop success stories of adult learners to provide incentive to other learners. But, it is also important for you to carry out a continuous process of documentation for analysing the program and its achievements. In case of transfer or some other causes, if an adult educator

has to change duty then the new person in-charge will not face difficulty in assessing the activities and the teaching-learning process at the ALS will

not be affected if you have carried out the process documentation in an efficient manner.

2.9 Apply What You Have Learnt

Imagine that a new colleague has joined your adult learning setup (ALS) and you need to handover the responsibility of process documentation to this person. For explaining her/his tasks, you prepare a long note so that the new person can refer to it while in doubt. Prepare this note in the context of your ALS and try to incorporate the following points.

- ❖ Aim and Importance of Process Documentation
- ❖ Methods and Tools of Process Documentation

- ❖ Process Narratives and Flow Charts
- ❖ Risks and Controls
- ❖ Proactive Process Management
- ❖ How to Conduct Process Documentation
- ❖ Software Documentation
- ❖ Documenting a Digital Event

Applying what you have learnt in this Unit about Process Documentation prepare a note on process documentation of your ALS and critically examine how to carry out the documentation on a day-to-day basis.



KNOWLEDGE MANAGEMENT

B K SEN

Structure



- 3.1 Introduction
- 3.2 Data, Information and Knowledge
 - 3.2.1 Data
 - 3.2.2 Information
 - 3.2.3 Knowledge
- 3.3 Management of Data, Information and Knowledge
- 3.4 Tacit knowledge
- 3.5 Technologies for Knowledge Management
- 3.6 Prerequisites for Knowledge Management
 - 3.6.1 Sharing of Expertise
 - 3.6.2 Knowledge Mapping
 - 3.6.3 Knowledge Workers
 - 3.6.4 Value Creation
- 3.7 Major Challenges of Knowledge Management
 - 3.3.1 Lack of Sharing of Expertise
 - 3.3.2 Attaining Expertise
 - 3.3.3 Handling of Tacit Knowledge
 - 3.3.4 Legal Issues
- 3.8 Conclusion
- 3.9 Apply What You Have Learnt

Learning Objectives



It is expected that after going through Unit 3 you will be able to

- ❖ Understand the concept of knowledge management
- ❖ Differentiate between data, information and knowledge
- ❖ Have a fair idea of tacit knowledge
- ❖ Gain a fair degree of knowledge about technologies, prerequisites and major challenges of knowledge management.

3.1 Introduction

Unit 3 on Knowledge Management (KM) pertains to the basic activity of planning and implementing our tasks in a systematic and efficient manner. Its relevance for adult educators is obvious as they are generally responsible to

accomplish many a task in their capacity of professional adult educators. Unit 3 has focused on the theoretical understanding of the concept of knowledge management. In Unit 4 you will learn about its skill component. The

two units together prepare you to apply the concept to your day-to-day activities at an adult education setup.

The concept of management is known to all of us. In our daily life we use this concept more often than not to accomplish various tasks systematically. Managing various activities requires precise planning in advance and proper implementation. Suppose, you have been given the responsibility of organizing Independence Day celebration in your adult education centre. Immediately you are to start planning as to the particular spot in the centre where it will take place; time when the celebration will start; the person who will hoist the flag; informing the people of the community about the celebration; the collection of subscription, if required, to meet various expenses; making the venue attractive as well as comfortable for sitting; arranging the flag, flagstaff and flowers; giving the responsibility to someone to train the boys and girls of the community to sing the national anthem after flag hoisting and also perform other cultural functions; contacting the photographer to take photographs or video of the function and so on. Once the celebration is over, you are to see that the venue is cleaned, the flag and the flagstaff are preserved properly for the

next year, the payments due to those involved in the celebration are made, the necessary accounting of the money raised through subscription is properly done and made known to people who paid the subscription. If all these activities are done without any hitch, then the people will say that the celebration has been organized very well which would not have been possible without proper management.

While organizing the celebration, you have recorded various things, e.g. the amount of subscription collected from various sources, the expenditure incurred for diverse purposes, the responsibilities given to various persons, and so on. These recordings are in fact data which provide us information either straightway or after processing. You have also gathered information from various persons who organized such activities earlier. The persons who have given you information have in fact shared their knowledge with you. As an adult educator, you need to manage the various activities of the adult education centre. Unit 3 aims to equip you with the requirements of managing adult education programs efficiently and effectively.

In the next section we shall deal with data, information and knowledge.

3.2 Data, Information and Knowledge

The three terms, data, information and knowledge are semantically interlinked and often you may find people using them indiscriminately and creating confusion in mind. Let us carefully discuss each term and its specific meaning in our context and find the relationship among them.

3.2.1 Data

We encounter various definitions of data in dictionaries. For our purpose we shall use the following definition - 'Facts or figures from which conclusions may be drawn' (NWDDC 1993). We shall try to understand the concept with certain easy examples. For celebrating certain public

festivals we usually raise subscriptions for which we use subscription books. In the subscription book we record the name of the subscriber, his or his/her address as well as the amount given. All these are data.

During census operations, enumerators visit every household and record in a prescribed form the name, sex, age, educational qualification, occupation, and so on of all the family members of the household. Data gathered by each enumerator is transmitted to the office of the census commissioner for processing and generating information.

You may note that data are quite often recorded in figures, e.g. statistical data; and sometimes also in words, e.g. the address of a person. The role played by data in management is enormous.

3.2.2 Information

Information is a very common term and we use it quite often in our day-to-day conversation. We receive information from newspapers, radio, television, relatives, friends, teachers and many other sources like written media, print media and oral communication and so on. Sometimes we generate information by virtue of our multifarious activities.

A dictionary provides a number of definitions for the term 'information'. For our purpose, we shall take into account the following definitions: i) Any fact or set of facts, knowledge, news or advice, whether communicated by others or obtained by personal study and investigation (see HWG 2006); and ii) Data that has been processed into an organized, usable form and is meaningful to the recipient for the task at hand (cf. Szymanski, et al 1994).

Let us now try to understand the meaning of information from the

definitions given above. Everywhere in the world, nay, the universe, incidents are happening. Some persons are observing these incidents. When the observers are communicating these incidents to people, they are getting informed or getting information about the incident. On 21 July 2006, a Haryana boy, called Prince fell into a deep borehole on his sixth birthday and had to stay there for about 50 hours awaiting his rescue by military personnel. Reporters there were continuously witnessing the rescue operation and airing the news through radio and TV and people not only in India but also in many parts of the world were getting the latest information about the rescue of the boy. In this case an incident gave birth to a lot of information.

A person may acquire knowledge by observation, reading, thinking, research, listening, tasting and feeling. When the person communicates his or his/her knowledge by telling, writing, printing or recording, it becomes information.

Now, we take up the second definition and try to see how the organization of data in a desired way becomes information. We have already seen that subscription needs to be collected using a subscription book for organizing a function like Independence Day celebration. The subscription book will have the data relating to the name and address of the person and the amount contributed. Now, if we add the amounts recorded in all the subscription books, we generate information as to the total subscription raised. We may arrange the amounts contributed by individuals in ascending order to find out the minimum amount contributed, maximum amount contributed, amounts contributed in the range of Re. 1-5, Rs.

6-10, and so on. Thus, you see, we generate different information using the same data set. Information being generated through the processing of data is usable and meaningful. In many cases a piece of data itself provides us information. For example, if we want to find out how much Ms. X has contributed we can do so by checking the subscription book.

3.2.3 Knowledge

Data and information are like tangible products. They can be collected, handed over, distributed, and so on. Take for example, mark sheets. They contain data as to the marks a student has obtained, division s/he has secured, the school from which s/he passed and so on. The concerned Board of Examination has distributed these mark sheets to various schools wherefrom they are distributed to students. We cannot collect and distribute knowledge in the same way. Every day the newsboy distributes the newspapers to various subscribers. The principal of a school or college may ask one of his teachers to distribute mark sheets. S/he cannot ask the teacher in the same way to distribute knowledge among students. Knowledge is more abstract, hence it cannot be treated as a product. It is a philosophical concept.

Dictionaries provide many a definition for knowledge. We take only the following definitions for our purpose: i) 'all that has been perceived or grasped by the mind; learning; enlightenment; ii) the body of facts, principles, etc. accumulated by mankind' (NWDDC 1993).

From the first definition it is very clear that mind is involved in the case of knowledge. Throughout our life we observe, read, hear, and feel many a

thing. Of all these, whatever we can grasp or perceive is our knowledge. It is always to be borne in mind that *knowledge is personal*. An example is being given here to distinguish between information and knowledge. A teacher before delivering his/her lecture in a class distributed the photocopy of his/her class note on the topic to each student. Afterwards s/he took the class as usual, explained the topic, and answered questions asked by the students. Finally, s/he took a class test on the topic. On examining the answer books s/he observed that the answers varied from student to student even though the same amount of information was distributed to each student by way of the class note and the lecture. The test clearly showed that knowledge gained varied from student to student despite the distribution of equal information. This is the knowledge we are concerned with in knowledge management.

Every day we are getting a plethora of information from diverse sources like television, radio, newspapers, books and people talking to us, events happening before us, and so on. We cannot digest all the information that we receive because of our limited knowledge. An erudite lecture on Einstein's theory of relativity broadcast by a TV channel may not be digested by most viewers. On the other hand a lecture on solar eclipse can easily be grasped by most people. So, the limited knowledge of a person does not allow digesting every piece of information s/he receives. Whatever s/he can digest properly gets internalized and adds to one's knowledge. Now, on the basis of this knowledge, s/he can provide information to others. Incomplete and half-digested information many a time gives rise to

rumors or wrong information. Let us give a concrete example here. It is an incident of late 1960s when television transmission from Delhi station used to start around 6 PM and continued till around 10 PM. Prior to 6 PM, a girl with chest pain visited a doctor. The doctor as usual examined her and advised X-ray of the chest. While talking to another person, the doctor said - 'TV has already started'. The girl heard the doctor as saying 'TB has already started'. She was totally upset and her agony continued till the X-ray report revealed nothing of the sort. Here is a

case of improper grasping of information caused by incorrect hearing. In knowledge management listening to a person with undivided attention is of paramount importance.

The other definition is quite clear. From the early days of civilization till date whatever facts, principles, ideas, etc have been accumulated by mankind is knowledge. It is to be remembered that all facts etc are recorded in the form of information. Whenever mankind comprehended the facts embedded in information, it became knowledge.

Activity 3.1

- Define data, information and knowledge. Explain briefly how data is related to information.
- Also answer the question: when does information become knowledge?
- Write your answer on a separate sheet of paper.

3.3 Management of Data, Information and Knowledge

Data and information have been recorded since time immemorial on stones, clay tablets, papyrus, parchment, vellum, palm leaves, *bhojpatras* and paper and so on. Now we record data and information on microfilms, microfiche, ultrafiche, magnetic tapes, compact discs, hard discs of a computer and so on. Anything on which information has been recorded is usually termed as a document. For management, these documents are classified, catalogued, properly arranged on shelves or other places, maintained and preserved. Whenever needed they are used by students, teachers, professionals, managers and so on. Libraries in the world are famous for the management of documents containing data and information. Many a time data is recorded in registers (e.g. in banks, universities, etc), forms,

paper files, computer files and so on. In every office there is a system of organizing registers, files, forms, and so on. Whenever needed these documents are retrieved, used, and placed back when done with in shelves, cabinet, etc. for future use. Knowledge base is a specialized database containing information on a specific topic. It is a centralized repository of information and data.

Knowledge management involves the management of data and information in one side and management of the knowledge of employees on the other side. Documents and employees - all are carriers of knowledge. The way we manage data and information, the same way we cannot manage employees. The content of knowledge in a particular set of data or in a particular document is constant. The messages of Asoka, the

king of Magadh, recorded more than 2,000 years ago on stones has not undergone any change. The marks and other details of students which have been recorded in a Calcutta University register one hundred years ago have remained the same till date.

This is not the case with the knowledge content of an employee. A library employee who joined the profession twenty years ago might have forgotten today many rules of cataloguing due to non-practice. On the other hand s/he might have gained substantial knowledge in library automation in which s/he is involved during the past several years. Thus, we see the knowledge content of an employee undergoes change with the passage of time.

Whenever we take a book and go through it we know about its knowledge content. It is pretty difficult to fathom the knowledge content or simply knowledge of an employee. The information about the qualifications and experience of an employee gives some idea about his/her knowledge. In certain cases, that might be the tip of the

iceberg. The employee might have attained in-depth knowledge in computer application through his/her own effort, working with computers in office, cyber cafes or at home. The records available in the office might not give any idea about the newly acquired knowledge of the employee.

An employee may become highly knowledgeable or an information gatekeeper of an organization. Identifying such an employee, giving his/her due importance and incentives, and tapping his/her knowledge properly may benefit the organization profusely. It is to be taken care of in knowledge management.

Knowledge of the employees that is used to run an organization is called the corporate knowledge. It is a conglomerate of visions, policies, strategies, rules, procedures, traditions, and people. Miller (2002), Documentum's Chief Executive Officer, very aptly said: 'Every afternoon our corporate knowledge walks out the door and I hope to God they'll be back tomorrow'.

3.4 Tacit Knowledge

Tacit knowledge is believed to be the expertise a professional possesses and utilizes it whenever needed. S/he can orally explain it and if necessary write down. For example, a classifier can lucidly explain the rule of classification, and write it down. Following which an inexperienced classifier will be able to classify a book. Initially, s/he will take time for the job, and gradually s/he will pick up speed. On the other hand, a tea taster tastes tea and grades six cups of tea as excellent, very good, good, fair, bad and very bad, according to its quality. Now, it will be very difficult

for the taster to explain or write down how s/he has decided the quality of tea as excellent or bad. This is inexpressible tacit knowledge. Take another example, with the basic ingredients of milk and sugar, a cook demonstrates to a layperson how a *rosogolla* is made. The methodology can also be written down. When the layperson tries to prepare the *rosogolla* following the same method, the sweetmeat does not become so tasty. Here lies the tacit knowledge of the experienced cook, which has been developed through years of experimentation and experience.

Undeniably, the tacit knowledge of the employees is an asset to an organization and its proper utilization and nurturing is a good example of knowledge management. Moreover, the case descriptions of highly successful projects usually include 'a statement of the problem being solved, the circumstances that are relevant to the case, the steps the expert goes through in the solutions of the problem, the specification of

useful data and information relevant to the exercise, and the outcome'(Blair 2002: 1025). These case descriptions form the firm base for the establishment of the set of best practices which often serve as a benchmark for comparing the quality expected of practicing experts (Blair 2002). Collection of 'good practices' is an important component of knowledge management.

3.5 Technologies for Knowledge Management

We have seen in the foregoing pages that knowledge resides in documents as well as in the brains of experts. Retrieving necessary information from such a multitude of sources is undeniably a daunting task. Fortunately, database management systems (DATA BASE MANAGEMENT SYSTEM or DBMS) developed by Oracle, INTERNATIONAL BUSINESS MACHINES (IBM) and Informix can cope efficiently with a wide variety of information media to retrieve desired information.

The advent of Internet, World Wide Web, high bandwidth communication technology, TRANSMISSION CONTROL/INTERNET PROTOCOL (TCP/IP) communication protocol, digital networks like INTEGRATED SERVICES DIGITAL NETWORK (ISDN) and DATA SET LEVEL (DSL); multimedia mark-up languages like HYPERTEXT MARKUP LANGUAGE (HTML) and XML have added unimaginable dimension to knowledge management. Now, we can think of managing knowledge on a global scale. A multinational company may have

branches all over the world with thousands of employees working in them. Managing the knowledge of the company lying in files, blue prints, drawings, variety of reports, books and other published documents, press clippings, data sheets, human brains, and so on was unthinkable even two decades ago. Now this huge quantum of knowledge can be managed by storing them in databases, and getting the databases connected through internet or intranet.

As far as storing is concerned, there is no problem as such. A single DEWEY DECIMAL CLASSIFICATION (DDC) can store information scattered in thousands of sources. The problem still exists with the retrieval of information. Today in most cases we try to retrieve information using words which almost invariably yield huge amount of garbage many a time hiding the required information. The retrieval mechanism is yet raw and requires a great deal of sophistication.

3. 6 Prerequisites for Knowledge Management

Prerequisites of knowledge management comprise sharing of

expertise, knowledge mapping, knowledge workers and value

creation. We shall briefly discuss each of the items here.

3.6.1 Sharing Expertise

In an organization each person possesses some expertise. For example, in a library one may be an expert in classification, another in cataloguing, the third person in computer application and so on. When a new person joins a post, in many cases s/he may be totally fresh from the university with nil experience. In such a case the new entrant quite often may require the help of his/her seniors who are experts in their respective areas. Here comes the question of sharing expertise. If the seniors share their expertise with the new entrant, then s/he will pick up his/her job fast, his/her productivity will improve, and gradually s/he will also turn into an expert. On the other hand, if the senior does not share his/her knowledge with the new entrant, s/he at times will commit mistake, and obviously will take time to learn his/her job. It will not be beneficial to the organization. Hence, a culture of expertise sharing is to be developed in an organization. Otherwise the organization will suffer.

3.6.2 Knowledge Mapping

No two individuals possess exactly equal knowledge. A few persons of an organization may have equal qualifications and experience even then their knowledge will not be the same. Hence knowledge mapping of every employee is considered so important. While mapping knowledge, apart from listing the employees along with their qualifications and expertise, their specific problem solving capacities are also to be included without fail.

3.6.3 Knowledge Workers

A knowledge worker is 'a member of the organization who uses knowledge to be a more productive worker. These workers use all varieties of knowledge in the performance of their regular business activities. Everyone, who uses any form of recorded knowledge, is a 'knowledge worker' (Earthlink 2005). The definitions obtained from Internet provide a clear understanding of the concept of 'knowledge worker'. The first definition is more elaborate and better portrays a knowledge worker. It says a knowledge worker uses 'knowledge' which belongs to his/her and acquires some more from other sources like WWW and other experts. The second part of the definition mentions that knowledge workers use 'all varieties of knowledge', i.e. knowledge which is recorded in documents or websites in the form of data or information, tacit knowledge of the worker herself, and also of other experts of the trade.

To be a successful knowledge worker, s/he should have the ability to pick up from the bewildering multitude of information sources the information that is authentic and validated. Otherwise anytime s/he may slip into a pitfall.

3.6.4 Value Creation

One of the most desired goals of knowledge management in an organization should be value creation within the organization. This value does not necessarily mean the economic value. Philanthropic organizations, government bodies, etc do not create economic values. Here value creation is directly related to providing support to effective decision-making.

Activity 3.2

Enumerate the prerequisites for knowledge management.

3.7 Major Challenges of Knowledge Management

Major challenges of knowledge management relate to the sharing and attainment of expertise, handling tacit knowledge, legal issues, etc. We shall dwell on them briefly.

3.7.1 Lack of Expertise Sharing

The sharing of expertise fosters friendship, generates amicable relation, engenders helpful cooperation and creates a congenial atmosphere in an organization highly conducive to work. Unfortunately expertise sharing is not always smooth. Because, many experts feel that if they divulge their expertise completely, they will lose their importance and will no more be the so-called 'experts'. They may not feel interested in sharing expertise when they know very well that they are not going to get anything in return. Instances show that whenever a knowledgeable person leaves, an organization loses useful expert, sometimes the loss is too much to run a project. Finding a good replacement for an expert quite often proves to be difficult.

3.7.2 Attaining Expertise

There is some understanding as to how a person turns into an expert. However, the process is not yet completely understood. Several persons with the same qualification and experience will not have the equal expertise. A tricky problem in a complicated machine that baffles an engineer with brilliant academic records and sound experience can at times be detected and rectified by a simple mechanic practically in no

time. This is the beauty of expertise. When more will be known about the process of expertise attainment, possibly knowledge management will become a shade simpler.

3.7.3 Handling Tacit Knowledge

The tacit knowledge that is expressible poses no major problem. It can be recorded and used any number of times depending on the need. The inexpressible tacit knowledge is still a formidable problem in knowledge management. The expert cannot express it in words hence it cannot be recorded. Some people during the course of their work develop sixth sense or presence of mind which at times helps them tide over a difficult situation. The person concerned may not even know how the sixth sense or presence of mind developed in him or his/her. Obviously the person will not be able to explain how one can develop it. It is not known how this problem will be solved, when it will be solved, or it will be solved at all.

3.7.4 Legal Issues

Legal issues relate to intellectual property right (IPR). Knowledge or expertise gained by, say Ms. X, with his/her own efforts is his/her intellectual property. If the same is gained in the course of his/her work in an organization, justifiably it should be the intellectual property of the organization. As long as Ms. X is the employee of the organization, there is no problem. While leaving, Ms. X will not be able to deposit back his/her intellectual property to the organization. S/he will carry it with his/

her. If she uses or divulges this intellectual property in another organization, will it be a breach of IPR? If the answer is 'Yes', then immediately the question arises - what is the solution? What weapons the organization should have to stall the transfer of the property to another organization? It

should also be remembered that quite often an organization poaches an employee of another organization at a high price just to milk the intellectual property s/he has gained there. This is a tricky problem of knowledge management begging solution.

Activity 3.3

What information is to be recorded for knowledge mapping of an employee?

3.8 Conclusion

After enumerating the objectives and providing a brief introduction, the terms data, information and knowledge have been defined and explained. Tacit knowledge and technologies for knowledge management have been briefly touched. Under the heading prerequisites for knowledge management sharing of expertise,

knowledge mapping, knowledge workers, and value creation have been discussed providing adequate emphasis. Major challenges of knowledge management have been dealt with laying emphasis on sharing and attaining of expertise, handling of tacit knowledge, and legal issues involved relating to the acquisition and sharing of expertise.

3.9 Apply What You Have Learnt

As an adult educator you need to plan and implement your activities at your ALS. For this purpose you consider the idea of holding a meeting of all those working in the ALS and explaining about the meaning of the terms, data, information and knowledge and then

about their management. Write a note of two pages on what you would like to say in this meeting as its first speaker who is introducing the purpose of the meeting and explaining the prerequisites for knowledge management.



KNOWLEDGE MANAGEMENT IN A LIBRARY AND AN ADULT LEARNING SETUP

B K SEN

Structure



- 4.1 Introduction
- 4.2 Knowledge Management in a Library
- 4.3 Knowledge Management in an Adult Learning Setup (ALS)
 - 4.3.1 Agriculture and Allied Industries
 - 4.3.2 Small Scale Industries
 - 4.3.3 Health and Hygiene
 - 4.3.4 Housing
 - 4.3.5 Education
 - 4.3.6 Employment
- 4.4 Creating a Knowledge Base
 - 4.4.1 Collection Building
 - 4.4.2 Compilation of a Local Directory
- 4.5 Information Service
- 4.6 Conclusion
- 4.7 Apply What You Have Learnt

Learning Objectives



It is expected that after going through Unit 4 you will be able to

- ❖ learn about the management of knowledge in a library and an adult education centre;
- ❖ create a knowledge base; and
- ❖ render information services to the villagers.

4.1 Introduction

In Unit 4, we have discussed about knowledge management (KM). KM can be applied almost in every area of activity. In Unit 4 we shall focus on application aspect of knowledge management and discuss how knowledge is managed in a library and an adult education centre (AEC). Libraries and adult education setups

are found both in urban areas as well as rural areas. They vary in scope, size, functions, and so on. Since in Course 02 our focus is on documentation, dissemination and networking at adult learning setup, we shall here only touch upon KM in libraries and discuss in greater details KM in adult learning setup.

4.2 Knowledge Management in a Library

A library is considered a storehouse of knowledge. Major part of the knowledge of a library is recorded in books, journals, newspapers, patents, standards, theses, reports, and other documents in the form of data and information. Most of these are procured from outside, some are generated locally which include among others annual report of the organization, trip reports, committee reports, budget proposal, case descriptions of successful projects, audited statement of income and expenditure, and locally compiled databases. For their management, there are well-established rules and procedures which are followed. At times some rules are framed locally by the library staff for the proper management. You will learn about these rules and procedures in detail in other units.

The other part of the knowledge of a library lies with the library staff

themselves. Knowledge of the library staff varies from person to person. One may be well-versed in classification, another in cataloguing, and someone may be in reference service. The librarian should have adequate knowledge about the expertise of his staff and utilize their expertise to the optimum level. In some libraries there are employees who are extraordinary in finding out documents with the slightest of hints. Utilizing this type of person properly will be a very good example of knowledge management. On the other hand if the head of an organization feels that anybody is capable of doing anything, and accordingly places a typist in the reference desk and a non-professional as head of the library, then this will be the worst case of knowledge management in a library.

4.3 Knowledge Management in an Adult Learning Setup

The resources of an adult education setup vary from place to place, and locality to locality. In a typical rural adult education centre there might be a handful of books, old and new issues of one or two magazines, a newspaper and some files. Some setups may be more resourceful. With a short-term training on document processing and management, an adult educator will be able to manage these documents efficiently. For knowledge management however, an adult educator will have to be active, enthusiastic, and needs to have an aptitude for gathering information. There are rural as well as urban adult education setups. Here we shall discuss knowledge management in

a rural setup.

Villagers require information mostly relating to agriculture and agro-industries, small scale industries, health and hygiene, housing, trade and commerce, education, religious events, communication, traveling and so on. There may be constant demand for this type of information in case correct information is provided to rural folk in time. The responsibility for the building up a knowledge base in an adult education centre lies solely on the adult educator. For accomplishing this job s/he has two options:

i) s/he can create a knowledge base of her own gathering information from

various sources; or

ii) s/he can create a corporate knowledge base.

In the first case, the adult educator will have to identify the various types of information pertaining to agriculture, health, etc the educatees or villagers need. Then s/he will have to find out either the information itself or the sources wherefrom the information can be obtained.

4.3.1 Agriculture and Related Industries

About 65 to 70 per cent of India's population is dependent on agriculture for their livelihood. We may not find any village in India which is devoid of some sort of agricultural activity. Along with agriculture have developed animal husbandry, fisheries and forestry in some villages. Hence, the extent information requirement for these areas is really large. Hence, villages may need among others the following types of information for agriculture and related industries [Chatterjee and Rahman 2003]

- ❖ The place where From good quality seeds can be obtained
- ❖ The cattle market where from the cattle of better breed can be purchased
- ❖ The suppliers of various agricultural implements in nearby cities or towns
- ❖ The repair shops for agricultural implements
- ❖ The sellers of fertilizers, pesticides, etc in nearby markets
- ❖ The buyers of food grains and other agricultural products
- ❖ The availability of cold storage in nearby areas

- ❖ The facility for transporting agricultural products by rail, road, etc
- ❖ The availability of expertise for cultivation, pest control, harvesting, storing, etc of the new variety of a crop
- ❖ The possibilities of receiving training in vermin-culture and organic farming
- ❖ The kind of trees that can be planted in a village so that the trees can thrive well and in the course of years become a good source of fruits, timber, fuel wood, shade and so on
- ❖ Availability of seedlings for the purpose of plantation.
- ❖ Varieties of flowers that can be grown in a particular village.
- ❖ Market for purchasing and selling domestic animals, poultry, etc.
- ❖ Centers for artificial insemination.
- ❖ Dairies and markets where milk can be sold.
- ❖ Method of fish breeding
- ❖ Sources for the purchase of hatchlings etc
- ❖ Centers providing training in beekeeping, and so on

4.3.2 Small-scale Industries

The types of small scale industries vary from village to village depending on the availability of raw materials and other facilities. In the villages of Murshidabad district in West Bengal there is a predominance of *bidi* industry. There are villages in Uttar Pradesh which specialize in bangle-making and basket weaving (see Figure 4.1). The above instances make it clear that our villages also specialize in product generation.

Obviously, information requirements of villagers will depend on the work they are doing for their livelihood.



Figure 4.1: Basket Weaving

Let us take a village specialized in doll-making. The villagers would obviously need the following types of information related to doll-making.

- ❖ The place wherefrom they can get raw materials (clay, plastics, clothing, dyes, etc) needed for making dolls
- ❖ The channels available for marketing as well as export of dolls to various states as well as foreign countries
- ❖ Banks providing loans with low interest
- ❖ Facilities available for training in doll-making including charges for training, lodging and boarding

It goes without saying that depending on the industry prevalent in the village,

the adult educator will have to create her knowledge base.

4.3.3 Health and Hygiene

Through education, media, traveling, personal contacts, etc villagers are getting exposed to various modern facilities relating to health and hygiene. Hence, information they often require is of the following types [Chandra and Bhattacharyya 2003].

- ❖ Availability of renowned doctors for complicated diseases like cancer, tuberculosis, and heart ailments
- ❖ Location of hospitals, dispensaries, maternity centers, mental asylums, polio booths, family planning centers, pathological testing centers, etc
- ❖ Location of nearby reliable drugstores wherefrom genuine drugs and other medical supplies can be obtained
- ❖ Availability of treatment through alternative systems of medicine
- ❖ Possibilities of receiving professional training in childcare and childbirth
- ❖ Location of nearby training centers for setting up hygienic sanitary systems of low cost
- ❖ Reliable information on HIV-aids and other related diseases
- ❖ Availability of short term training courses in keeping environment clean and unpolluted
- ❖ Information on forming village clubs of young men and women to promote health and hygiene related issues

4.3.4 Housing

The housing scenario in villages is fast changing. Fifty years ago where there were only thatched houses in my village, gradually they have all been replaced by brick-built houses. Today villagers need information about good quality building materials like bricks, stone chips and cement; sanitary wares; timbers; architects; artisans; and so on. Information on low-cost housing with local resources can be of great value to villagers. Local resources are often equally good if not better in comparison with those procured from outside the area at a great cost.

4.3.5 Education

Gradually the curse of illiteracy, which dominated for centuries in our country, is finally fading out. Even the poorest of the poor is trying to send children to school. The percentage of literate people is steadily increasing. Even in rural areas schools are coming up, primary schools are being upgraded to middle schools, and middle schools to secondary and higher secondary schools. Students appearing in class XII examination nowadays need a variety of information as to their future pursuit and career. Some of which are listed below.

For admission in top ranking medical and engineering institutes in the country students take joint entrance examinations (JEEs), and for this they require very good preparation as the

competition is extraordinarily tough. In this case villagers need information about the centers that provide coaching through correspondence course, distance learning or any other mode. Those who are getting a chance for admission in engineering or medical colleges, they need money beyond the capacity of most villagers. Such students need information about bank loans. Those who fail to qualify in JEEs need information about various colleges, polytechnics, vocational education centers, and so on where they can take admission for pursuing their studies further.

Unemployed youth in rural areas need skill up-gradation in order to find sustainable employment. Another useful educational input can be information on training with placement opportunities.

4.3.6 Employment

In villages students who have cleared secondary or higher secondary exams, or graduated, they are in constant search for an employment. Hence, information regarding employment is of vital importance for them. The central as well as state governments in our country have started many self-employment schemes. Employment seekers very much need to know about them.

Similarly for organizing religious, social, cultural events, etc information is required.

Activity 4.1

Enumerate the types of information a farmer in your area generally needs. Does your center provide the villagers information on any of the areas listed by you? Write a short note on the types of information available at your center.

Write your answer on a separate sheet of paper.

4.4 Creating a Knowledge Base

For creating a knowledge base in a rural setup, first of all a profile of the village is to be created. If it is already there it should be used (Sarkhel and Majumdar 2003). In an Adult Learning Set-up (ALS) all the information villagers may require will not be available. If the villagers come to know that the adult educator is a knowledgeable person, they will come to him or her for information on various matters. Hence, the adult educator will have to prepare herself or himself to satisfy the villagers. For this purpose s/he will have to create a knowledge base. Now we shall discuss how a knowledge base can be created.

4.4.1 Collection Building

For creating a knowledge base, collection of information assumes paramount importance. The information is to be collected from diverse sources as described below.

National Fertilizer Corporation; Seed Corporation; National Horticultural Board; state agricultural universities; state forest departments; companies dealing with fertilizers, seeds, pesticides, etc from time to time bring out leaflets, pamphlets, etc. These documents provide valuable up-to-date information and are generally available free. If an AEC writes to these organizations, the name of the AEC will be in their mailing lists, and whenever such publications are issued, one copy will be made available to the AEC. The central and state governments from time to time issue notifications relating to various schemes directed towards rural development. These notifications are also to be collected, preserved, and used whenever occasion arises.

National and local newspapers and magazines from time to time publish articles of rural interest. The adult educator is to scan them and maintain clippings of those items.

The files available in the centre also contain valuable information which should be preserved carefully.

Some reference books like an almanac, a time table, a PIN code directory, a relevant telephone directory, etc should be purchased to provide information on various religious matters, travels, post offices and so on. These are not costly and affordable by the AEC. If the AEC can subscribe to periodicals like *Employment News* it will be of very great help to employment seekers. If genuine efforts are made, some of these things may be available through gifts even. Agricultural Finance Commission publishes monthly Techno-economic Feasibility Report which contains valuable marketing information relating to agricultural and industrial commodities. National Horticultural Board also issues various bulletins on horticulture which also should be collected as a potential source of information.

4.4.2 Compilation of a Local Directory

As an adult educator goes on collecting information, s/he will gradually feel the need of systematic compilation in order to use the collection being gradually built up. One of the useful information sources to gradually compile is the directory of important **persons** like district magistrate (DM), block development officer (BDO), agricultural development officer (AGO), *krishi prayukti sahayak* (KPS), specialists and

knowledgeable persons of the area, head and members of gram *panchayat*, doctors, *amins* (land surveyors), technicians of agricultural machineries and dealers of seeds, fertilizers and pesticides functioning in the area; organizations like government offices, non-government organizations, banks, schools and colleges; hospitals, dispensaries, drugstores; local farms; nurseries; and shops selling agricultural equipment and machineries. This apart, the directory needs to include information about the local markets, the days the markets function, the

products that are sold and purchased, the renowned buyers, wholesalers, and so on. The directory should include name, address, telephone number etc.

Whenever somebody needs any information, the person may refer to the directory and retrieve the information. This is a painstaking job and requires patience, perseverance and devotion. Moreover, the information gathered requires constant updating. Of course, some information like crops grown in a village round the year may serve for many years.

Activity 4.2

Explain how you as an adult educator will create a knowledge base in your adult education centre.

Write your answer on a separate sheet of paper.

4.5 Information Service

The information services that AEC is generally expected to render pertains to **reference and referral services** (Ray 2003). When the information required by a person can be directly given to him or her, it is known as reference service. For example, a person needs information about a heart specialist. The adult educator searches the directory and finds that there is a heart specialist in the district town. On a piece of paper s/he writes the name and address of the specialist, and tells the person about the doctor's fees and visiting hours. This is reference service.

On the other hand, the adult educator may not have the information and in such case s/he may ask the person to consult the local doctor who may provide the information. This is referral service. If an AEC can collect some books and

magazines through gifts and purchase, then the lending service can be started. Books and bound volumes of magazines can be issued for one week and magazine issues when become old can also be issued.

A notice board can play a big role in information dissemination. Some information like prices of commodities in various markets, weather forecast and farming-related advice for the week, fortnight or the month, as well as relevant circulars issued by the government can be displayed on the notice board.

Considering the fact that a large section of our population is still illiterate, lectures by experts, seminars of topical interest, film shows relating to topics of local interest may also be organized.

4.6 Conclusion

Knowledge management in a library has been briefly touched as it is being discussed in detail in unit 16 and unit 17 of course 02. Knowledge management in an AEC which is of paramount importance for adult educators has been described in

greater detail. The creation of a knowledge base, collection building, compilation of a directory, and information service has been described laying sufficient emphasis.

4.7 Apply What You Have Learnt

Suppose that you need to carry out knowledge management in your ALS and create a knowledge base as well as provide information service to users of the ALS. Describe in 1500 words how

you will plan and implement these activities in your ALS in the context of already existing base and your plans for improvement in the base.



BASICS OF INFORMATION DISSEMINATION

S M DHAWAN

Structure

- 5.1 Introduction
- 5.2 Importance of Information Dissemination
 - 5.2.1 Problem-centered Nature of Adult Learning
 - 5.2.2 Special Nature of Information Dissemination for Adult Community
- 5.3 Customizing Information for Dissemination
 - 5.3.1 Issues of Relevance to Adult Community
 - 5.3.2 Assessing Information Needs
 - 5.3.3 Types of Information for Communication
 - 5.3.4 Media and language for Communication
- 5.4 Approaches to Information Dissemination
 - 5.4.1 Model 1: Searching Indexed Resources
 - 5.4.2 Model 2: Non-indexed Sources
 - 5.4.3 Model 3: Establishing Public Platforms for Reaching Out to Community Members (Nicknamed 'Choupal')
- 5.5 Database Creation
 - 5.5.1 The First Step
 - 5.5.2 Record Structure
 - 5.5.3 Software for Creating Database
- 5.6 Conclusion
- 5.7 Apply what you have learnt

Learning Objectives

We hope that after going through Unit 5, you will be able to

- ❖ Form your own understanding of various aspects of information dissemination.
- ❖ Share your understanding of the basics of information dissemination with non-governmental organizations (NGOs) organizing adult education projects and programs.
- ❖ Facilitate the NGOs efforts to develop skills and techniques required for organizing information dissemination services for the benefit of the adult community.

5.1 Introduction

Unit 5 pertains to acquiring skill and applying the same to your professional activities and we hope that Unit 5 will

be of especial relevance to your day-to-day work at adult learning set-up. Information dissemination is a proactive

information service designed to educate and inform focused groups of users on social, economic and educational issues, problems, and opportunities of interest to them. It requires systematic planning, collection, organization, and storage of information for its delivery to the target

audience using different media and communication means.

Let us now discuss the importance of information dissemination before moving on to a community's information needs.

5.2 Importance of Information Dissemination

It is a fact that survival and self-development are the major issues central to several adults in many communities. The need to raise their socio-economic status is thus necessary and urgent. This requires empowering adults, the under-privileged and economically weaker sections of society with technical skills and education. However, organizing programs meant mainly for raising awareness, education, and training are information and communication dependent. Information dissemination as such constitutes an important and critical factor for the success of adult education and learning programs.

More often than not, organizers perceive information dissemination to be a one-way form of communication, circulating information and advice mainly through mass media in a cost-effective and timely manner. In some cases, the media are posters and pamphlets, while in some others reliance is exclusively on text-based print medium. However, two-way form of communication is relatively more relevant and effective for organizing awareness programs and activities in adult education.

5.2.1 Problem-centered Nature of Adult Learning

Essentially, adult learning is more of a problem-centered rather than content-centered activity. In content-centered

learning, the emphasis is on refining knowledge that already exists, upgrading existing level of skills, and nurturing and shaping innate potential and talent of individuals and groups in a society. In problem-centered learning, the emphasis is on applying information/ knowledge as well as skills for finding solutions to the problems and issues confronting the adult community.

Let us look at the special character of information dissemination for adults in a community.

5.2.2 Special Nature of Information Dissemination for Adult Community

In the context of this Unit we have used the phrase 'adult community' to refer to the groups of adult people, who have something in common such as low level of literacy with a higher level of knowledge and skills, yet poor living standards and poor economic conditions. Special features of disseminating information to adult community are as follows:

- ❖ Information dissemination programs, organized mainly for adult community, need not be always one way such as through mass media alone.
- ❖ For vitality and impact, adult educators need to organize information dissemination activities in classroom mode and structure them around face-to-face

interactions. One of their aims could be to offer services such as counseling, referral, practical help, advice, advocacy, community education, etc.

- ❖ Counseling may be on livelihood issues such as employment, occupation, marketing, and new sources of revenue.
- ❖ Practical help may mean aids such as facilitating and liaison with different government agencies to address day-to-day problems.
- ❖ The scope of information dissemination could as well expand to training and educational programs to improve employment potential of adult-learners.
- ❖ The two-way form of communication needs to dominate information dissemination activity, with focus on

contents relevant to problems of the adult community.

- ❖ It is essential that communication with adult community takes place in the language that they understand.
- ❖ It is essential that information content in verbal and written communications to the adult community should be of a type of interest and relevance to adult community (Type of information content as discussed under Section 5.3.2).
- ❖ Adult educators may also offer content-oriented services mainly for the benefit of the NGO staff engaged in education, research and training in adult education and learning.

See Box 5.1 on the possible aims of information dissemination oriented programs.

Box 5.1 Aim of Information Dissemination Oriented Programs

Information dissemination oriented programs, for the benefit of the adult community, may pursue the following aims.

- ❖ To sensitize adult learners on the importance and relevance of information
- ❖ To give practical information for problem solving
- ❖ To spread awareness in adult community about their rights and privileges as well as responsibilities
- ❖ To assist adult community in identifying markets for their produce, products, and skill sets, and introducing and publicizing such produce and products in the identified markets
- ❖ To supply and popularize among the adult community members relevant market data on best market prices
- ❖ To educate NGO staff on the intellectual property rights issues and their management (Intellectual property rights refer to protection given by law to intellectual property such as patents, copyrights, trademarks and trade secrets.)
- ❖ To apprise all NGOs engaged in adult education on recent and major developments in adult learning

5.3 Customizing Information for Dissemination

For organizing information dissemination programs for the benefit of the adult community, the first step is to assess and understand their

information needs based on issues of relevance to adult community, and to customize the information accordingly for dissemination.

5.3.1 Issues of Relevance to Adult Community

As per local community members' choices, needs, aspirations, an adult educator is likely to arrive at a very specific list of needs. All the same, we may say that broadly the issues of relevance to adult community with diverse cultural backgrounds, cover a wide spectrum, ranging from rights and privileges matters at one end to health, housing, education, market and marketing issues on the other. We find some of the following issues have been widely reported in literature (Venkatappiah 2004, Vashishth 1995, and Kumar 2004).

- ❖ Community profile including cultural, civilization of the local area
- ❖ Redressal of grievances - contact points, government agencies/ departments, etc.
- ❖ Rights, privileges, duties, responsibilities, welfare measures, legal matters
- ❖ Consumer services, daily necessities, provisions of grains and foods at reasonable rates
- ❖ Environment information, family, health and safety, government information
- ❖ Health care information: immunization, hospitals, admission procedures, first aid, grandma's remedies, sanitation, hygiene
- ❖ Housing and schemes mainly intended for disadvantaged groups
- ❖ Government welfare schemes for weaker sections, rural development, etc.
- ❖ Transport, bus, rail, and other modes
- ❖ Sources of finance, banks,

government subsidies, loan schemes, and other money matters

- ❖ Privileges of senior citizens, women's issues and their solutions
- ❖ Youth problems, citizens rights and duties
- ❖ Education, skill development and training programs, admission procedures, and costs, grants and scholarships
- ❖ Self-employment schemes and programs, rural development schemes
- ❖ Sports information, games, arts
- ❖ Agricultural information such as new farming methods, seeds, insecticides, fertilizers, weather, vermin-culture,
- ❖ Recycling of waste material
- ❖ Market information, product, produce prices information
- ❖ Ongoing trends in the field of adult learning
- ❖ Content oriented information for education, research, and training

5.3.2 Assessing Information Needs

You may adopt participatory approach to assess the issues and problems confronting the community and to understand their information needs. The adult individuals in the community may not be in a position to articulate their information needs as clearly as research and academic communities communicate. However, by holding interactive sessions with the community members, adult educators can identify topics of relevance to their survival, and accordingly judge/interpret the kind of content going to be of use to them, understand their linguistic concerns and preferences, and their media preferences for communication, etc. You may also use the data in past reports on adult literacy program, research papers published on the subject

to update and supplement findings made from interactive face-to-face sessions with adult community. While identifying information needs, adult educator would assess what types of information

contents delivered in the service are going to be of interest and relevance to the adult community in addressing their issues and problems.

Activity 5.1

Identify the issues and problems of unemployed, literate adults in farmer community and the types of information content, media, and language you would plan for their socio-economic development.

5.3.3 Types of Information for Communication

Theoretically, information generated for communication and dissemination is of different types as stated below. However, not all types are of relevance to the adult community. Assessment about usefulness of a particular type of information would differ from community to community given their diverse social and cultural backgrounds. It mainly depends upon the level of their literacy and education, the issues and problems of relevance to them, and their preferences for language and communication media (means of communication are radio and television, newspapers, and magazines that reach or influence people widely). Adult educators would need to customize information for dissemination to adult community or to the team of adult educators according to their needs. You may consider the following different types of information for the purpose.

- ❖ Bibliographic information
- ❖ Practical information: markets for local products, produce, new employment opportunities, where to go for addressing grievances, etc
- ❖ Referral information
- ❖ Statistical data: adult literacy data
- ❖ Analytical information: analyzing quantitative data for discovering trends

- ❖ Condensed information: concise picture of thought contents described in documents such as digests, abstracts
- ❖ Consolidated information: literature reviews/ state-of-the-art reports to catch with latest developments in the specific areas of interest
- ❖ Repackaged information: to educate a non-technical person on technical topics such as popular/encyclopedic information sufficient to understand or revive one's knowledge in the subject

Let us discuss in brief each of the types of information contents in the service.

Bibliographic information: It is about the identity and records of books, articles, and other published material. It also refers to listings of bibliographic records, listings of cataloguing records, listings of references, listings of articles, etc. Such information service outputs are of value and relevance for gathering and understanding knowledge in the subject, and generating new knowledge through research studies and investigations.

Practical information: It is the information having value and meaning in problem-solving situation acquired through cognitive process of studying, understanding, and analyzing contents, or knowledge acquired through learning experience.

Referral information: It is the information about experts, people, contacts, or institutions that serve as useful referral sources in gathering practical information, knowledge, or even documentary information.

Statistical information: It is about temporal, spatial, institutional data on various activities and programs in different subject areas. For example, adult literacy data of different geographical regions spread over time.

Analytical information: It is the information generated by analyzing temporal, institutional, and spatial data for discovering trends. For example, quantitative data on adult literacy analyzed on time series basis provide insight about strengths and weakness of adult literacy programs on comparative basis.

Condensed information: It is the information generated to provide a concise picture of thought contents described in documents. Examples include digests, abstracts, synopsis, brief summaries, etc.

Consolidated information: It is the information generated by analyzing and compressing thought contents from documents that have appeared on the subject. It gives a critical and consolidated overview of the topic, assessing and reviewing contributions made in the field over time, presenting complete overview of trends and developments in the field, the latest developments in field, the state-of-the-art in the field, and the highest level of achievement in the field, etc.

Repackaged information: It is the information generated to educate a non-technical person on a subject of importance. It gives a complete but concise picture of the subject easy to

understand and comprehend. For example, popular articles, like presentation on the importance and relevance of right to information Act.

5.3.4 Media and Language for Communication

The information dissemination programs and projects, planned for the benefit of the adult community, cannot be effective unless the media and the language used for communication of contents are meaningful to the adult community. The media most commonly used for communication are (i) oral/verbal communication, (ii) written communication, (iii) visual communication, and (iv) multi-media communication.

- i) **Oral communication** is by word of mouth when two or more persons meet and talk directly, face-to-face, or by telephone. Both these forms are oral and not verbal.
- ii) **Verbal communication** is through words, both written and spoken, such as group meetings and presentations, and informal talks.
- iii) **Visual communication** (drawings, photographs, pictures, etc) is more effective than any number of words.
- iv) **Multi-media communication** (combining text, visual, graphics, sound, and motion pictures) is still more effective.

Given their low literacy level, yet higher level of language and communication skills, communication to adult community may limit to oral, visual, and multi-media. Adult educators may of course adopt written means of communication when the target audience reaches the requisite level of competence in reading and writing. The community would be able to receive and comprehend the message conveyed only

if it understands the language used in communication. The language used in oral communication is, therefore, of great significance. It has to be the one

that the community understands and is comfortable with it in face-to-face interactions.

Activity 5.2

Using information sources available within the library, prepare one-page write-up on the importance of right to information act can help improve living conditions in the village.

5.4 Approaches to Information Dissemination

Information dissemination requires systematic collection, organization, and storage of information relevant to the needs of adult community. There are several approaches to capturing relevant information both content-oriented information and problem-oriented information. Some approaches are traditional while some others are innovative. Adult educators can generate a series of services after gathering information through such approaches. Unit 10 will discuss the how or application aspect of information dissemination services. Let us here look at different models of collecting information.

5.4.1 Model 1: Searching Indexed Resources

This model is more suited for collecting content-oriented information. Here we capture information from indexed information resources such as multidisciplinary and specialized databases, library catalogues, repositories, digital libraries, web resources. Information captured from such resources is first stored in the database created for the purpose before it goes to the target audience (see Figure 5.1).

The indexed information resources

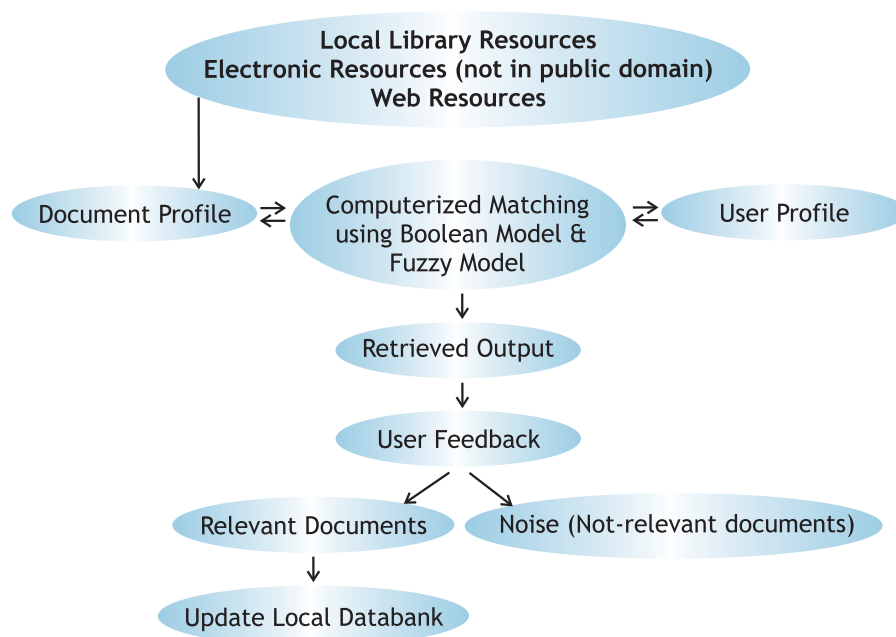


Figure 5.1: Information Dissemination Model 1: Library Services Generated using Indexed Resources

useful for searching content-oriented information are of the following types.

- ❖ Electronic databases and Online bibliographic services
- ❖ Local library catalogues
- ❖ Digital libraries and repositories on the Internet
- ❖ Web resources

We will now discuss each of the types of sources for content-oriented information.

Electronic databases: Electronic databases mainly index primary sources of information such as journals (including scholarly journals, review journals, and popular journals), conference proceedings, and research reports. Such sources of information generally engage in publishing original work in the subject. Journals publish wide variety of papers such as general, review, theoretical, and developmental papers focusing on new developments, economic and commercial information, practical applications, new tools and products, etc. Conference proceedings contain original and unpublished research, covering case studies, and state-of-the-art reports of topical interest. Research reports are institutional reports reporting findings of research projects of social, economic, and cultural relevance. Such sources are excellent sources of information for discovering latest trends or understanding the impact of new measures in the field. Evidently, primary information sources are more useful for updating knowledge in the subject, understanding overall trends in the subject, but not for searching and collecting problem-oriented information.

Consequent upon electronic publishing, multidisciplinary and specialized database have become available online for searching. Some are bibliographic

databases (with or without abstracts) while others are full-text offering access to the original articles in the archives dating back to say 5 to 10 years. By entering in the database search menu, search terms related to a topic, individuals are able to retrieve information about articles of interest. The search outputs from databases categorized as select listings of articles, bibliographies, and full-text articles and papers. Such outputs form the basis for generating analytical information, preparing state-of-the-art reports for latest developments in the subject, etc.

Databases are largely commercial products and are available for online access on subscription basis. However, some databases offer free access online. We have listed below only some of them. You can obtain additional information on free databases by searching the Internet.

- ❖ Ingenta
- ❖ Findarticles.com www.findarticles.com
- ❖ ERIC- World's largest digital library of educational literature
<http://www.eric.ed.gov/>
- ❖ POPLINE® - World's largest bibliographic database on population, family planning, and related health issues.
<http://db.jhuccp.org/ics-wpd/popweb/>

Online Bibliographic Service: Online bibliographic services such as DIALOG, OCLC, BLAISE, ESA-IRS, and Silver-Platter offer online access to commercial bibliographic databases, cataloging databases, trade catalogues, standards and patents on fee basis. Such services are of immense importance to libraries that do not subscribe to electronic databases but do need to access them on occasional basis.

Library catalogues are the tools for accessing library holdings comprising books, journals, reports, etc. Digital

libraries on the Internet and Web resources are also useful sources of information on books.

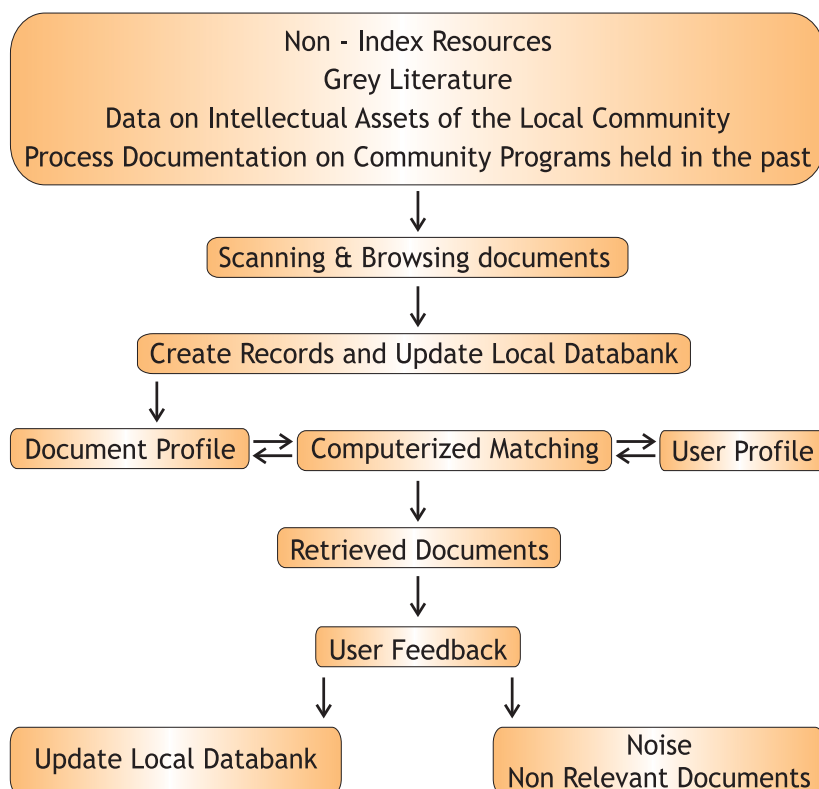
Activity 5.3

List ten online databases in health and medicine using the Internet.

5.4.2 Model 2: Non-Indexed Sources

This model is more suited to meeting needs for problem-centered information. It entails browsing non-indexed sources of information for capturing and storing the relevant data

first in the databank created for the purpose and later applying it for problem solving, educating, training, and enlarging the choices of the target users (see Figure 5.2).



**Figure 5.2: Information Dissemination
Model 2: Library Services Generated using Non-indexed Resources**

You can categorize non-indexed information resources in the following heads.

- ❖ Grey literature
- ❖ Reference sources such as product directories
- ❖ Capturing data about intellectual assets of the local community

- ❖ **Grey literature:** You can refer it as non-conventional literature. It comprises documents, not published commercially such as census, statistics, government reports, legislations, patents, conference proceedings, theses, preprints, research reports, newsletters,

pamphlets, annual reports, and technical reports. Grey literature also comprises newspapers even though they produced commercially. Such documents are often original and comprehensive sources of information and provide access to the latest research in a particular area. However, these sources of information are difficult to search

and access compared to traditional sources for two reasons: (i) typically not collected and acquired by libraries systematically and (ii) not well indexed for retrieval. Agencies such as government, academia, business or industry, usually produce them both in print and electronic format.

Activity 5.4

List information sources on Indian patents using the Internet.

- ❖ **Reference sources:** These are typically comprehensive information sources compiled mainly for reference purpose rather than reading them cover to cover. These works are informative in nature and emphasize the documentation of statistical data. Examples of reference works are: almanac, atlas, concordance, dictionary or lexicon, thesaurus, directory, encyclopedia, gazetteer, and handbook, etc.
- ❖ **Local cultural wealth:** The local communities in several areas are rich in traditional knowledge, traditional art and artistry, cultural resources, natural resources, agro biodiversity wealth, etc. The knowledge about such wealth and resources generally remains undocumented. There is need to capture information about these resources and preserve them for posterity. One can the data needed for the purpose from process documents produced by NGOs, published sources of information, and supplementing this data by field surveys of the area. Procedurally, it is better to first document information about local cultural wealth and resources in the database

and later use for information dissemination to support awareness programs, and education and training programs.

5.4.3 Model 3: Establishing Public Platforms for Reaching Out to Community Members (Nicknamed Choupal)

This is an innovative model for establishing communication links with the community for education, learning, and addressing issues of importance to the local community such as right to information, product marketing, health, job opportunities, etc. The basis of this model is on the philosophy of community-based participation, wherein the people from within the locality come together at designated venue for discussion and exchange information. Even this model is novel, but conceptually this approach is not new. Village 'Choupals' have traditionally been the instruments of communication. What is new is the application of the information technology for giving wider reach to the participating communities, enabling them access to new markets over Internet. Secondly, the contemporary 'Choupal' model has the involvement of facilitators such as the

‘Non-Governmental Organizations’ playing their role as link between the village community on one hand and government and private agencies in the marketplace on the other. States like Tamilnadu, Madhya Pradesh, and

Rajasthan have put this conceptual framework into practice. (World Bank Report 2006). See Box 5.2 for some case studies pertaining to practical application of model 3.

Activity 5.5

Search the Internet to find out information five ICT based projects on poverty alleviation in India.

Box 5.2 Case Studies Reflecting the Application of ‘Choupal’ Model

Case Study 1 - Information Village Research Project

Information Village Project is the initiative of the M S Swaminathan Research Foundation, a non-governmental organization founded by Prof. M S Swaminathan. (<http://www.iimahd.ernet.in/egov/ifip/feb2006/article3.htm>) This project employs technology as a tool for empowering the poor for reaching the unreached, who need access to information that they can immediately use to their advantage. Local volunteers collect information from the markets, weather office, government departments, etc. Transmission of this information goes to the nine villages over the local area networks. In villages without steady power supply, the villagers use the substitute of solar energy and charged batteries. The volunteers and representatives of the community meet at a designated place regularly for sharing and exchanging information. The project is known for innovative use of technologies for reaching the so far not-reached communicating to them the information they can use to their advantage and helping them to realize their innate potential. Local volunteers, mostly women, operate the knowledge centers, and gather the locale specific information. It is an example of bottom up approach, demand driven and need-based program for empowering the poor some of them still below the poverty line.

Case Study 2 - Warna Wired Village Project

This project is the initiative of National Informatics Centre undertaken in collaboration with the Government of Maharashtra, and Warna Vibhag Shikshan Mandal. This is an example of top to bottom approach in information dissemination for educating farmers, cultivators, and others on latest crop cultivation practices in respect of major crops, pest and disease control, marketing information, dairy and sugarcane processing practices. (<http://www.apdip.net/projects/2003/in/cases>) The NIC has set up village kiosks in the Warna area, computerized and networked for access and sharing of information. Since the people in the area are not literate, kiosk operators lend help to disseminate information to the villager visiting the kiosks. Each kiosk has 8 to 10 computers linked to VSAT for network connectivity through NIC. The project was initiated in 1998 and is jointly organized by the Government of India through the National Informatics Centre (NIC), the Government of Maharashtra and Warna Cooperative Society.

Case Study 3 - E-Choupals and Choupal Sagars

It is an excellent example of private sector participation in marketing services to the farmers for marketing using information technologies. ITC has opened up business model e-choupal telecenters covering 30,000 villages in Madhya Pradesh, Uttar Pradesh, Maharashtra and Rajasthan. (<http://www.apdip.net/projects/2003/in/cases>) It is also planning to extend its e-choupal models to cover 100,000 villages across in the next two years and is looking at investing Rs 50 million (or 5 crore) per 50 e-choupals. It was in

June 2000 that ITC began its e-business operations with six e-choupals in Madhya Pradesh. The company plans to set up 'Choupal Sagar', a multiple service centre for every cluster of 50 e-choupals. This multiple service centre will accommodate warehouses, retail stores, a fuel station, a training and health centre. ITC does not employ any marketing or advertising to promote its e-business model. The company's field teams directly go to Indian villages to create awareness for its e-choupals. With the help of audio-visuals, they show the benefits of the project of mutual interest to villagers. After selecting an operator (sanchalak) in a particular village, ITC trains him or her to run the Internet centre. However, the real work still lies in educating villagers to use Internet centers effectively.

Case Study 4 - Gyandoot Project

Gyandoot project in Madhya Pradesh is an example of grassroots level participation of local people at village level for socio-economic development. Under this project, twenty information centres (soochanalayas) have been set up in five blocks of Dhar district. (<http://www.apdip.net/projects/2003/in/cases>) These are located in the premises of the office of village panchayat (panchayat ghars) for availing of their technical and physical infrastructure such as power, furniture, equipments. The librarian in the centre (called Suchak) provides technical and information support for running activities such as computer literacy, desktop publishing. Interestingly, nearly half-a-million people in Dhar district are using these services.

Activity 5.6

Search the following website for information on impact of e-information village.

<http://www.iimahd.ernet.in/egov/ifip/feb2006/article3.htm>

5.5 Database Creation

Libraries supporting adult education and learning programs would need to create a database for organizing and storing the data/ information they capture for the purpose of dissemination. Such a database could come handy for disseminating the same information repeatedly, if so required.

5.5.1 The First Step

The first step in creating a database is to create bibliographic records conforming to established bibliographic standards such as the i) standards for bibliographic description, and ii) standards for record format

❖ Standards for Bibliographic Description

There is International Standard for Bibliographic Descriptions (ISBDs),

created for different types of publications and media. These include ISBD (M) for monographs, ISBD (S) for serials, ISBD (NBM) for non-book materials, ISBD (ER) for electronic resource (IFLA Committee on Cataloguing. ISBD(G)). These ISBDs prescribe the common way for presenting data elements in the bibliographic record, a pre-defined order separated by prescribed punctuations. The need for establishing standards for bibliographic description had arisen from the fact that without common standards libraries would not be able to exchange bibliographic information. You will find a detailed discussion on these standards in Unit 9.

Bibliographic description is also about syntax for describing the contents of

bibliographic elements. For example, it helps to learn the skill of rendering the name of personal author or corporate author in author field or of writing the statement of responsibility. I may also tell you about the filing elements in a cataloguing record. You can control such syntax related issues by using cataloguing code: Anglo-American Cataloging Code-2 (AACR-2) (American Library Association. 2002).

❖ Standards for Record Format

The term record format first came into being when user computers sought it for cataloguing and cataloguing database. Essentially, record format is a standard for representing bibliographic data in machine-readable form for exchanging data between the libraries. Standards provide a common way of organizing machine-readable records so that they users can easily exchange records. A number of standard formats schemes have been created. These include USMARC, CANMARC, UKMARC, MARC21, CCF, and UNIMARC. (Saur 1994, Simmons and Hopkinson (Eds). 1998, MARC 21 Manual <http://www.loc.gov/marc/>) Such standard record formats comprise prescribed bibliographic data elements as well as prescribed codes to identify data elements. The importance of standard record format lies in the fact that libraries can exchange such records without any loss of data and thus libraries can benefit by sharing their cataloguing or bibliographic resources.

5.6 Conclusion

After completing this Unit, the learner would come to understand the importance of information dissemination and the role that such a proactive service

You will find a detailed description about these standards in Unit 9 on Standards.

5.5.2 Record Structure

The term record structure often implies record format. However, record format is generally the broader term and often refers to a combination of record structure, content designation, and content of the record. The record structure specifies the structure of bibliographic/ cataloguing record. It consists of

- ❖ A record label consisting of 24 characters,
- ❖ A directory consisting of a 3-digit tag of each data field, along with its length and its starting character position relative to the first data field, and
- ❖ Data fields of variable length, each separated by a field separator.
- ❖ ISO 2709 further specifies that the data in fields may optionally be preceded by indicators and subdivided into subfields.

5.5.3 Software for Creating Database

The libraries need to acquire software for creating records in machine-readable format. This could be either an integrated library management software or single module software exclusively for database creation only. The software acquired and used by the library for record creation must support the standards for bibliographic exchange format, and standard record format.

can play in addressing the social, economic and educational issues and problems of interest to adult community. They would also come to

learn of issues and problems confronting adult community and how could they use information dissemination services for raising awareness about opportunities in the marketplace for improving their socio-economic status. The learners would also come to learn what type of information is useful in planning communication to the adult community for addressing their day-to-day problems, improving their employment potential, or developing their innate

potential. The learners would also learn about different models available for planning and organizing information dissemination services. To make impact, they would have place greater emphasis on offering proactive information services, and opening avenues for interactive sessions with the target community, such as E-Chouplas and Choupal Sagars and deploying all such innovative means that interest and benefit the target adult community.

5.7 Apply What You Have Learnt

If you have completed all the activities, given in the various sections of Unit 5, you would have learnt to apply the information provided. Further to this input, you may write a short account

of how you plan to augment your efforts to disseminate information received at your end among those connected with your adult learning set-up.



6 INFORMATION DISSEMINATION SERVICES

S M DHAWAN

Structure



- 6.1 Introduction
- 6.2 Search Strategy
 - 6.2.1 User's Requirements
 - 6.2.2 Selecting Database
 - 6.2.3 Query Formulation Options
- 6.3 Retrieval Performance
 - 6.3.1 Recall
 - 6.3.2 Precision
- 6.4 Information Services
- 6.5 Types of Library and Information Service
- 6.6 Document Delivery System and Services
 - 6.6.1 Modes of Document Delivery Service
 - 6.6.2 Document Delivery Service Providers
- 6.7 Conclusion
- 6.8 Apply What You Have Learnt

Learning Objectives



Our hope is that after going through Unit 6, you will be able to

- ❖ Describe the techniques used for searching databases for effective retrieval
- ❖ Discuss the services that can be initiated for disseminating information to adult community and to research and programme teams engaged in adult education and learning
- ❖ Outline document delivery services available in India and abroad
- ❖ Use such services for acquiring documents not held in the small collection at the adult learning set up where you are working.

6.1 Introduction

Unit 6 introduces you to the practical aspects of information dissemination. It will familiarize you with the techniques for finding out databases and thereby effectively retrieving the desired material. Further, it will describe the services you can use for information dissemination to adult community and discuss some of the document delivery

services you can find in India and abroad. Our effort is to motivate you to use these services for obtaining documents not available at your adult learning set-up. Small libraries in adult education and learning can utilize such services for acquiring documents not held in their own small collections.

Let us now discuss some of search strategies.

6.2 Search Strategy

Search strategy is about formulating search statement for an effective retrieval and about deciding the databases as such suitable for searching and retrieval. It is all about series of operations and decisions starting from developing an understanding of user's needs to selecting appropriate databases for retrieval, formulating search statement by using suitable keywords, descriptors and phrases (reflecting user's requirements) coupled with or without Boolean operators, and the data fields on which to carryout the search. The role of the library is to mediate between the user and the information resources, working out a plan of action from amongst the various available options for database searching.

Retrieval performance is all about post-search operations involving evaluation of the search output for its relevance to the user's needs and revising search strategy in the light of the user's feedback.

6.2.1 User's Requirements

In mediated searching, understanding user's requirements is about bridging the gap between the 'expressed needs' and 'actual need'. The gap sometimes stems from the lack of understanding of the part of the user about terms and keywords used in the database to express a key concept under retrieval. The best approach to reduce this gap is to ask the user to provide a few references of documents that seem to meet his expressed requirements. You could use the keywords used to index such documents in the database to understand his 'actual requirements'. The second approach to reducing the gap is to expose the user to descriptors

in the thesaurus and to let him express his requirements using descriptors relevant to his topic.

6.2.2 Selecting Database

Selection of a database for retrieval depends upon the subject of the query and specialty of the database. It also depends upon depth and breadth of coverage of indexed resources in the database, coverage of indexed resources by regions and countries, and accessibility to database archive for retrospective searching and full-text searching.

6.2.3 Query Formulation Options

A search query can be simple or compound. In addition, you can advance a search by using Boolean, limiting, string, proximity and truncation operators and sets. We will now discuss each type of query formulation options.

- ❖ **Simple Query:** In simple query, you use only keywords (or descriptors taken from the controlled vocabulary). Sometimes, you may use a phrase in place of keywords in the simple query. In such a case, you will retrieve only records matching the phrase. However, you reduce the chances of finding records matching the query if phrase is quite long. In case, you use only keywords for expressing the query (i.e. without using any operator); the search output would comprise records containing one or more keywords matching the query. Thus, the greater the number of keywords in the query the larger would be size of the search output. There is no single formula for keeping the output small when there are too many keywords in query. Thus the tip to

searching nearly exact match is to keep the query as simple as possible but without losing specificity in expressing the query.

- ❖ **Compound Query:** One of the strategies to keep the search output (matching the query) small is to construct a compound query using Boolean operators .OR, AND, NOT. You can use them to group search terms to broaden or narrow the results of a search. Boolean searching is a method of combining search terms either to retrieve more documents (use OR as the Boolean operator) or a smaller and more precise set of documents (use AND or NOT as the Boolean operator). Most databases and search engines allow Boolean searching, but may also use special characters or commands. AND retrieves items in which both terms are found e.g. adult AND community. OR retrieves items in which either term is found e.g. adult OR community. NOT retrieves items in which the first term is present but the second term is not e.g. information NOT knowledge. In other words AND narrows a search, OR expands a search, and NOT excludes terms from the search.
- ❖ **Advanced Search:** Simple or compound search can be further refined by combining advanced search capabilities of the search engine such as limiting the search to specific fields in the record, grouping keywords in the query statement, using proximity operators, truncation features etc,
- ❖ **Limiting Search:** Many search engines provide the facility to limit the search to any one or more fields, say, title, author, descriptors,

language, publication year, and country of publication.

- ❖ **String Search:** Many search engines allow searching data fields for character strings that are not in the index. For example, character string ‘adult education and learning’ can be searched by employing string search technique. This facility is particularly useful in searching for specific characters.
- ❖ **Proximity Search:** Proximity operator between two terms is used to find records that contain both terms in the same field. For example, when searching for ‘adult WITH literacy’, the word and word literacy would both appear in the same search field. This operator can thus be used to make a search more precise than using the AND operator. Some search engines use the term ‘SAME’ in place of ‘WITH’ to represent proximity operator.
- ❖ **Order of precedence when using multiple operators:** Parentheses override the order of precedence when using multiple Boolean and/ or Proximity operators. The search statement “house* and (finance\$ or loan\$)” retrieves documents that contain some variant of the word house and either one (or both) of the terms in the parenthesis. You can use up to fifty search operators in a single search statement. The order of precedence for multiple operators would be as follows:
()
Same/ With
NOT
AND
OR

❖ **Truncation:** Truncation can be used in a number of different ways: (i) at the end of the word to retrieve all mentions of the word (singular and plural), all forms of a root in cases of irregular plurals, and to retrieve more than one character, and (ii) internal truncation or wildcard characters to retrieve alternate spellings of words. You may apply truncation at least after three characters. The truncation symbol * serves as a substitute for any string of zero or more characters. The wildcard symbol '?' serves as a substitute for any one character exactly. For example, the search for wom?n retrieves woman or women. One can use truncation

or wildcards anywhere in the search term except as the first character. The wildcard symbol \$ serves as a substitute for zero or one character.

\$ = zero or one character

* = Zero or more characters

? = one character only

Example of right side truncation

Lite* = Literacy, liter, literature, literate
(* = zero or more characters)

Educate\$ = Educate, educated (\$ = zero or one character)

Example of internal truncation

Computeri?ation = Computerization, computerization (? = one character only)

Colo\$r = color, colour (\$ = zero or one character)

6.3 Retrieval Performance

There are two parameters for evaluation of search output: (i) recall and (ii) precision. Any search output from a database comprises two types of records (i) hits (relevant records) and (ii) misfits (noise, irrelevant records). You can measure recall and precision based on number of hit records and misfit records retrieved from the database and based on relevant records not retrieved from the database. The search engine due to poor formulation of the search statement does not retrieve sometimes records relevant to a query.

6.3.1 Recall

Recall is a ratio of hits retrieved (total records retrieved-noise) to total relevant records held in the database i.e. With reference to the figure below recall is computed as (A/C). It is a measure of the ability of the retrieval system to retrieve (recall) relevant records from the database.

6.3.2 Precision

It is a ratio of relevant records retrieved (relevant hits = total records retrieved - noise) to total records retrieved (hits + noise). With reference to Figure 6.1, it is computed as (A/G). It measures the ability of the system to suppress noise in the search output.

	Retrieved	Not Retrieved	Total
RELEVANT	A (HITS)	B (MISSED)	C
NON-RELEVANT	D (NOISE)	X	
TOTAL	G	H	

Figure 6.1 Precision

You can obtain user feedback in terms of recall and precision taken as the basis for improving retrieval performance by suitably amending search statement in the query.

Activity 6.1

Search website <http://www.findarticles.com/p/advanced?tb=art> for articles on poverty alleviation published during 2000-2005. List only top 10 references and measure the precision of the search output.

6.4 Information Services

The libraries could use in-house databases as well as external bibliographic and full-text databases for organizing information dissemination services. In adult education and learning sector the constituencies that need library support and services are two: (i) adult community and (ii) academic and research teams planning and organizing adult education programs. The most common service that libraries have been offering over the years is the access to document collections. However, the expectations of both the constituencies from the libraries go far beyond the accessibility to internal collections. The adult community is more interested in getting useful information than just the documents. Given their low socio-economic status and their low literacy

level, they need practical and processed information useful in making informed choices or taking decisions on matters relating to their livelihood and living standard, and guarding themselves against exploitation and deprivation, etc. The other constituency in the adult education and learning sector, which comprises academic and research teams, needs services far beyond the accessibility to document collections. They need bibliographic information, condensed information, analytical information, repackaged information, and consolidated information and such other content-oriented information for understanding latest developments in the field, state-of-the-art in the subject, and complete overview of the topic.

6.5 Types of Library and Information Service

Broadly, libraries offer different types of library and information services that should be of relevance to both the user constituencies in the adult education sector. These services include i) Current Information, ii) Everyday Use Information, iii) Catching up information services, and iv) Exhaustive Information. Let us now discuss each type in somewhat more detail.

i) Current Information Services: Such services usually refer to keeping up to date with the latest literature published/information in a subject area for the adult community in rural areas ‘mandi’

(wholesale market) rates for farm produce, revision in loan rates from the banks, latest health and family planning programs, agricultural melas (fairs), etc constitute current information as it is crucial literature, store it first in the database, before disseminating it to the adult community. However, for the academic and research teams engaged in adult education and learning programs, the connotation of current information is different. To them it implies latest research papers and publications in journals, latest books and monographs in the field, pre-prints, etc. The purpose of such a service is to

understand current research trends in the field and to gain knowledge about the highest level of achievements in the field. For planning and organizing current information services, the libraries need to browse published and grey literature in adult education and learning, and compile the relevant data in the database for producing such services as Current Titles service (classified by subject) and Table of Contents service (organized by journal titles). In addition, there are also a) Selective Dissemination of Information (customized to individual's needs) and b) Electronic Clipping Service. About the latter two services, we will discuss a little more.

- a) Selective Dissemination of Information (customized to individual's needs):** In addition, the library can organize selective dissemination of information (SDI) wherein the current information is provided to the users on the select topics of interests to the users, and from select sources of information. The user feedback is an important pre-requisite in the SDI service as it helps in performance evaluation of the SDI service and introducing midcourse changes, if so required, in the user profile or the search query for improved performance.
- b) Electronic Clipping Service:** Electronic publishers provide electronic clipping service to individual users on select topics of their interest. Individuals need to register with the publishers for the service. They get in their mail box listings of research papers from current issues of journals and on the subject of their interest. This service is now a substitute for the

traditional current awareness services as well as SDI service.

ii) Everyday Information Service: It is about information needed for performing day-to-day activities such as conducting experiments, engineering operations in a factory, fabricating products, etc. Usually reference sources such as directories, handbooks, and encyclopedias are of used in giving such type of information services. The need for such type of information services for adult community is usually not very strong.

iii) Catching up Information Service:

In this service, complete picture on a particular topic is given in simple and short form to enable an individual to catch up and comprehend the developments in the subject since the time he lost touch in it. Such a service includes i) Popular write-ups on a subject/ topic on demand, ii) Contents that empower adult learners and enable them to understand the importance of information/ knowledge, and iii) Knowledge and information useful for economic activity.

iv) Exhaustive Information Service: Exhaustive information services are important for assessing and understanding overall developments in the subject. These services include literature search, bibliography compilations, and state of the art reports, critical reviews etc. You can customize such services to individual's needs and give them on demand. Coverage of information in such a service is exhaustive. Usually such services are of importance and relevance in knowledge creation and utilization and as such useful and relevant to adult education teams.

Activity 6.2

Explain the difference between current awareness service and selective dissemination of service.

6.6 Document Delivery Systems and Services

Libraries supporting adult education and learning programs are required to provide documents on demand or in support of pro-active services that they organize. Given the fact that the collections size of NGO libraries is usually not large, they may not be able to provide access to all documents on demand from their in-house collections. They will have to depend upon external document delivery systems for the purpose. Initially, before the advent of photocopying machine, libraries used to exchange documents in their holdings on demand on inter-library loan. However, with the advent of photocopying machines, photocopies have replaced the practice of lending original documents. The end users or user libraries get photocopies of documents for permanent retention. Subsequently, with the emergence of electronic publishing era and advent of ICT, Internet era, the libraries started sharing their resources by transmitting digital images of the print documents or sending electronic files of digital documents over the Internet.

In the literature, the terms 'inter-library loan' and 'document delivery' are used interchangeably. However, the two terminologies have specific and different connotations though they serve to meet the same end purpose. In inter-library loan, you can borrow only holdings of the library such as books, journals, reports, standards, etc., from one

library to another but for a limited period only. You need to return such documents to the lending library after the expiry of loan period. In inter-library loan, you never get documents for permanent retention. On the other hand, in document delivery, the end-user gets copies of the documents such as photocopies/ electronic images/ fax images/ electronic files for permanent retention.

6.6.1 Modes of Document Delivery Service

Document delivery means supplying documents on demand in either original or as copies of the original (copies in print or digital format) and delivered through mail/ courier or over communication networks. Document delivery to end users implies three types of operations: i) document identification, ii) document location, and iii) document procurement. Document identification requires verifying the bibliographical elements of the documents to ensure that details such as author, article title, source title, volume, and pages as given in the user request are correct. You can verify such details by searching the Web or the relevant databases. Document location implies identifying the library holdings the documents under reference. You may do this by searching union catalogues available from library networks. Document procurement implies writing to the relevant libraries/

service providers for delivery documents. There are several modes of document procurement.

- ❖ Requesting documents from the holdings library/ library networks
- ❖ Requesting documents from document delivery service providers
- ❖ Searching the Web for digital copies of the documents for free access

6.6.2 Document Delivery Service Providers

There are several document service providers in India and abroad. Their role is to provide copies of documents on

demand. The mode of copying may be photocopy, fax image, digital image, or duplicate electronic file. The delivery options are post-mail, courier, fax, or over the network. Unlike traditional libraries which give documents without charging any money, these delivery systems are commercial in approach and charge for providing document delivery service. These systems compete with each other in terms of speed of service, being exhaustive in terms of depth and breadth of information sources, and in terms of service costs. See Box 6.1 for a list of the service providers in India and abroad. You can obtain more information about their services by searching their websites.

Box 6.1 List of the Service Providers in India and Abroad

INDIA

- ❖ INFLIBNET Document Delivery System offers services in collaboration with the following set of libraries.
- ❖ Indian
- ❖ Banaras Hindu University, Varanasi
- ❖ University of Hyderabad, Hyderabad
- ❖ Indian Institute of Science, Bangalore
- ❖ Jawaharlal Nehru University, New Delhi
- ❖ Punjab University, Chandigarh
- ❖ Tata Institute of Social Science, Mumbai)
- ❖ NISCAIR Document Delivery Service
- ❖ National Institute of Rural Development, Hyderabad
- ❖ Institute of Rural Management, ANAND, Gujarat
- ❖ Tata Institute of Social Sciences, DEONAR, MUMBAI
- ❖ NASSDOC Document Delivery Service
- ❖ National Social Science Information Centre, M.S University, Baroda
- ❖ National Information Centre, SNDT Women University, Mumbai

FOREIGN

- ❖ British Library Document Delivery Service
- ❖ Canadian Institute for Scientific and Technical Information
- ❖ National Library of Australia

Activity 6.3

List using the Internet the terms and conditions for document delivery services offered by INFLIBNRT, NISCAIR, NIRD, NASSDOC.

6.7 Conclusion

After completing Unit 6 the learner would come to learn the techniques for searching databases for effective retrieval, plan and organize various services for disseminating information to adult community as well as to research and programme teams engaged in adult education and learning. This Unit would also educate learners about the institutional resources in India and abroad for obtaining full-text articles. Most NGO libraries may not have comprehensive collection of databases. In such cases, it will be advisable on the part of the adult

educators to use the services of online hosts or else use the Internet resources for information retrieval. The choice of services for information dissemination will depend upon needs of the target users, the level of their education and literacy, and their preferences for the media and the language for communication. The NGO libraries would need to use extensively the document delivery services for obtaining full-text documents. This is so because not all NGO libraries generally possess limited resources in their collection.

6.8 Apply What You Have Learnt

During completion of all activity sections of Unit 10, you would of course apply what you have learnt in this unit. In addition, you may also write a short account of how you plan to introduce some of information dissemination

services discussed in the unit at your adult learning set-up.

In this exercise, you will find very useful the list of some key words given in Box 6.2.

Box 6.2 Some Useful Keywords

Search strategy	Formulating search statement for an effective retrieval and deciding databases to be searched for retrieval.
Search statement	Keywords used for expressing search query with or without operators
Simple search	Keywords used for expressing search query without any operators
Advanced search	Keywords used for expressing search query using operators and placing operators in the query statement in prescribed order of precedence
Limiting search	Searching database on select indexed fields
Boolean operators	Boolean operators are .OR, AND, NOT. Boolean operators provide a method of combining terms either to retrieve more documents (use OR as the Boolean operator) or a smaller

	and more precise set of documents (use AND or NOT as the boolean operator).
Proximity search	Proximity operator 'WITH' or 'SAME' is used between two terms to find records that contain both terms in the same field.
Recall	The ability of the retrieval system to retrieve relevant records from the database
Precision	The ability of the retrieval system to suppress noise in the search output
Selective dissemination	Current awareness service customized to individual's of information needs
Electronic clipping service	Service provided by electronic publishers to individual users on select topics of their interest for receiving alerts on articles on the topics/journals of their interest
Document delivery systems	Individual or collaborating libraries of national importance providing documents on demand to end users for permanent retention against payment



7 NETWORKING

INDIRA KAUL

Structure



- 7.1 Introduction
- 7.2 What is a Network?
 - 7.2.1 Definition and Concept of Networking
 - 7.2.2 Need for Networking
 - 7.2.3 Various Features of Networking
 - 7.2.4 Networking Components
- 7.3 Networking through Information and Communication Technology
 - 7.3.1 Technology, the Internet, and Adult Literacy
 - 7.3.2 Advantages of Networking and Internet Technology
 - 7.3.3 Internet Services
 - 7.3.4 Electronic Networks of Practice (EnoPs)
- 7.4 Why of Networking
 - 7.4.1 Problems Associated with Networking
 - 7.4.2 EnoP and Participation and Helping Others
 - 7.4.3 Knowledge Sharing and Electronic Networks
- 7.5 Conclusion
- 7.6 Apply What You Have Learnt

Learning Objectives



After going through Unit 7, it is expected that you would be able to

- ❖ Define networking, its concept, need, features and components
- ❖ Conduct networking through ICT in adult literacy programmes
- ❖ Differentiate communities of practices (CoPs) versus electronic networks of practices (EnoPs) and knowledge sharing.

7.1 Introduction

Besides documentation and its dissemination, an adult educator can improve the facilities and services of the adult education set-up by networking. You

may ask, “What is meant by networking?” Unit 7 answers this question in detail and helps you to understand its significance for your profession.

7.2 What is a Network?

A network is a social structure made of nodes which are generally individuals or organizations. 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 **i n t e r p e r s o n a l** communication for gathering, processing, and moving information in organisation. Networking is a set of behaviors that take place within the context of organisations. However, networking has become a popular term in the day to day conversation and is often considered to be related to job seeking and personal advancement with an emphasis on self-promotion and trying to use others for ones' own ends.

None of us can survive in business or other profession without a strong network of information and referral sources. Every person has a network of old schoolmates, relatives, colleagues from former jobs or leisure activities, and friends. The critical factor is your

mindset towards networking-recognising networking as important, not a waste of time. Networking is valuable not simply because of the information you gather, but because of the sense of cooperation or goodwill that you create. Networking is often considered as the hidden side of organizational leadership.

The human network is the social structure composed of individuals, friends, collaborators or other organizations connected through technology using a variety of devices - personal computers, mobile phones, gaming consoles and PDAs. In many instances the term is described synonymously with the architecture of participation. It is the intersection of communications networks and social networks - a telecommunications network where people are the endpoints.

Activity 7.1

Build your network by following the steps given below.

- ❖ Find out who has the information and influence that you need.
- ❖ Develop well rounded relationships that are not all “business”. Develop and use your contacts.
- ❖ Try to go to meetings, even if the topic is not of direct relevance to you, to meet other people. Talk to everyone you know about opportunities.
- ❖ Find those friendly network spiders, those types of people who just seem to know everyone.
- ❖ Warm up long-cold contacts.
- ❖ Get into the habit of being talkative.

7.2.1 Definition and Concept of Networking

Networking is the building and maintaining of relationships with a wide range of individuals, groups, or institutions who share common interests, goals, or expertise. Networking implies that the relationships between people are the determining factor in programs.

Women face different challenges than men in the workplace. To meet these challenges successfully women need to network. Networking is about sharing information, ideas, resources, opportunities. Members of a network look to each other for advice, tips on jobs, careers and employment and create a support system for each other. These informal strategic alliances can benefit you greatly.

Networking is emerging as an important concept in the study of professional effectiveness and advancement, leadership, and organisations. It has been linked to studies of leadership power and influence skills, 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 trying to use others for one’s own ends (Stark 1985).

7.2.2 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 important, because networking is becoming the best way to accomplish things in organization(See Box 7.1). Albrecht and Ropp 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.

7.2.3 Various Features of Networking

Networking is characterized by the following features:

- ❖ Ongoing, purposeful interaction
- ❖ Cooperation
- ❖ Relationships
- ❖ People centeredness
- ❖ Complex and diverse interconnections
- ❖ Open ended and flexible progression

Box 7.1 Steps to More Effective Networking

- ❖ **Define your objective:** Focus on what you want to achieve and how people can help you. Think about what you can do for members of your network in exchange for information, contacts and support.
- ❖ **Be Visible and Approachable:** Go out of your way to be where people are. Be cheerful, confident and straightforward.
- ❖ **Make contact:** Select the best approach and initiate the conversation. Wait for a response. Mention common interests. Report news of interest.
- ❖ **Get the contact of the people you meet:** Not just their business card but other key information that can be stapled with their card.
- ❖ **Follow up** on information, advice or leads given to you.

7.2.4 Networking Components

It is essential to approach networking systematically. In order 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?

Different people have different attitudes to networking. All persons are not natural net workers. Some can develop strong networking skills with a little help, and others are really not comfortable meeting strangers especially in new cultures. You would find different attitudes towards networking among different types of net worker as you can make out below.

The Passive Net worker: They have little interest in meeting new people. Instead, they will gravitate to people they already know, wasting the chance to expand their contacts(See Box7.2).

The Inquisitive Net worker: This type of people takes initiative but behaves 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.

Social Net worker: This type takes appropriate initiative in meeting new people but keeps the conversation on a social level. They may be very popular and receive many social invitations - and so can be very valuable in your networking strategy. However, they need to understand how to engage in commercial information exchanges as well.

Dedicated Net worker: They initiate appropriately and are constantly looking

for ways to be helpful to others. In return, the latter often share with them valuable market information and intelligence. These staff members are the heart of your networking team and should receive your active support and are 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 work world. Such attitude expresses what is best about networking ability to create an effective support system for yourself that also works to the advantage of others.

Box 7.2 Tips on How to be Visible while Networking

- ❖ Ask a question at a conference.
- ❖ Make a point in a meeting.
- ❖ Discuss a book with an industry leader.
- ❖ Make people laugh.
- ❖ Have an opinion on everything.
- ❖ Send cards at Christmas or New Year to remind your contact that you exist.

Networking is now becoming as emerging style of functioning within the organization. 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, one can identify the following as strategies for successful networking (McHale 1987)

- ❖ Finding the right track to multiple sources of information related to a

- project;
- ❖ Bridging the 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 the give and take of information flow within an organization or between

organizations, often outside formal organization lines and;

- ❖ Facilitating the interchange among individuals who serve as resources to obtain a specific goal.

It has been found that networking can be a decisive factor in the 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 discussed work and personal matters. Tacit knowledge is shared relatively easily between individuals within the

community, often without ever being made explicit.

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 innovation has taken place in those organisations where collaboration, free flow of information and coalitions built of supporters are the dominant characteristics.

Activity 7.1

Imagine a younger colleague comes to you and asks help in writing a short essay on 'Networking'. The colleague asks the following basic questions. In order to help your colleague you need to read the above sections from 7.2.1 to 7.2.4 carefully and answer the questions asked. The colleague requests you to put your answers in writing for future reference. Write down your answers and oblige the colleague.

- ❖ What does one actually do while 'networking'?
- ❖ Why has networking now become so important?
- ❖ What are the key features of networking?
- ❖ Do you ever utilize any of the steps of effective networking within your organisation? If yes, give details of the steps. If no, give reasons for not doing so.
- ❖ How can a passive net-worker be turned into a dedicated net-worker?
- ❖ Mention any three tips on how to be visible without really trying while networking.

7.3 Networking through Information and Communication Technology

Now a days, organisations are investing in 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 to communication through which individuals working on similar problems may quickly ask each other for help on task related problem(See Box 7.3).

Educators and policy makers need to

stay alert to the need for programs that maintain the principle of providing a positive, useful, and quality service.

i) Professional Development: New Technologies, while helpful in certain key ways, also create new problems, the foremost of which is training individuals (learners and teachers) how to implement them in a cost-effective manner. Sometimes the training process becomes very expensive, and nearly counterproductive (when in the midst

of repaid platform and software changes). The Internet promises, in some respects to be relatively easy to train on and with.

ii) Technological Lifelong Learning: Using Online networking technology and the Internet not only provides adult learners with new opportunities for literacy and basic skills instruction but the use of these technologies themselves provide new technological literacy skills that adult learners can utilize in the work place, for personal reasons, and in the future for additional lifelong learning at higher levels.

In sum, 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 in 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.

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.

Box 7.3 Follow-up Strategies

Networking does not stop with meeting people. An information management process is critical to your success. Some ideas to help you build and maintain a strong network:

- ❖ Note the function, date and key issues on the business cards you collect as soon as possible (but not in the presence of the card giver).
- ❖ Have a standard follow-up letter ready to send out when you return to the office. Remember that you are likely to be very busy at that time, so being prepared in advance is helpful.
- ❖ Set up a mailing database to track information and make correspondence easy.
- ❖ Find reasons to keep in touch. Send the person copies of papers you have written, news clippings they might be interested in, anything to keep your capabilities in their minds.

Activity 7.2

Prepare a database of adult education functionaries of your area and build up a network to share success stories of adult learning known to you and innovations in adult learning that have been carried out by you.

7.3.1 Technology, the Internet and Adult Literacy

One 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 broadband width 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.

i) Electronic Technologies

Computers, wireless communications, videotapes, and the like - are now being incorporated into elementary, secondary, business, and college level education. Adult literacy programs, in contrast, still lag far behind in using these newer technologies for instruction. Studies show that many adult literacy programs have a foothold in technology, but this is mainly in the use of microcomputers for administrative purposes, not instructional ones.

Economic considerations clearly are a major impediment to technology implementation in adult literacy programs.

ii) Need of Network in Adult Literacy

These technologies hold enormous promise for the future because they can:

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

However, we need to keep in mind that across these new technologies, there is also inadequate staff training and lack of information on effective implementation and specialised uses.

7.3.2 Advantages of Networking and Internet Technology

There are some clear advantages of networking and Internet technology both for adult learners and for adult literacy programs.

For learners, this would 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, this would include

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

7.3.3 Internet Services

The Internet allows each of us to 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. A few usages of the Internet can be listed.

- ❖ To trade with people or other organizations
- ❖ To access information on Internet, you need a browser-software. Examples of the browser can be Netscape, Internet Explorer etc.

The World Wide Web (WWW) can be defined as a hypertext, multimedia, distributed information system that

provides links to hypertext documents, as well as too many other Internet tools and databases. There are several features that are unique to the Web that make it the most advanced information system to appear on the Internet to date. See Box 7.4 for information on Search Engine and Network-based Information Services.

Box 7.4 Search Engine

There are several tools to find information on Internet. Search engines are one of their examples of search engines can be Google (www.google.com), HotBot (www.hotbot.com), dogpile (www.dogpile.com) etc.

Network-based Information Services

- ❖ Resource Sharing, Virtual Libraries, Computer Mediated Communication, Web Publishing, Other Services
- ❖ Infrastructure Requirements Hardware, Software, Human ware, Technologies for Networking, Network architecture etc
- ❖ Organization of Information

Resources Digital resources, Non-print media, Content creation, Metadata tools, Research networks, Institution networks etc

- ❖ Network Policy and Governance Participation in INFLIBNET, Legal and Copyright issues, Economics of centralised database services Institutional policies etc.

Activity 7.3

Your younger colleagues has come to you once again asking for help in applying the ideas about networking to adult learning. In order to help her, you first read the paragraphs in sub-section 7.3.1 to sub-section 7.3.3 and then write down for her the answers of the following questions.

- ❖ What are the specific needs of networking in adult literacy?
- ❖ How can Networking and Internet Technology be of advantage for adult learners?
- ❖ How does Internet allow us to share information?
- ❖ What are the network-based Information Services?

7.3.4 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 as

electronic networks of practice (EnoPs).

Needles to say, communication within this network of practice occurs primarily through computer-based communication technologies such as bulletin board, listservs etc.

One of the main characteristics of ENoPs is that the participants in the network interact with one another to help each other solve problems. By posting a message, individuals seeking help can reach out others who can provide valuable knowledge and insight in response. 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 database.

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 able to identify, thus increasing 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 online 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 they want to participate as well as 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 work, such as virtual teams in which the members of participants are expected to coordinate efforts to deliver a specific outcome (see box 7.5).

Box 7.5 Example

An example of online participatory networking is *ohmy News*, a sort of online newspaper. It is an example of 'citizen journalism' in action. The website of this South Korean newspaper gets an average of 700,000 visitors and two million page views a day, which puts it in the same league as a large newspaper. But *ohmy News* has no reporters on its staff at all. Instead, it relies on amateurs or citizens to contribute the articles. The newspaper is a 'playground' for South Korean hobbyists. The articles are of good quality as South Korea has a good educated 'people power'. *Ohmy News* has a build-in-feedback and rating systems so that the best articles rise to the top.

One of the biggest innovations of this newspaper is economic. The site has 'tip-jar' system that invites readers to reward good work with small donations. All they have to do is click a little tip-jar button to have their mobile phone or credit-card account debited. The system is working well. In addition, advertising and syndication revenue helps it to run smoothly. The success of *Ohmy News* has wide ramifications in South Korea's media industry. Many newspaper sites now have feedback and conversation passes at bottom of online articles and are trying to interact more with readers (*Economist: A Survey of New Media*, April 22, 2006).p.7.

In addition to these, participants in an ENoP are strangers. Knowledge exchange in an ENoP occurs between people regardless of personal acquaintance, familiarity or 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.

Activity 7.4

Your younger colleague is much baffled by acronym ENoP and its meanings. Please write down the full form of the acronym and explain its meaning and help her to find answer of the following questions:

- ❖ What does ENoP stand for and what is its meaning?
- ❖ Why is it better to share knowledge through ENoPs?
- ❖ How can Internet help you to build a network of Adult educators?
- ❖ How can you get a feel of 'best practices' in your field through an ENoP?
- ❖ In what way an ENoP is different from a conventional social network?

7.4 Why of Networking

Electronic Networks of Practice 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 was actively working in different areas. Technically or otherwise people gain competitiveness.

There seem to be a variety of reasons why people help each other. As the saying goes, 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.

Studies indicate that individuals participate in ENoPs outperform their colleagues who primarily rely on their colleagues for knowledge and advice.

A database of all the postings / questions can be made. This shall help individuals to find previously discussed topics as well as a means to educate people on how to use email or list serve technology give here examples of Adult education / community participation questions.

7.4.1 Problems Associated with 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 his much time which otherwise could be utilised in some productive work.

In a discussion form, the participants are required to enter forum actively otherwise he/she gets no postings of the network.

An online CoP may be ephemeral and the knowledge created may be lost, unless proper infrastructure is in place that can sustain what may be learned.

7.4.2 EnoP and Participation 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 as standing participants.

EnoPs are a type of collective in which the knowledge exchanged and created is the collective'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 that is available to all individuals regardless of their original participation.

7.4.3 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 the continuous incremental improvements in the community's practice and the reason why CoPs are centres for learning and innovation within organisations.

In contrast, as mentioned above, interactions in an EnoP are limited 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.

7.5 Conclusion

In a nutshell, Unit 7 has explained that networking is an important activity in the field of adult education. The 21st century is witnessing 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 in the organisational level. In adult learning set-up 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 can not be overlooked.

7.6 Apply What You Have Learnt

Have you formed an Adult Learners Association (ALA) in your region? If yes, make efforts for Adult Learners Association (ALA) to create a “Social Network Site” on which knowledge can be shared by way of placing

- ❖ Relevant articles - information on web and

- ❖ Events of particular institutions.

If no, as an adult educator, make efforts to initiate the process so that an ALA may be formed and it can then move in the direction of creating a ‘Social Network Site’.



COMPUTER NETWORKS

S GANGULY

Structure

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Learning Objectives

It is expected that after going through Unit 8 on Computer Networks you would be able to

- ❖ Understand basics of the various types network technologies in the area of computers, Local Area Network (LAN) and different components of computer network
- ❖ Familiarize yourself with the Internet and its terminologies, web addresses, advantages, benefits disadvantages and its usages 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 by the help of different case studies
- ❖ Appreciate the importance of participation in application oriented networks and community education

8.1 Introduction

In Unit 7 we mentioned about electronics-based networking. In order to understand fully the concept of this type of networking Unit 8 introduces you in greater detail to computer networks. With the greater use of computers it was realized that the use of the computer could not be restricted to a particular place. A need was felt to link computers located at different places, e.g. in the same room or scattered through a building or at

distant places for exchange of data/information. A group of two or more computer systems linked together is known as computer network. Networking has revolutionized use of the computer. It is more cost effective and productivity is also gained. It allows computers and their users to share information and resources. Its other uses are database server, computer server, email, chat, internet, etc.

8.2 Networking through Computers

In Unit 7 you read how networking through computers is emerging and no one could keep himself/herself away from it any longer. But, what are the types of a network within the arena of computers? Those are 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 words and their usages when we move to the area of networking through computers and extend its use in reaching out to adult learners. Let's discuss in detail about seemingly strange terms and their everyday applications.

8.2. 1 Types of Network

Based on geographical dispersion of computers there are mainly three types of network.

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

Local Area Network

In this type of network computers and other communication devices are in a small area and are connected together (networked). The area can be single building, cluster of buildings in the same campus. Examples can be Local Area Network of Lab in which you may be working or a library which you may be using.

Metropolitan Area Network

A Metropolitan Area Network 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 private or public.

Wide Area Network

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.

8.2.2 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, i) Bus Topology, ii) Star Topology, iii) Ring Topology and iv) Mesh Topology (See Figure 8.1).

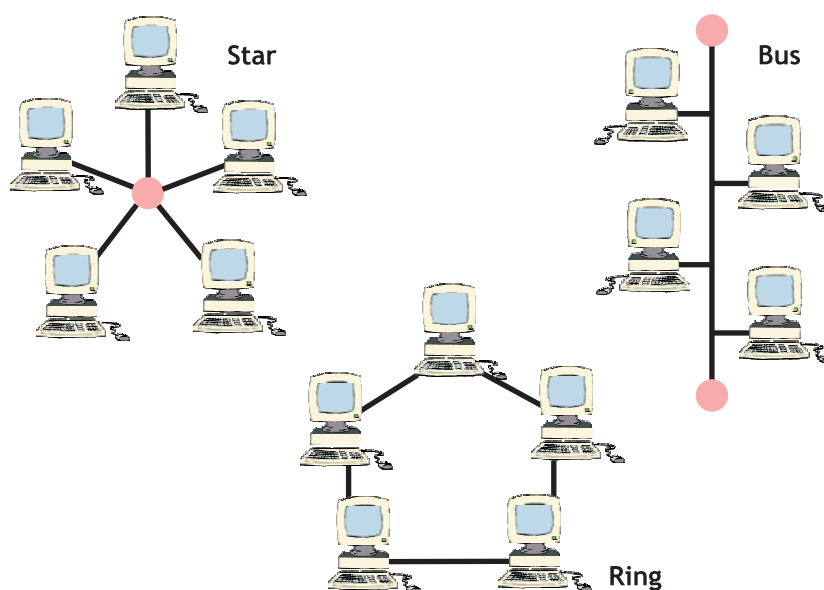


Figure 8.1 Network Topologies - Star, Bus and Ring

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.

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.

8.2.3 Network Components

The following are essential components for computer networking.

- Network hardware
- Transmission media
- Network software

Let us discuss each component in some detail.

a) Network Hardware

The basic component of computer network hardware is a computer. Computers on 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. To this computer resources are attached. And the clients, also known as nodes access, are the resources which are attached to server. In peer to peer computer networks there are no servers.

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 phone cable. Twisted pair cables come in two varieties, a. shielded and b. unshielded.
- c) Optical fibre cable

Unguided Media

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

Network Card

We will discuss about networking software. But hardware has also to be connected. Most important part of connection is the network card. This is

the middle part of connection. These cards are 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 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 on a network.

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, while as Internal and Built-in are inside the PC. Present day modems have 56 kilobites per second speed. ISDN (Integrated Services Digital Network) circuits are digital. In this conversion from digital to analogue is not required.

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.

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, 12, 24 ports.

Router

These 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.

c) Network Operating Software

Network operating software (NOS) is a collection of software and associated protocols that allow a set of autonomous computers, which are 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 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 have 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

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 you are working in Microsoft Office Word under Windows environment, you can share the shared documents. It is possible because

Windows XP is peer to peer networking software.

Client Server Based (Two Tier)

This software is in two parts. One part which includes functions and services resides in one or more exclusive (dedicated) computers. This part is called server. It provides security and access to resources. Another part 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.

Client Server Based (Three Tier)

Here a client-software is split into two parts.

- i) Browser (user-interface) (thin client)
- ii) 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 server for thin client. Nothing changes in the server side.

LAN

Standards for LAN are Ethernet, LocalTalk (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 10mbps.

Activity 8.1

Do you have a computer in your adult learning set up? If yes, 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. Write a short account of 500 words on your information about the computer in your adult learning setup.

8.3 Internet

The Internet is a network of networks. It connects millions of computers and thousands of computer networks throughout the world. The Internet has revolutionised 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 the information infrastructure.

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 Internet it uses standard protocol which is 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 being defined from time to time by various international organization and committees after rigorous testing and reviewing.

8.3.1 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 being 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.

8.3.2 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 (All the three visited by the author on 27.9.2006).

Email 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

8.4 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 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 bypassed groups (women, the poor, rural populations, children)
- ❖ **Introduce economic opportunities:** E-commerce, ICT-sector development etc.
- ❖ **Improve environmental management, GIS:** Food security early warning systems.
- ❖ **Support indigenous knowledge:** Communities document their knowledge.

8.4.1 Disadvantages of Internet

Advances in communication media (VoIP, Instant messaging, email), based on Internet technology have made computer mediated communication more rich and cheap. Yet, today, this potential for knowledge sharing is not

fully realized. Indeed, the internet is by nature an anonymous medium in which people find it hard to place their trust. As a result, people who have had few or no face-to-face meetings are not likely to share knowledge.

8.4.2 Benefits of Internet

It supports and encourages the new learning environment, which is 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 the purposes are

- ❖ to exchange e-mail instantly with institutions in India or abroad
- ❖ to participate in teleconferences with people on topics of internet or research problems like adult education
- ❖ to find out educational information from universities libraries and book stores all over the world
- ❖ to search on-line library catalogues for bibliographic data and other databases for textual data
- ❖ to have access to electronic journals, newsletters and in-house information of many organisations and institutions.

Activity 8.2

Have you ever used the Internet? If yes, write briefly about the contexts in which you use the Internet. Do you find it an enabling technology? If yes, then write in one short paragraph, how it has enabled you to do what.

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

8.5 Case Studies - I

Here we will discuss about the network that focuses on teachers and another network that focuses on learners. Then

we will talk about a network that links literacy efforts and also about futures trends.

8.5.1 ALTIN: Focus on Teachers

The gradually increasing use of instructional technology and online communications in the field of adult literacy is creating both new opportunities and reviving old challenges.

ALTIN: The purpose of the Adult Literacy Technology Innovation Network (ALTIN) technology training program, begun in the mid-1990 was to provide basic instructional technology staff development for adult literacy teachers, including the basics of instructional technology and electronic online communications in a useful and user-friendly way, while at the same time building a network of practitioners who can, after the six months of training, assist other literacy programs 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 when they are able to identify commonalities of interest and need, have established a level of trust and commitment among themselves, and can identify 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 online.

8.5.2 SHELCOM: Focus on Learners

The shelter communications Literacy Network was an experimental Internet-based computer writing project for adults living in homeless shelters in Philadelphia, USA. The project began in 1993 and completed in 1995. These

poorly educated adults also suffered from a variety of problems associated with drug and alcohol use. SHELCOM showed that such disadvantaged populations can be reached effectively through the Internet, in spite of the initial low literacy abilities of many participants.

8.5.3 Literacy Link

Distance education for learners and teachers: Literacy Link, funded by the U.S. Department of Education is designed to serve the large numbers of Americans who require additional basic skills instruction. As an Internet-based lifelong learning system, Literacy Link 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 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 and demand to adult learners, as well as communities, libraries, schools and homes.

8.5.4 Conclusions and Future Directions

The above case studies illustrate 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 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 with 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 community.

Activity 8.3

Do-it-Yourself: ICT & Adult Education Network

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 names of SWS. Or alternatively using “Yahoo mail” they can form “Yahoo group of adult workers”. 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.

8.6 Case Studies - II

Production of information and its dissemination through network can be most effective if it comprises local content. We will discuss here importance of local content and creation of local content in India. Then we will look at creation of information that 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.

8.6.1 Information Production and Dissemination through Network

Let us first discuss

- how important is local content and
- generation of local content in India.

a) Importance of Local Content

An education centre can provide people in the community with access to computers to send and receive 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 and credit information, and information related to employment and training. 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 because trying to get information from the Internet is like drinking from a fire hose - you don’t know the source of the water.

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 globalized 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. In the same vein, another IICD report suggests developing countries are being invaded by foreign ideas and

values that may undermine or overwhelm local cultures.

b) Generation of Local Content in India

Here is a case study of a village knowledge centre. It shows how staff dealt with the issues of local, relevance and language. The centres, established in Pondicherry on the southeast 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 weather and tides information. 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 localized information on agricultural, health and government programs 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.

The content in the above cases is based on Dagron (2001) and Harris (2003).

Information must be locally relevant and respond to the information needs of the potential users. In such ways these services shall contribute to social and economic community development and

to sustainability of the adult education setup.

8.6.2 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, 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 System, 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, deductions effected by the society towards, 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.

These excerpts are from K Bedi, P J Singh, and S. Srivastava (2001).

8.6.3 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, the 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 consisting 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 would provide the information regarding the objectives of the programs, eligibility for participation, etc. Details of experts in agriculture and health are also kept in the tele-centers.

Camps are organized where experts and villagers meet and discuss various issues in specific subjects. These discussions are captured in audiocassettes and video photography. In a form of question-

answer, the discussions are kept in a database. Camps such as livestock management, credit management, and women's health are being organized. 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 given and supplied through local area network. Moreover prints-out of some of the location-specific and very vital information are being pasted at the public places every day. Thus, Tagaval Thinnai is available both in 'online' form as well as in print form. The animators collect the information through formal channels such as web sites and informal channels such as contacting the traders. Some of the main sources of the information are agricultural extension agencies, the block development office, commission agents of the flower market at Nilakotai (a market town), Gandhigram, a deemed university etc. The information is collected and provided on a daily basis.

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

8.6.4 Local Websites

A local website with the help of users of adult education centre can guide to relevant information. The website can, on the one hand, be a medium for introducing information on the community with information provided by the community. On the other hand, the website will provide links to useful

information sources and present information that has been interpreted into the local languages. The website can further link to online distance learning material and/or local databases. Example of a community-based website is: www.tarahaat.com.

8.6.5 Databases

The tele-center manager in collaboration with project volunteers can build their own databases. These shall be locally generated and, hence, locally and personally relevant information sources that can include details of government programs for low-income rural families (dependent on the context of the particular community); 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 timetable for buses and trains; and a directory of local veterinarians, cattle, and animal husbandry programs, 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 license

for their software to NGOs or community groups upon request, so if a NGO is in need of software, it can contact the producer.

8.6.6 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.

8.6.7 Email Lists

Email lists allow the posting of questions, receiving of news updates, and sharing of experiences via email within a group that you define. An email 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 tele-center in Latin America and the Caribbean.

Activity 8.4

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 online distance learning material. Write a short not of 200 words on what you have discovered after visiting the website: www.tarahaat.com.

8.7 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 organizations, fosters co-ordination 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.

8.7.1 Example for an Application Network: FarmNet

Farmer Information Network (FarmNet) is a network of rural people and supporting intermediary organizations, such as extension services, using ICTs and conventional communication media to facilitate the 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.

FAO, FarmNet brochure, 2000

URL of FarmNet : <http://www.fao.org/sd/2001/KN1008-cn.htm>

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 center 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 organizations with the farm communities.

URL: <http://farmnetasia.nic.in/>

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.

URL: <http://www.tarahaat.com>

8.7.2 Community Education

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

By organizing programs and activities that serve all ages and 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 organizational structure for school community collaboration.

8.8 Conclusion

Unit 8 provides details about various types of computer networks such as LAN, MAN and WAN, how they are useful. It explains about different components of network, what is Internet, and tells about some e-mail lists of sites related to adult education, importance of Internet, its benefits and advantages, etc. From the different case studies you learn about the use of instructional technology in reaching out to those who we cannot easily reach and how information can be generated and disseminated 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. To have these data in an

online and print is also of advantage. 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, service and possibilities of improvement in livelihood. As an adult educator you need to relate education to development and work on livelihood issues of adult learners. In this context, networking helps in bridging the gap between adult educators and adult learners.

8.9 Apply What You Have Learnt

Have you ever witnessed or participated in an application-oriented network? If yes, share it with your colleagues. If not, then open the Internet and in the website address given in the unit search for it. Write down the information you received. Design and propose to develop such an application-oriented network keeping in view the needs and demands of adult learners in your region.

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
- ❖ Health 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



9 NETWORKING AND ADULT LEARNING

SHOBHITA JAIN

Structure



- 9.1 Introduction
- 9.2 Networking
 - 9.2.1 What is a Network?
 - 9.2.2 Two Basic Principles of Professional Social Life
- 9.3 Diverse Types of Networking
- 9.4 Why Network?
- 9.5 Conclusion
- 9.6 Apply What You Have Learnt

Learning Objectives



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

- ❖ Discuss the basics of professional networking
- ❖ Enumerate diverse types of networking
- ❖ Appreciate the relevance and importance of networking

9.1 Introduction

After reading in detail about networking and computer networks in Unit 7 and Unit 8 respectively, you come to Unit 9, which is about accessing and linking with resources available in the field of your profession. When you carry out this activity in an organized fashion, we call it the process of networking. The purpose of this lesson is to increase your

ability to network, so that you are able to network for a specific purpose. We will first briefly talk about networking in the context of adult learning and then in Unit 10 you will read about Adult Learning Documentation and Information Network (ALADIN), which is a global network of adult learning.

9.2 Networking

Before we can effectively discuss about ALADIN, let us understand what a network is and why we network. Since networking is a social activity, it is relatively simple and easy to apply its methods for building a professional network so that you are in know of

emerging themes in your profession, able to use consultation to organize your activities at work, ensure that you receive credit for your innovations and above all learn to engage professionally with active scholars from different disciplines and cultures. So in a nutshell

we are here concerned with the relationship between your professional network and your work. Both reflect the process of weaving yourself and your work into a set of professional links. You have already understood the nuts and bolts of networking and computer networking in Unit 7 and Unit 8, respectively and here we will discuss network building and concepts that underlie this process and try to follow a more advanced theory of networking that includes the process by which your work interests in adult learning become institutionalized. So here are the fundamentals of professional networking.

9.2.1 What is a Network?

Network refers to accessing the links from relevant people/ resources we know to people/ resources they know. We are here using the term “relevance”, in functional terms, that is, you know how your professional world operates and with whom you have a mutual interest in your profession. Your

network will in this sense comprise those with interests similar to your professional interests.

The process of accessing the links is established in an organized way, for a specific purpose. Networking involves establishing goals, analyzing the kinds of help you will need in achieving your goals, analyzing and developing your skills, building and cultivating your network accordingly, keeping in mind that people like to give advice, people like recognition, people like to be helpful. Furthermore, knowing about and accessing resources referred to by those who belong to one’s network has always helped in analyzing 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.

Activity 9.1

State at least two goals for which you would like to be part of a network and then write in 200 words the kind of skills you would like to develop in order both to give help and receive help.

9.2.2 Two Basic Principles of Professional Social Life

In considering the way to become a part of a professional network, you encounter two fundamental principles of professional social life. The first one pertains to articulation of commonalities. In other words, you develop relationships with people on the basis of shared values, shared goals, shared research interests, or anything else of a professional nature that you would share with others in your

profession. In order to articulate commonalities, you need to formulate a distinct language for establishing your professional relationships. Since the people who excel in the field of your profession (adult learning) often live in different parts of the world and hold worldviews quite different from your own, you will certainly need to learn to express yourself in a language that is understood by your professional colleagues at home and abroad.

Having understood one dimension of the

first fundamental principle of social life, let us discuss the other dimension of this principle which pertains to exploration of differences, disagreements, debates and other engines to promote clear and analytical thinking. It is no use to avoid conflict in your professional relationships. Rather you need to be able to assert your 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 your membership of a professional network.

The second principle of professional life refers to what we sociologists like to call “structural holes”. You may like to read more about this concept in Ronald Burt’s book, *Structural Holes: the Social Structure of Competition*, published by Harvard University Press in 1995. A structural hole refers to a group of people who do not know each other but professionally speaking ought to know. Your professional interests define a

structural hole and you get a place in that hole because you have formed relationships with all those whose professional interests are linked to your professional interests in several different directions. The fact of different directions is indeed relevant because your professional relationships are mostly with those from different communities and regions. The more diverse people/ resources you form relationships with, the more unforeseen opportunities will arise for your own professional growth as well as for theirs. Being placed in a structural hole that contains professionals in several other communities, you need not fear the isolation of a limited world of relationships within your own professional colleagues. You enter a professional network through the Internet. In order to learn about using the Internet for this purpose, you need to refer to information about internet tools explained in any basic course on computer operations for beginners, if you do not already possess the relevant skills.

Activity 9.2

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.

9.3 Diverse Types of Networking

As we all know networks can be very diverse. Krolak (2003) has mentioned the following types in a Handout on Networking.

- ❖ horizontal (same sector, same level), vertical (same sector, different level) or cross sectoral (different sectors, different level)
- ❖ informal, more formal (some form of co-ordination) or formal

(registration with legal and financial responsibilities)

- ❖ local, national or international
- ❖ unrestricted or restricted
- ❖ centralized or decentralized
- ❖ highly structured or unstructured

Activity 9.3

Try and access the following websites, which are in fact very useful ones for PALDIN learners and discover the type of networking each one belongs to. Please note that you may not find all the links functioning at the time you would 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 updating, so do not despair and keep trying to access. You may find some websites still operational and quite useful for you. On the part of those in-charge of PALDIN course material development, there will be efforts to update this list. 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 Useful Links for PALDIN Learners

Adult Basic Learning and Education (ABLE) <http://www.bellanet.org/adultlearning/inde10.cfm> 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 organizations 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 <http://www.col.org/> (ALADIN Member) 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, all clearinghouses, publications, ERIC's digests, information services and updates from the system.

ERIC Clearinghouse on Adult, Career, and Vocational Education (ERIC/ACVE) <http://www.ericacve.org/> (ALADIN Member) 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) <http://www.eaea.org/> (ALADIN Member) Website includes information on the activities of EAEA and its member organizations, 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/> Provides access to the online encyclopedia of informal education and to e-archives of informal education documents and publications.

International Bureau of Education (IBE) <http://www.ibe.unesco.org/Links/linkhome.htm> (ALADIN Member) A comprehensive collection of links to education-related resources, documents, organizations, conferences, data and other information sources.

International Council for Adult Education <http://www.web.net/icae> (ALADIN Member) 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 organizations, and current news and events related to adult education and learning.

UNESCO Education Sector <http://www.unesco.org/education> (ALADIN Member) 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/> 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.

9.4 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. 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 you can shut or open as per your needs. You need to of course consciously keep your presence in it alive if you wish to continue to enjoying its benefits. The more you contribute to maintaining it, the better it will serve you.

9.5 Conclusion

After reading the basics of networking in the context of adult learning as described in Unit 9, you will find that in the next unit (unit 10) the account of a network, where diverse interests have come together under one umbrella, will open up for you 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 PALDIN learners you 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.

This is why we have said on the cover page of PALDIN books that PALDIN is the product of an ALADIN-INDIA initiative. Let us learn in detail in Unit 10 about ALADIN.

9.6 Apply What You Have Learnt

Describe in 500 words the nature of networking that you have developed

during your career as adult educator and work out the benefits you have enjoyed

from it. In order to articulate the benefits that you may have accrued from your networking, you may read many benefits of networking given in Box 9.1.

Box 9.1 Benefits of Networking

Krolak (2003) has mentioned in her handout on networking the following of many benefits to networking.

- ❖ Facilitating the exchange of (professional) information, ideas, skills, knowledge, experiences, expertise and materials
- ❖ Linking people of different levels, disciplines, organizations 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.
- ❖ Organizational strengthening
- ❖ Offering capacity building opportunities such as workshop, conferences and exchange programs
- ❖ Providing interpersonal or intercultural relations and communication skills
- ❖ Offering opportunities to access e.g. funds, training, scholarships
- ❖ Recommending or referring individuals or organizations
- ❖ 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



ALADIN: CASE STUDY OF A NETWORK OF NETWORKS

SHOBHITA JAIN

Structure



- 10.1 Introduction
- 10.2 ALADIN: A Global Network
- 10.3 Objectives of ALADIN
- 10.4 Year-wise Account of ALADIN Activities
 - 10.4.1 The Year of 1997
 - 10.4.2 The Year of 1998
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 - 10.4.4 The Year of 2001
 - 10.4.5 The Year of 2002
 - 10.4.6 The Year of 2003
 - 10.4.7 The Year of 2004
 - 10.4.8 The Year of 2005
 - 10.4.9 The Year of 2006 and beyond
- 10.5 PALDIN Learners' Networking on the Network
- 10.6 Conclusion
- 10.7 Apply What You Have Learnt

Learning Objectives



It is expected that after going through Unit 10 you would be able to

- ❖ Gain information about ALADIN as a global network
- ❖ Make out how to use it for your activities in the field of adult learning documentation and information services
- ❖ Consider the possibilities of your making contributions to augmenting the qualities of this useful resource for policy-makers, researchers, and programme developers in adult learning
- ❖ Learn to network in order to excel in your profession.

10.1 Introduction

As a PALDIN learner you are interested in establishing useful links with resources that would help you analyze and develop your skills to build and cultivate your professional network. Unit 10 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. In this lesson 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.

In Unit 10 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 and 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 10 and for the second purpose you will need to complete all the exercises given in the unit.

10.2 ALADIN: A Global Network

The Adult Learning Documentation and Information Network (ALADIN) is a global network, set-up by the UNESCO Institute for Education (UIE) and several adult learning documentation and information centers. It is co-ordinated by the Head of Documentation 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 *Energizing ALADIN*, edited by Lisa Krolak. I have at times used the author's own words, without quotations marks but with full acknowledgement and gratitude. For full reference see the entry under Krolak 2005 in the list of References at the end of this unit.)

This network has been established for facilitating the access to adult learning resources. Its current membership comprises 100 members spread in more than 40 countries. It was initiated in 1997 as a follow-up action of CONFITEA V (Fifth International Conference on Adult Education). For more information on the various aspects of the network please visit its website, <http://www.unesco.org/>

[education/aladin](http://www.unesco.org/education/aladin)

A general and broad definition of adult learning characterizes the philosophy and activities of ALADIN, which binds in one network practitioners of adult learning located in such diverse environments as university, research institutes, national, regional and sectoral centers, community-based organizations and services and online information providers. 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 the 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 or by entering the ALADIN e-mail listserv, which is an e-mail link between friends of ALADIN. You can either visit the website or contact the ALADIN co-ordinator for further information.

Activity 10. 1

In order to access the ALADIN Website, you need to have your computer connected to the Internet so that you can use a browser to view ALADIN website on the world wide web. As you know that every website has a unique uniform resource locator (URL) that identifies it on the computer. URL of ALADIN website is www.unesco-aladin.net. You can also find this website by using a search engine (e.g. google, yahoo, ask jeeves, aolsearch, hotbot etc). Each search engine does not search a website directly. It searches a database of the full text of web pages from the billions of web pages out there living in servers. You need to simply type the keyword relevant to the topic you are searching. In this case you need to type the word ALADIN and the search engine will display all the web pages in its database that contain this word.

After finding the ALADIN website, you will see its homepage which expects you to click at its various icons for finding further information under each head. Try to click some of these icons and then answer the following questions.

- ❖ What steps did you take to find the home page of ALADIN website?
- ❖ Do you find its design attractive and appealing to your sense of aesthetics?
- ❖ What is the name of the ALADIN Co-ordinator?

10. 3 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, you 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 knowledge management. The network aims to set right the uneven access to adult learning documentation and information resources.

10. 4 Year-wise Account of ALADIN Activities

ALADIN is only a less than ten-year old child with a history of very active life. Let us look at its birth and growth that its co-ordinator 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.

10. 4. 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 centers felt a strong need of organizing an interactive knowledge management system in the field of adult learning. The Head of the UIE Documentation Center coordinated the initiative.

10. 4. 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 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 expert's 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.

10.4.3 The Year of 1999

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

The ALADIN website provides detailed information and online access to all ALADIN members.

The ALADIN Task Force has members,

forming the international steering body of ALADIN. Its online seminar was coordinated jointly by the UIE's Documentation Center 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 online seminar collected information from the members to set the future agenda of ALADIN.

10. 4. 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.

10.4.5 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 PALDIN learners will take advantage of his 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 organizing information in the field of adult learning and ii) to formulate a training strategy at the regional level.

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

Activity 10.2

Write answers to the following questions after considering carefully your access to resources that you require for your work as an adult educator.

- ❖ What kind of resources do you need most for your everyday work as an adult educator?
- ❖ 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?
- ❖ As an adult educator, do you find that ALADIN website is a useful resource for your work in the field?
- ❖ Have you ever accessed any resource from any website for your research/ programme development in adult learning, documentation and information?

10.4.6 The Year of 2003

The Coady International Institute in Antigonish, Canada organized in May and June 2003 a four-week certificate course in “Managing NGO Resource

Centers” and five ALADIN members received full scholarships to attend it. For details of the four-week certificate course and its methodology see Box 10.1.

Box 10. 1 Managing NGO Resource Centre and its Methodology

The following description has been taken with acknowledgement from the website [http://www.coady.stfx.ca.library//MRCLinkshtm](http://www.coady.stfx.ca/library//MRCLinkshtm).

Development organizations around the world recognize the power of information to raise awareness and mobilize action for social change. They also recognize the need to develop their own capacity to access, organize 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 plan to establish—information resource centres. Well-managed resource centres are a valuable component of learning organizations, and can help reduce unproductive duplication of effort both within and among NGOs. They can also serve as centres of community learning and participation in civil society initiatives.

The Certificate in Resource Centers for Learning and Change will provide participants with the opportunity to gain or improve skills in managing information, as well as to analyze the dynamics of indigenous knowledge, appropriate media, information-sharing and networking. During the program, 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 organization. (For the content, objectives, target group and methodology of the program, you need to visit the site and gather further information.)

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 & Standardization 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 recognized the growing importance of developments in information and communication technologies for ALADIN. The ICTs enable and support networking, the connection of information services, the sharing of knowledge and the e-learning at different levels. A networked community requires the standardization of knowledge management tools, such as cataloguing software and 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 Standardization (ALADIN ICT&S) group.

10. 4. 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 Standardization group held discussions with the ALADIN Co-ordinator 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). In 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 organizes them before sending them out. This has resulted in the high quality and systematic 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, a task that is still underway. The vision is to create the most comprehensive platform on knowledge and information on adult

learning. It shall be an interactive site with links to existing information services and to the resources of the ALADIN members and other key actors in the adult learning community. Besides search functions and online 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, programs development for adult learning

documentation and information. All PALDIN learners are likely to find the ALADIN website an interactive meeting point.

Six Latin American ALADIN members met in July at INEA 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 10.2.

Box 10.3 Joint Bibliography on Adult Learning for Latin America

The following excerpt has been taken from the website <http://www.unesco.org/education/aladin>

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 of what is being done in the field of education for young people and adults. It presents the general analytic and policy framework for the education of young people and adults in Latin America and the Caribbean, providing a compendium of best practices in literacy training and adult education carried out in the region.

During the International Adult Learners' Week in September 2004, an ALADIN lecture was held in Cape Town, South Africa, on the topic of "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 the 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 centres exist. This felt need of ALADIN members emanated from the realization that i) library and information management has globally received little attention and ii) there is hardly any material that supports documentation and information centers 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 a standardized 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 10.3.

Box 10.4 ALADIN Toolkit, for setting up basic documentation centers for adult learning

The following excerpt has been taken from <http://www.unesco.org/education/aladin/atkToolkit.htm>.

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

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 organizations and community-based groups that are wishing to organize their information resources or to improve efficiency of existing information centres, and whose staff have limited or no training in information management.

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 realization that documentation is not taken to be a core activity within adult learning programmes, iii) while larger organizations employ professional documenters, smaller organizations lack such expertise and iv) very little information is available on the existing documentation centers in South Asian countries. It came as a revelation that the 2003/2004 ALADIN Directory included 89 documentation centers in 41 countries and listed only two centers in India and one each in Nepal, Bangladesh and Sri Lanka. Since the available directories of libraries and documentation centers 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 centers in India.

10.4.8 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 10.5 and figure 10.1).

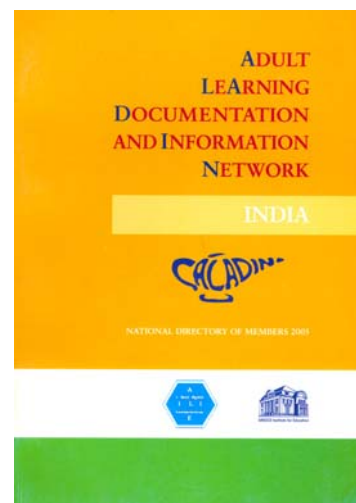


Figure 10.1

Box 10.5 The Country (India) Study and International Workshop

The following excerpts are from the website, <http://www.unesco.org/education/aladin/news>.

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 organizations spread all over India. By May 2004, 47 centers 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.

10. 4. 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 achieve a balanced global representation of adult leaning documentation and information services.

In 2006 and beyond ALADIN is continuing its activities regarding such projects as

- ❖ the ALADIN Toolkit
- ❖ constant improving and updating of the ALADIN website
- ❖ organizing training and capacity

building initiatives in different regions of the world

- ❖ building up regional structures, supported by ALADIN regional meetings (for example, 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 exist

10.5 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 and fax numbers etc)

- ❖ Links to organizations you are associated with (your department, project, professional associations, classes you teach, events that you are involved in organizing 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, for example 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. Creating your web-page with links to online 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 online 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 listen in 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, unshowy, 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, writing 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 the 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.

Activity 10.3

Identify the various tools of communication media employed by ALADIN members and consider the possibility of creating a home page for PALDIN program of study. State the main elements that this home page will include in its design.

OR

Create your own home page and include the four components discussed above. Take help of ALADIN web pages for creating links to other online resources which are important and relevant for your professional work as an adult educator.

10.6 Conclusion

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 each PALDIN learner to appreciate and practice.

Having initiated the process of networking, you would like to consider what to do with it. If you would like to do well in your field, you will like to try organizing 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 have either created your own home page or become a member of ALADIN or you have both venues 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 grassroots level can give you impetus to try and make use of ALADIN for boosting your professional identity.

Of course, you are not always 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 pose problems and 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 organization'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 centralization and domination if one network co-ordinator or an organization is leading the process
- ❖ Networks suffer if the co-ordinator is not in close contact with the field, whom they claim to represent
- ❖ Dependency on personalities or conflicts and competitiveness between strong personalities or organizations
- ❖ 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 10 with the thought of possible risks to be possibly encountered in the world of networking. Therefore we discuss in the last section of the unit the features of successful networks.

10.7 Apply What You Have Learnt

In this lesson you have learnt about ALADIN as a global network of networks. It is expected that you have accessed some links to support and enrich your own professional work as an adult educator. You will also know about other networks in your personal or professional life. In this exercise we would like you to go carefully through the following criteria of successful networks (the list of criteria has been taken from Krolak 2003) and identify criteria that are met by ALADIN and/ or by networks that you know. Please choose at least three criteria and explain your decision.

Successful networks usually meet the following criteria.

- ❖ 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/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

Hopefully after completing this exercise you will find that you are well aware of the good and the bad aspects of networking and it will much 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!



STANDARDS FOR INFORMATION MANAGEMENT AND DISSEMINATION

P R GOSWAMI

Structure

- 11.1 Introduction
- 11.2 Why Standards
 - 11.2.1 Definition
 - 11.2.2 Categories of Standards
- 11.3 Indian Standards
 - 11.3.1 Editing, Printing and Publishing of Books, Periodicals etc.
 - 11.3.2 Information Processing, Management and Documentation
 - 11.3.3 Library Management
 - 11.3.4 Database Development and Exchange of Information in Electronic Form
- 11.4 Standards for Information Literacy Programs
- 11.5 Information Technology and 'Open Standards'
- 11.6 Conclusion
- 11.7 Apply What You Have Leant

Learning Objectives

After going through Unit 11, it is expected that you would be able to

- ❖ Acquaint and sensitize yourself to the use of different specified standards pertaining to procedures/system/practices (both national and international) at your workplace.
- ❖ Be familiar with recent developments in the area of 'open standards' particularly for managing digital information
- ❖ Relate the standards described here to work done in an information intensive organization.

11.1 Introduction

Unit 11 is about performing your tasks so that they match with the specified standards used both nationally and internationally. For this purpose it is necessary that you are familiar with such standards relating to different procedures or systems or practices at your workplace. In addition, you will

also learn in Unit 11 about relatively 'open standards' as they are applied in the management of digitalized information. In an information intensive workplace like an adult education and learning set-up, it is important for you to be sensitive to the need of applying standards to all your

activities so that you are able to share them with colleagues and others at home and abroad. Similarly, if you are aware of standards in procedures and practices, you will be able to appreciate and make use of what others are doing. With the application of standards in all your procedures, systems and practices, it becomes quite easy for you to exchange information and this sharing can bring both efficiency and speed to your performance at your workplace. Unit 11 will enable the PALDIN learner to understand the importance of use of standards, particularly in a network environment where different organizations/institutions are required to share their expertise and resources to break information isolation. Unit 11 stresses the viewpoint that use of a widely accepted standard is desirable while developing a computerized/electronic database as it facilitates exchange of information with other institutions. In addition, Unit 11 highlights also the benefits of open standards in IT environment.

11.2 Why Standards

Standards are necessary for successful management of information and supporting resources in addition to communications systems. We use a telephone and dial direct to any place in the world because of standards accepted by vendors of telephone equipment. Standards are published as operating guidelines, procedures and policies. Whatever the standards are called, rules are required in the management of information, just as laws are needed in our society.

A shop in your locality selling building material and hardware items has ‘screws’ of different sizes or

specifications. You can easily buy them according to the size given by your carpenter. But buying a ‘screw’, nut or bolt was not easy in the 19th century. Most screws, nuts and bolts were locally made and products available in different shops were often incompatible. It happened simply because the craftsmen who made them did not follow any defined standard. However, one of these craftsmen put America’s machine tool industry on the path of standardization. In the year 1864, William Sellers introduced a ‘uniform system of screw threads’ which later became widely adopted. The argument made by William Sellers was simple, ‘without standardized easy-to-make screws, there could be no interchangeable parts and thus no mass production’. Later, most technology sector such as railways, electricity, tele-communications all learned to love standards in their fledgling period. The stalwarts in the field of industry or technology believed in the dictum ‘without standards a technology can not become ubiquitous, particularly when it is part of a larger framework’. For instance, railway track gauges, voltage levels, signaling systems all had to agree on before railways, electricity and telephones became ready for widespread use or mass consumption. Standards also allow a technology to become automated thus making it more reliable and easier to use.

In our day to day activities, we come across manufacturing standards. They are often cited in product advertisements. We do ask for ISI marks (i.e. Indian Standards Institution) when we purchase an electric motor switch (ISI: 3854), or white cement (IS-8042). We also advise our friends and relatives to buy ISI marked goods for quality products.

The importance of standardization was felt in the field of library and documentation work quite early. The world-wise use of standard catalogue cards of 12.7 cm X 7.6 cm size was for a long time. The introduction of International Standard Book Numbering (ISBN), and Serial Numbering (ISSN) along with International Standard Bibliographic Description (ISBD) was for the purpose of achieving bibliographic control over books and serials that are published all over the world in a dispersed manner.

11.2.1 Definition

International Organization for Standardization (ISO), Geneva, the apex body, has defined standards as:

“A technical specification or other document available to the public, drawn up with the cooperation and consensus or general approval of all interests affected by it based on the consolidated results of science technology and experience aimed at the promotion of optimum community benefits and approved by a body recognized on the national, regional and international level”.

Charles D Sullivan describes standard as a ‘category of documents whose function is to control some aspects of

human endeavor’. Thus a standard is a result of particular standardization effort or activity which after getting approval of an empowered body takes the form of a document containing a set of conditions relating to quality control, pattern of practice or processes that are to be followed.

11.2.2 Categories of Standards

Standards relating to procedures, system and practices that relate to an ALS fall under the following categories.

- ❖ Preparation of
 - (i) abstracts of periodical articles/ thesis
 - (ii) alphabetical indexes
 - (iii) bibliographical references
 - (iv) abbreviations of titles of periodicals
 - (v) technical manuals
 - (vi) trade catalogues etc.
- ❖ Printing and publishing, electronic document interchange/information retrieval, ISSN/ISBN, microfilming etc.
- ❖ Management of library and information centers, public library, inter library lending, use of thesaurus for classification and cataloguing terms, layout of a union catalogue etc.

Activity 11.1

Please read the section 11.2 thoroughly and try to answer the following questions

- ❖ Who invented the standards? What sort of difficulty Indian Railway could face if there is no ‘standard’ or ‘specification’ for railway tracks?
- ❖ How can ‘standard’ help you to judge the quality of a product like a Pressure Cooker?
- ❖ What types of standard are required in an ALS for information management and editing of publications?

11.3 Indian Standards

Indian Standards Institution (ISI), now known as Bureau of Indian Standards (BIS) was established in the year 1947 primarily to improve quality of goods produced in the country. However, ISI or BIS has also published a large number of standards which relate to processes and procedures that are followed in the creation of knowledge artifacts (e.g. books, learned periodicals, technical manuals) or exchange of information in a computer mediated environment. In addition, the importance of standard practices in library and documentation work was realized by the ISI, and a technical committee was set up by it as EC 2: Documentation Committee, headed by an eminent person in the field Dr. S.R. Ranganathan.

This Committee is presently known as MSD 5: Documentation and Information Sectional Committee. The Committee is responsible for formulation of Indian standards on the following documents

- ❖ Preparation of abstracts of periodical articles, reports etc.
- ❖ Indexing work/preparation of subject indexes of books etc.
- ❖ Bibliographic references
- ❖ Cataloguing and classification terms
- ❖ Automated information handling system
- ❖ Transliteration
- ❖ Book numbering (ISBN)
- ❖ Book production, illustration and printing processes
- ❖ Style manual
- ❖ Binding and any other aspects relevant to processing, handling and publication of documents.

The Committee works in close cooperation with other bodies that are responsible for formulating technical guidelines in related fields. They are:

ISO/TC 46	Information and documentation
ISO/TC 130	Graphic technology
ISO/TC 154	Processes, data elements and documents in commerce, industry and administration
ISO/TC 171	Document management applications

So far BIS has compiled more than 50 standards in different areas that are relevant to the persons working in adult learning setups and their documentation unit. A near exhaustive list of these current standards with all necessary details such as publication data etc. is given below.

11.3.1 Editing, Printing and Publishing of Books, Periodicals etc.

These standards relate to editorial and publication unit of an ALS.

IS 4:1963	Guide for layout of learned periodicals (Revised)Jan 2003
IS 790:1987	Guidelines for preliminary pages of a book (First March 2003 Revision) (superseding IS 791:1956, IS 792:1964 and IS794:1956)
IS 795:1976	Guide for preparation of abstracts(First Revision) Mar 2003
IS 1250:1958	Proof corrections for printers and authors Jan 2003

IS 1275:1976	Rules for making alphabetical indexes (First Revision) Mar 2003	ISO 2108:1992	Standard book numbering (ISBN) (First Revision)
IS 3130:1968	Guide for preparation of manuscript of an article March 2003 in a learned periodical	IS 9637:1980	Guidelines for presentation of information in Jan 2003 technical manuals
IS 6298:1971	Guide for selection of type and page layout in Jan 2003 textbooks	IS10101:2003	Information and documentation - International
IS 6660:1972	Guide for illustrations in books Jan 2003	ISO 3297:1998	Standard serial number (ISSN) (First Revision)
IS 7140:1971	Symbols and notations for correction of Jan 2003 illustration and illustration proofs	IS 12000(Part 1)	Guide for paper spoilage and wastage for Mar 2003 1987 printing industry: Part 1 Sheetfed, letterpress and offset processes
IS 7160:2003	Guide for print area, margins and type sizes for textbooks (First Revision of various parts of IS7160)	IS 15281:2003	Information and documentation - International
IS 7400:1974	Guide for preparation and production of Jan 2003 textbooks	ISO10444:1994	Standard Technical Report Number (ISRN)
IS 8010(Part1)	Guidelines for preparation of technical reports: Jan 2003	IS 15306:2003	Printing @ Publishing - Glossary of terms
1976	Part 1 Research and development reports	DOC.MSD 5(145)	Transliteration of the Indian scripts to the Roman script
IS 8010(Part 2)	Guidelines for preparation of technical reports: Jan 2003		
1982	Part 2 Feasibility reports		
IS 8010(Part 3)	Guidelines for preparation of technical reports: Jan 2003		
1987	Part 3 Industrial potential survey reports	IS 18:1999/	Documentation - Rules for the abbreviation of title words and titles of publications (Second Revision)
IS 8310:2003/	Information and documentation - international	ISO 4:1997	

11.3.2 Information Processing, Management and Documentation

These standards are needed for various types of documentation works such as indexing/alphabetical arrangement, preparation of catalogue, etc.

IS 382:2003	Practice for alphabetical arrangements (First Revision)	Documentation - Vocabulary
IS 2381:1978	Recommendations for bibliographical references: Mar 2003 Essential and supplementary elements (First Revision)	/ISO 5127:2001 (First Revision of various parts of IS 13550)
IS 3050:1965	Code of practice for reinforced binding of library Jan 2003 books and periodicals	IS 14720:1999 Documentation-guidelines for the Establishment and development of monolingual thesauri
IS 6666:1972	Recommendations for frequency notation for Jan 2003 Periodical publications	ISO 2788:1986
IS 9400:1980	Guide for the preparation of bibliographic March 2003 Description sheet for technical reports	IS14836(Part 1):Codes for the representation of names of countries
IS10454:1983	Guidelines for presentation of translations March 2003	2000/ISO 3166-1: and their subdivisions: Part 1 Country codes 1997
IS 10455:1983	Guidelines for presentation of abstract sheets March 2003 in serial publications	
IS 11956:1987	Guidelines for the preparation of trade March 2003 catalogues	
IS 11957:1987	Guidelines for contents list of periodicals March 2003	
IS 13550:2003	Information and	

11.3.3 Library Management

These standards relate to different practices and procedures that are involved in the management of a library and information Centre.

IS 796:1966 Glossary of cataloguing terms (First Revision) Mar 2003

IS 1358:1967 Practice for layout of library catalogue code Mar 2003 (First Revision)

IS 2550:1963 Glossary of classification terms Mar 2003

IS 7150:1974 Specification for library catalogue and Mar 2003 Abstract card

IS 12940:1990 Documentation - Library statistics - Guide Mar 2003

IS 13536:1992 Documentation- Directions of libraries,

Aug 1998		for bibliographic description of different kinds of documents
ISO 2146:1988	Archives, information and documentation Centers and other databases	
IS 15283:2003	Layout of an entry in a union catalogue of Periodical publication	IS 14873:2000 Information and documentation - Format for ISO
IS 15339:2003	Public Library - Guidelines	2709:1996 Information exchange
DOC.MSD 5(132)	Inter-library loan (to be finalized)	IS 15389: 2003 GEDI - Generic Electronic Document Interchange
		ISO 17933:2000
		IS 15390:2003 Information and documentation - Information
		ISO 23950: 1998 Application service definition and protocol retrieval specification (Z39.50) -
		In addition to these, there are quite a few standards relating to microfilming of different types of publications, their handling and storage. A guide has also been published in the form of a standard for the purpose of drafting and presentation of Indian standards, 1988 (Third Revision).
		These standards are available in a documented form and can be acquired by any organization from the Bureau of Indian Standards, Bahadurshah Zafar Marg, New Delhi-110002.

11.3.4 Database Development and Exchange of Information in Electronic Form

These are the standards and protocols used in data communications; and development of today's interoperable and global Internet

IS 7900:2001 Data elements and interchange formats - Information Interchange - Representation of dates and times (Second revision of IS 7900)

IS 11370:1985 Guide for data elements and record format Mar 2003 for computer based bibliographical data bases

Activity 11.2

Please read the section 11.3 and try to remember the titles of standards that can be used by you for your work and acquire at least two relevant titles and use them in your work. Also answer the following questions.

You have been asked to write a research paper for a peer reviewed periodical in the field of adult education. What are the standards you would like to consult when you prepare the final manuscript.

You have a full size English dictionary in your office. Try to find out what sort of standard 'symbols' or 'guidelines' are available in it that can be used for editing/proof reading purposes.

11.4 Standards for Information Literacy Programs

In the context of an adult learning centre, information literacy is a practical and strategic concept guiding the efforts in information seeking and using skills. To be information literate a person must be able to recognize when information is needed and have the ability to locate and use information effectively. Right to Information Act (2005) has enhanced the importance of this concept.

Information literacy is defined as the set of skills needed to find retrieve, analyze and use of information. According to American Library Association, information literate people are those who have learned how to learn. They know how to learn because they know how knowledge is organized, how to find information and how to use information in such a way that others can learn from them. They are people prepared for lifelong learning, because they can always find the information needed for any task or decision at hand. Though the definitions of information literacy vary, they include the following as determinants.

- ❖ effective information seeking
- ❖ informed choice of information sources
- ❖ information evaluation and selection
- ❖ comfort in using a range of media to best advantage
- ❖ awareness of issues to do with bias and reliability of information
- ❖ effectiveness in transmitting information to others.

A number of standards have been developed in western countries primarily to assess information literacy skills of a person. Two well known standards have been developed by Association of College and Research Libraries (ARCL) in USA and Society of College, National and University Libraries (SCONUIL) in U.K. SCONUIL has developed a model for information literacy called 'Seven Pillars Model of Information Literacy'. In this model, information literacy has been identified under seven headline skills which have been further sub-divided into several sub-skills. See Box 11.1 for these headline skills and their subdivisions.

Box 11.1 Headline Skills and their Subdivisions

i) Recognition of the Need

The ability to recognize a need for information

ii) Filling the Information Gap

The ability to distinguish ways in which the information 'gap' may be addressed knowledge of appropriate kinds of resources, both print and non-print, selection of resources with 'best fit' for task at hand

The ability to understand the issues affecting accessibility of sources

iii) Strategies to Locate Information

The ability to construct strategies for locating information

to articulate information need to match against resources

to develop a systematic method appropriate for the need

to understand the principles of construction and generation of databases.

iv) Accessing Information

The ability to locate and access information
to develop appropriate searching techniques (e.g. use of Boolean)
to use communication and information technologies, including terms for international academic networks
to use appropriate indexing and abstracting services, citation indexes and databases
to use current awareness methods to keep up to date

v) Compare and Evaluate Information

The ability to compare and evaluate information obtained from different sources
awareness of bias and authority issues
awareness of the peer review process of scholarly publishing
appropriate extraction of information matching the information need

vi) Communicate Information

The ability to organize, apply and communicate information to others in ways appropriate to the situation
to cite bibliographic references in project reports and theses
to construct a personal bibliographic system
to apply information to the problem at hand
to communicate effectively using appropriate medium
to understand issues of copyright and plagiarism

vii) Create New Knowledge

The ability to synthesize and build upon existing information, contributing to the creation of new knowledge.

At the base of this model are the two fundamental building blocks of basic library skills and basic IT skills. The former is a part of user education programs of academic libraries where as the latter is a part of IT related training programs for the use of electronic resources. The personnel working in at adult learning centers are required to master these skills for their day to day work.

The information skills model given on the right presents diagrammatically the relationships between the competent information user at the base level and the much more advanced user. The seven pillars shown above represent transformation of an information user from a beginner to an expert.

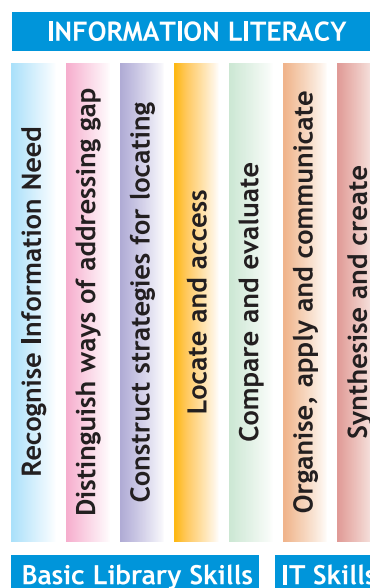


Figure 11.1: Information Skills Model

Activity 11.3

Please read the Section 11.4 thoroughly and try to answer the following questions. Also read the basic provisions of Right to Information Act (2005).

What do you understand by the strategic concept of 'information literacy'? How it is different from the term 'literacy'?

What are the basic library skills that are required to be an information literate person?

What sort of information literacy skills would you like to teach to neo-literates at your centre/set-up?

Have you ever exercised your right to information?

If yes, what kind of information you sought and how long did it take you to get it ?

11.5 Information Technology and 'Open Standards'

It is true that standards have always played an important role in IT applications but they were often proprietary. Now there is a visible change. For the first time there are true standards to allow inter-operability and these standards are not controlled by a vendor.

This is not simply a question of protocols and interfaces that have become 'open standards' (i.e. not controlled by any IT firm), even entire pieces of software are becoming open standards popularly known as open source software. This

is a software development model where the underlying programming code is open to inspection, modification and redistribution. One of the prominent examples is Linux operating system developed by world wide virtual communities of volunteer programmers.

This gradual shift towards 'Open Source' is important as most players in IT industry believed in locking in customers and making it costly for them to switch from one brand of technology to another.

Box 11.2 Open Standard (excerpted from Wikipedia, the free encyclopedia)

Some definitions of the term "open standard" permit patent holders to impose "reasonable and non-discriminatory" royalty fees and other licensing terms on implementers and/or users of the standard. For example, the rules for standards published by the major internationally recognized standards bodies such as the ITU, ISO, and IEC permit requiring patent licensing fees for implementation. However, the definitions of the European Union and Danish government forbid open standards to require fees for use. Permitting such license fees is controversial, because these tend to forbid implementation as free/open source software and discriminate against those who do not hold those patents. Many definitions of the term "open standard" specifically forbid any such fees.

The term "open standard" is sometimes coupled with "open source" with the idea that a standard is not truly open if it does not have a complete free/open source implementation available.

Open standards which specify formats are sometimes referred to as open formats.

The following are some quotations that define 'open standards'.

- EU Commissioner Erkki Liikanen: "Open standards are important to help create interoperable and affordable solutions for everybody. They also promote competition by setting up a technical playing field that is level to all market players. This means lower costs for enterprises and, ultimately, the consumer." (World Standards Day, 14 October 2003) [3]
- Jorma Ollila, Chairman of Nokia's Board of Directors: "... Open standards and platforms create a foundation for success. They enable interoperability of technologies and encourage innovativeness and healthy competition, which in turn increases consumer choice and opens entirely new markets," (Nokia Foundation Award to Mårten Mickos, 2006)

In some ways although IT firm were often centers of mass production, when it came to standards they were still stuck in the old era of draftsmen with proprietary software bringing them huge profits.

In fact, the shift towards open standards or 'open source' products or practices in IT is based on the premise that value of a technology depends not just on its quality but also on number of users, positive feedback can help one firm to dominate the market. For example, if a large number of people are already connected to a data network using a particular transmission standard, the more people will see the point of hooking up to it. Thus network effects make it even more attractive to control a technology. These network effects also explain why the IT industry in the

1980's decided to move away from completely proprietary technology, the most important characteristic of the mainframe era. Microsoft Corporation, for instance, figured out how to strengthen feedback loops by encouraging other software firms to develop applications for its operating system. This kind of openness made windows a widely used 'standard' with a proprietary tag of a firm.

The Internet has played a dominant role in spreading open standards. It has provided a positive feedback loop in favor of open standard. The Internet has produced workable open standards such as TCP/IP, its communication protocol or HTML, the language in which web pages are written. The Internet has also made it much easier to develop standards.

Activity 11.4

Please read the section 11.5 and try to understand the newly emerging concepts like 'Open Standards' and 'Open Source Software'. Also read about telecommunication standards and 'Internet protocols' from a recent publication. Also answer the following questions:

What are the advantages of open source software?

Why are open standards now encouraged by the technology firms?

11.6 Conclusion

Standards are basically rules in the form of operating guidelines, procedures and

policies that are to be followed at your workplace. Unfortunately, organizations

continue to operate without standards or rules until much damage is done. Standards ensure quality products, procedures and services that are widely accepted by clients.

The purpose of this unit is to introduce the learner with the existing Indian Standards that are required for management of information resources (e.g. creation of bibliographic records or preparation of abstracts of monographs) and for the creation of knowledge artifacts (e.g. guide for

preparation of manuscript of an article in a learned periodical). The unit also tells about various international standards that are normally used for processing or exchange of digital information. However, one has to remember that nomenclature for standards to be followed differ according to organizational customs. It is anticipated that the unit would enable the learner to identify and procure relevant standards that can be used at his or her workplace.

11.7 Apply What You Have Learnt

Please prepare a checklist of various activities that take place at your ALS; and identify relevant standards for at least two important activities.

Use the standards identified for these activities at your centre; and assess how the standards have improved the quality of products, processes or services.



12 MANAGING ADULT LEARNING SETUP

S. GANGULY

Structure



- 12.1 Introduction
- 12.2 Adult Learning and Communication
 - 12.2.1 Means of Communication
 - 12.2.2 Effect of the Communication
- 12.3 Forms of Communication
 - 12.3.1 Intra-personal Communication
 - 12.3.2 Inter-personal Communication
 - 12.3.3 Group Communication
 - 12.3.4 Mass Communication
- 12.4 Methods of Communication
 - 12.4.1 Internal Communication
 - 12.4.2 External Communication
- 12.5 Effective Communication
 - 12.5.1 Communication Process
 - 12.5.2 Barriers to Communication
 - 12.5.3 The Communicator
 - 12.5.4 Factors Affecting Communication
 - 12.5.5 Skills of a Good Communicator
- 12.6 Oral and Non-verbal Communication
 - 12.6.1 Oral communication in Practice
 - 12.6.2 Guidelines to Create a Structured Oral Message
 - 12.6.3 Listening Skills
 - 12.6.4 Interviews
 - 12.6.5 The Telephone
 - 12.6.6 Non-verbal Communication
- 12.7 Apply What You have Learnt

Learning Objectives



After going through unit 12, it is expected that you will be able to

- ❖ Relate how effective communication is one of the major strategy in adult teaching-learning process and how different means of communication give effect to a communication process
- ❖ Distinguish between internal methods of communication and external methods of communication
- ❖ Appreciate the role of a communicator in making effective communication with the audience and the skills of a good communicator
- ❖ Discuss the importance of oral and non-verbal communication

12.1 Introduction

So far you have learnt about the processes of documentation, dissemination and networking. You have also sensitized yourself to the use of different specified standards pertaining to procedures/and system/practices (both national and international) at your workplace. This has set the stage for you to efficiently manage an adult learning set-up. In addition to learning about the above-mentioned processes while managing adult learning set-up, you require also the basic understanding of two significant aspects of your professional expertise. One deals with human communication and the other one concerns organizational behavior. Unit 12 and Unit 13 discuss in quite some detail about human communication while Unit 14 and 15 are on organizational behavior.

An integral part of living and working with people involves communicating at

all levels, so also does adult education set-up entails a whole series of communication skills. Communication is an everyday interaction that we have with people around us. As such, communication is not restricted to speech alone as body language plays an important role in it. In addition, we now have access to mass media such as radio, television, newspaper and videos which are useful tools of communication. Unit 12 is about the various aspects of human communication in the context of adult learning. Beginning with explaining the concept, forms and methods of communication, you will learn about the art of effective communication and oral and non-verbal communication. As a professional adult educator, you will appreciate the value of learning about communication process and the skills for effective communication. Let us start with the importance of communication in the context of adult learning.

12.2 Adult Learning and Communication

Considering the centrality of communication in an adult learning set-up we will first discuss the meaning of the term 'communication'. Communication may be defined as giving, receiving or exchanging information, opinions or ideas by writing, speech or visual means, so that the material communicated is understood by everyone concerned.

Let us try to understand the process of

communication in terms of who are the people involved and what they do. So we try to understand communication as **Who says what? With what purpose? To whom? In what situation? By what means? and with what effect?** See Box 12.1 Who, What, Why, Whom and When of Communication. Then we will talk about the means and effect of communication.

Box 12.1 Who, What, Whom and When of Communication

Who?

As a communicator you must know what you are talking about. The people you talk to must believe in you and trust you. They must accept you as a person so your attitude is important. You must have patience and be willing to listen.

What?

What are the content of your message? What your message communicates - skills, attitudes or information. At different times you may have different messages which are dictated by the needs of the community making sure they are not conflicting messages.

Why?

Be very clear about the outcomes that are expected after you have communicated the message to the people. In the case of development worker, most of the communication will have purposes like: teaching skills, presenting facts, organizing knowledge, stimulating imagination or changing attitudes.

Whom?

To whom are we giving the message to? A person's background in terms of experience, literacy level, interests, attitudes and values will determine how the person accepts the message. There are times when we may feel that giving some information (say about vaccinations) is important, but the attitudes of the people whom we are trying to communicate with as well as their willingness to listen to our message is an important factor in effective communication.

When?

Communication is a cycle process that starts from understanding the need to communicate, the actual intervention of communicating the message, decoding of the message on part of the receiver and then getting feedback from the receiver. Again we will try to improve or react to the feedback received.

12.2.1 Means of Communication

One of the most important factors is the means that are being used to communicate the message. For a long time the only way of communicating was the spoken word. Even today many communicators depend on this for giving messages. There are certain other tools which are used for communicating.

a) Audio as Tool: For many people information heard directly from the mouth of another person is important if that person is well respected and trusted or is professionally qualified. Others increase the effect of the spoken word through dramatic gestures. Still others will use language and nuances to increase effectively. The spoken word itself, though, has certain limitations. Many people hear the words but may have little understanding of the idea

behind them.

b) Visual-Something seen: With many subjects, visuals arouse the interest and provide a clear mental picture. It facilitates understanding and help in memorizing a fact or issue.

12.2.2 Effect of the Communication

Here we come to the last part of the steps in communication. After communicating what is important for us is to know how the audience has perceived that communication. This will be clear if we note the effect of the communication on the audience.

Short-term effect: Expressions, actions and words of the audience will tell us whether they are bored, clear, confused. Look for and encourage some sort of a response. This is a short-term effect.

Long-term effect: The success of the communication is finally judged by what people will do when they are free to act

as they choose. The long-term value of communications is to be found in people's actions.

12.3 Forms of Communication

There are four major forms of Communication.

12.3.1 Intra-personal Communication

Communication is an ongoing process and that intra-personal communication is one aspect of this. For example, if we see food that we are allergic to, we will say, 'I should not eat that as it gives me stomach ache'. So we have communicated to ourselves the aversion to talking in certain food. This way we keep communicating with ourselves about factors that influence us or affect us.

12.3.2 Inter-personal Communication

Inter-personal communication takes place between two people who share some kind of a relationship. Inter-personal communication allows us to better understand the external world-events, other people and out environment. Interpersonal communication may take place between two people or between small groups of people.

12.3.3 Group Communication

When you are working in a village, you may address a group of women who have come together to take up some task, or you may in course of your work, be interacting with a group of people, say the village education committee. All these become forms of group communication.

12.3.4 Mass Communication

With the advent of printing and information technology, a new form of communication was introduced. Mass communication involves the newspapers (and other print media), television, radio, Internet. All these are forms of mass communication and can be used very powerfully to mould opinions and get people to act in the desired manner. Mass communication is a very powerful tool for a developmental worker if used in the proper way. The limitation of mass communication is that it can be used for giving information, but is not very effective for getting feedback.

Activity 12.1

Test yourself?

How many of these forms of communication have you so far used ?

12.4 Methods of Communication

The main methods of oral and written communication, both internal and

external, are shown in the following diagrams.

12.4.1 Internal communication

Figure 12.1 depicts the interface between oral and written communication.

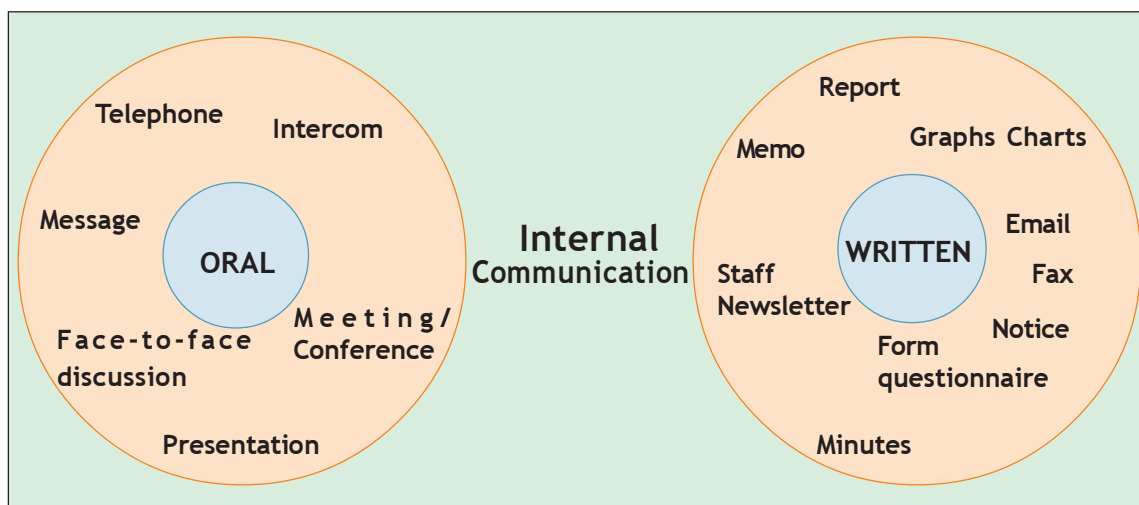


Figure 12.1 Interface between Oral and Written Communication

12.4.2 External communication

Figure 12.2 shows the different nature of oral and written communication.

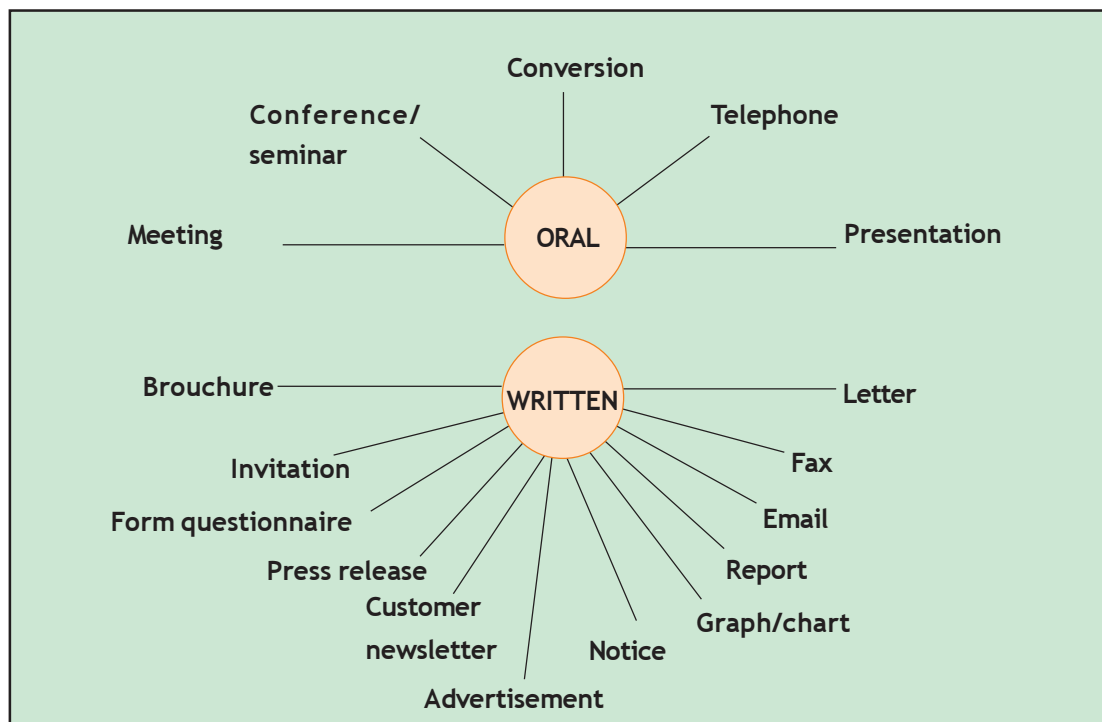


Figure 12.2 Difference between Oral and Written Communication

Activity 12.2

Which communication method would you use in each of the following situations?

- a) congratulating an employee on passing an important examination
- b) informing employees about an annual dinner and dance
- c) putting a nervous applicant at ease while waiting for an interview
- d) displaying the past 5 years' sales figures
- e) confirming a lunch appointment with an important client next week
- f) describing the location of a hotel where your company is hosting a seminar
- g) reminding staff of the security procedures at your company
- h) obtaining the reactions of staff to a new telephone system recently installed
- i) putting forward a proposal for a change in company policy
- j) sending an urgent message to an overseas client.

12.5 Effective Communication

Communication, whether oral or written, is all about understanding. Our aim should be to communicate a message successfully so that it is received as we intended, without any misunderstanding.

Effective communication can be achieved by having a thorough knowledge of the communication cycle, being aware of the barriers which exist and by considering carefully some of the vital factors mentioned in Box 12.2.

Box 12.2 Vital Factors in Effective Communication

What is the objective of the communication?: Is it intended to give information, to persuade, to request, to inform?

Who will receive the communication?: What is the relationship between the sender and the recipient? What is the recipient's background knowledge and experience?

Under what circumstances is the communication taking place?: Why is the communication happening? Is it urgent, serious, dangerous, emotive and informative?

How will the recipient react to the communication?: How will the message affect the recipient? Is it important? Will the recipient be offended or angered? Will it achieve the desired aims?

12.5.1 Communication Process

In human communication process, we shall be dealing mostly with interpersonal and group communication. In this process, we have a person formulating a message - acting as a source and another who receives the message - acting as the receiver.

In figure 12.3 you will find that there

are several steps between the time a message is conceived and the same is received and decoded.

As shown in Figure 12.3, the sender performs the following tasks.

i. Conceives the message: When you have something to say, consider the best means of putting our message across,

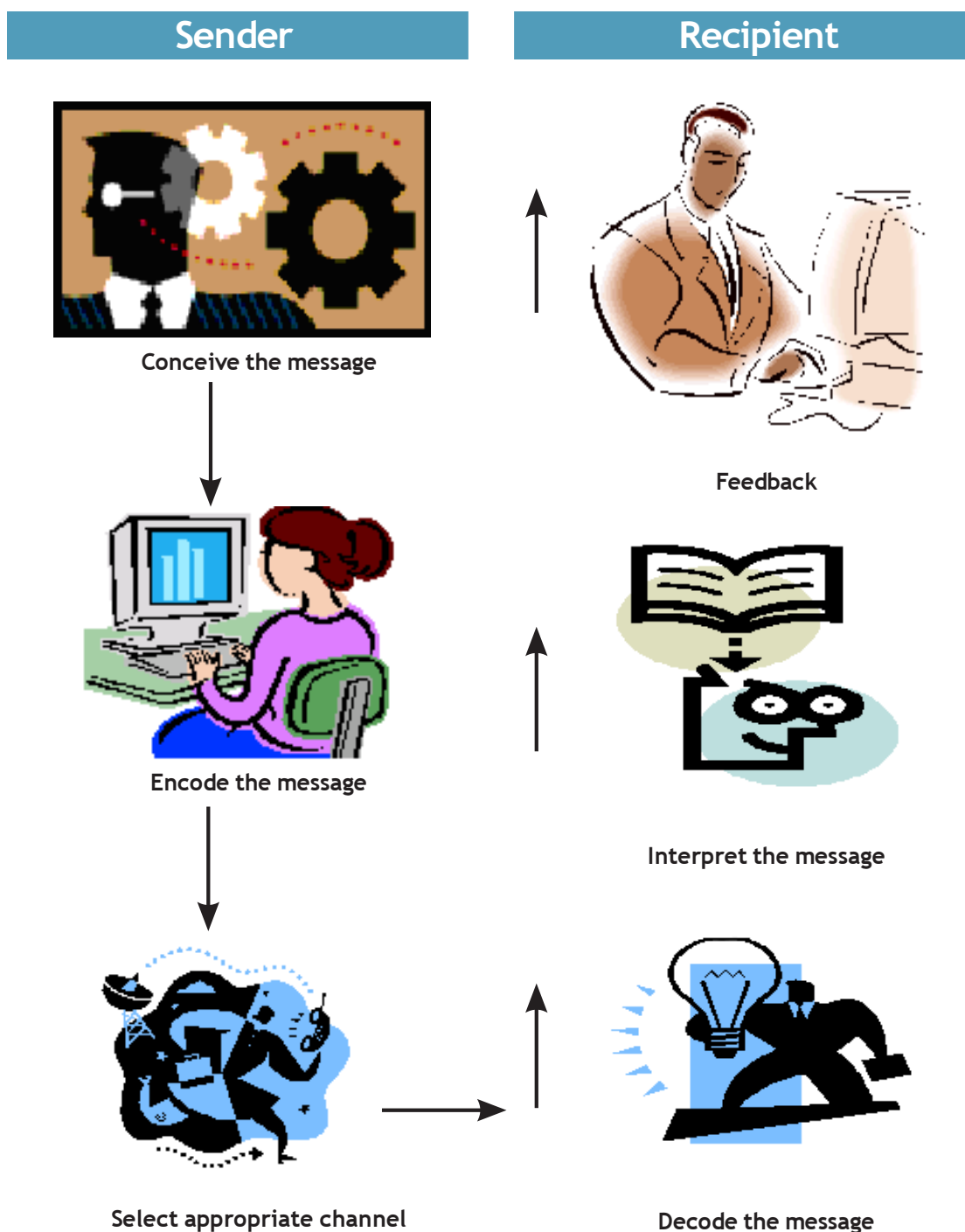


Figure 12.3 Communication Process: Tasks of Sender and Receiver

and bear in mind that timing is important. Consider your recipient carefully and aim your message to suit their specific needs.

ii. **Encodes the message:** This stage involves putting the information into an appropriate form suitable to both the sender, the recipient and the aim. Think before reaching for your phone or

putting fingers to keyboard. Decide first what specific outcomes you want from the communication. This will help you choose whether words will suffice, whether a printed record is necessary and whether graphics are appropriate. It will also help you choose appropriate language and tone.

iii. Selects the appropriate channel:

This stage is where the message is actually sent and the information is transferred. The technological revolution has brought about a wide range of telecommunication methods. You must consider all aspects: speed, cost, quick receipt, printed record, confidentiality, etc., and make an intelligent decision before sending your message. Time and money can be wasted if the wrong medium is chosen. As is clear in Figure 12.3, the recipient performs the following actions.

iv. Decodes the message: Because so many messages arrive in offices today, it is important to ensure that they are routed promptly and are given the attention they deserve. To achieve success at this stage it is also important to take the trouble to ensure that the recipient will understand the language and vocabulary used.

v. Interprets the message: Very often it is necessary to 'read between the lines'. It is always important to consider

carefully the tone and register used in your communication so that the correct message is received. For example, you do not want to risk antagonizing a good customer by using a harsh tone. Distortion of the message may occur if the sender has not carefully encoded the communication, in which case the recipient will interpret the message differently from how it was intended.

vi. Provides feedback: The communication process cannot be successful without appropriate feedback. In oral communication this is often immediate, in meetings the audience may nod or smile to show understanding and agreement. But with written messages courtesy and discipline are important to acknowledge receipt of messages until a full and appropriate response can be given.

TIP to Remember

How well you communicate is determined not by how well you say things but by how well they are received.

Activity 12.3

List the six stages in a two-way communication process, and briefly describe each stage. Next explain the importance of feedback in a communication cycle.

12.5.2 Barriers to Communication

Many problems encountered in our business and personal lives result from miscommunication. What the recipient understands by a message may not always be the message which the sender intended. Several communication barriers exist between sender and recipient, and they may be responsible for a message not being understood correctly, or a message becoming distorted (see Table 12.1). The table explains the nature of barriers to communication and suggest the ways to

maximise the import of a communication.

12.5.3 The Communicator

The process of effective communication is based on an effective communicator. And an effective communicator is one who has knowledge, attitude and skills. Lack of any of these can be a barrier for the communicator.

Knowledge

When you are knowledgeable about the subject you are communicating, you are

Table 12.1 Barriers to Communication

Barrier	What happens	How to maximise communication
a) Physical:	A learner may not be able to see or hear properly.	It is the responsibility of the communicator to be clear in speech and visual presentation.
b) Intellectual	A learner may not be willing and eager to receive the message. Their interest may not lie in what you have to say.	As a communicator, it is important that we design our communication in such a way that it takes into account the educational levels of the people, their experiences and backgrounds. We need to select appropriate examples and situations for explaining issues. The material that we use should also be carefully selected so that no ambiguous messages are given. Speak slowly if people are having difficulty in following you. Illustrate your points with lots of examples so that they are able to relate to what you say.
c) Emotional	A learner may not be able to understand what is being said or shown. This may happen because of lack of schooling, lack of functional literacy of different experiences and situations (for example you may be speaking about a city to a rural farmer)	People are interested and willing to change when they are given suggestions rather than lecture. So as a communicator, we need to learn the art of suggesting rather than telling. We need to offer our suggestions in a way that people recognize that the change will meet a need that they have recognized.

naturally more self-confident. Though knowledge about subject matter is one of the requisites of an effective communicator, it is important for us to remember that all knowledgeable persons are not good communicators.

Attitude

You are what your attitude is. This is manifested in our gestures, our tone of voice, our behaviour with people. Attitude will thus affect how we are perceived by the people as communicators. An attitude of openness and friendliness puts our audience at ease and invites them to be more

participative.

Skills

In the communication process we act or react as a whole. We cannot react only at the intellectual level or at the emotional level because we are not compartmentalized. Rather we react both intellectually and emotionally.

12.5.4 Factors Affecting Communication

There are always factors affecting communication and it is important that we recognize them. Let us discuss some of such factors.

Listening: In our day-to-day lives we listen to a lot of things. Listening is not the same as hearing. We may hear, but we may not listen. Hearing is a passive process that occurs subconsciously. Listening, on the other hand, is an active process that takes energy and commitment. Listening can be for enjoyment (as in listening to music), for information (as students or as trainees we pick up new ideas and information), for help (listening with the intention of being able to help others who have come to you with a problem).

Listening for Help is an important aspect of our work as developmental workers. We find that many times people have some problems and unless we listen to what they have to say, we cannot help them, cannot understand their needs. By listening carefully we can efficiently encode our messages. Listening helps a communicator to understand the priorities and needs of the people, the intellectual level at which they can be addressed, their attitudes and perceptions.

Voice: A pleasant voice is an asset. Those who do not have good voice can culture and improve their voice through practice. Voice needs to be controlled in volume and pitch. A loud and high-pitched voice can be grating on the nerves and put off the audience. Similarly, a low-pitched and soft voice can make the audience restless. Check the size of your audience. Although the voice should be loud and clear, if the group is small then a loud voice can be disadvantageous. If the audience is large make sure that there are arrangements for a mike, otherwise audiences in the back will start losing interest in the proceedings. Varying the tone of your voice can vary the connotation of a message. Emphasis on certain points can

be made by stressing on the words. Varying the tone also helps in making the message delivery more enjoyable. A monotonous or a singsong voice can be irritating to the audience.

Speed of Delivery: Along with the volume and pitch is the speed of delivery. Make sure that what you say is audible and clear to the audience; do not speak too fast or too slow. At the same time, when you are talking on technical subjects or giving information on subjects that are unfamiliar to the audience speak clearly and slowly. Illustrate your talk with examples to help the audience understand.

Quality of Content: The quality of content is influenced by the knowledge that you have of the subject. We cannot afford to be too abstract in our message delivery. We need to use as many examples as possible. We need to relate the content to the needs of the audience, their priorities and their situation.

Pronunciation: We have to be skilled enough to understand the accent of the local area and how to use that effectively to modulate our speech.

Body Language: Body languages comprises of movements and mannerisms. Both are sources of secondary communication. If we are confident of our communication, it will show in our body language - a body language that portrays confidence, openness, friendly nature, willingness to listen, ability to reach out and empathise with others, will all help in building rapport with the audience and make the communication easy.

Facial Expressions: Facial expressions are again a part of body language. Many times facial expressions can be used by a good communicator to communicate

a message. An encouraging sign makes the audience respond positively and open up to discussions. This is one part of it. The other part is how a communicator can use the facial expression on the audience to read the level of interest or to read how the message is being perceived and in short get a feedback from the audience. A skillful communicator will look for signs of disinterest, anger, eagerness, boredom and modify her message delivery style accordingly.

Maintaining Eye Contact: To maintain eye contact with the audience helps to monitor feedback. It is also essential for holding the interest and attention of the audience. At the same time, nervous shifty gaze and avoidance of eye contact can send out wrong signals to the audience.

12.5.5 Skills of a Good Communicator

As an adult educator you do need to acquire skills of a good communicator in order to perform your professional tasks. For becoming a good communicator you require the following skills.

- ❖ **Listening:** The first skill needed is the ability to listen carefully, picking out the positive aspects and the problems, difficulties and tensions of the audience.
- ❖ **Observation:** Going closely with listening is observation - the ability to pick up information and nuances about the communication needed in particular situations - the feeling from non-verbal clues.
- ❖ **Empathy:** The communicator needs to be able to identify with the issues/ situation as seen through the eyes of the participant.
- ❖ **Encouragement:** The communicator needs to build the confidence of the audience by appreciating their work, time and commitment. The communicator should also encourage the audience to ask questions, raise queries. This helps the communicator know that the message is being decoded correctly.
- ❖ **Summarizing:** The communicator needs to be able to summarize the information given in the sessions by picking the main issues discussed, the conclusions and analysis drawn. At the same time the communicator is to help the audience in paraphrasing messages in their own words.
- ❖ **Flexibility:** The communicator needs to be flexible in order to encourage creativity and a spirit of experimentation in the audience. A good communicator is also one who is willing to change the style of communication if she finds that the audience is not able to understand or participate in a certain style.
- ❖ **Timing:** The communicator needs a good sense of timing, when to encourage, when to challenge, when to ask a question, give suggestion, give support and keep track of the time.
- ❖ **Planning:** A communicator needs to plan the communication well ahead. The tools and methods to be used should be prepared well in time. In case you are using posters, ensure that there is enough place to fix the posters. Plan the communication from the beginning to the end—how do you introduce the topic, how do you ask questions, what are the expected outcomes and how do you evaluate these outcomes.

12.6 Oral and Non-verbal Communication

In your life you will probably spend much more of your time talking and listening to colleagues and clients than you will be writing and reading. In this process, both oral and non-verbal communications become quite significant.

12.6.1 Oral Communication in Practice

Oral communication can take a variety of forms. It can be over the telephone or face to face. It can be:

- ❖ A private discussion
- ❖ A conversation over lunch
- ❖ A gossip in the lift
- ❖ A telephone conversation
- ❖ A chance meeting in the corridor
- ❖ An informal gathering of staff
- ❖ Instructing subordinates
- ❖ Dealing with clients
- ❖ Formal meetings
- ❖ Interviews
- ❖ Training sessions
- ❖ Giving a presentation
- ❖ Conferences/seminars

12.6.2 Guidelines to Create a Structured Oral Message

Most people find talking easier than writing because phrases can be used in speech which would be unacceptable in written communication. However, if understanding is to be complete and effective, language needs to be chosen carefully. Effective oral communication

should be planned just as carefully as planning what you write.

Here are some guidelines to follow in order to create a well-structured oral message.

- ❖ Decide the desired outcome - what is the aim of your message?
- ❖ Select the important facts and figures to support your message.
- ❖ Identify key points of your message.
- ❖ Arrange the key points in a suitable order which will flow naturally from introduction to middle to conclusion.
- ❖ Choose an appropriate style in which to put your message over. Its acceptance will depend very much on
 - ❖ Facial expressions (sincerity, warmth, assertiveness, diplomacy, fairness)
 - ❖ Body stance and gestures (ease, physical presence, enthusiasm, conviction, determination, respect, eye contact)
 - ❖ Articulation (tone, enunciation, emphasis, volume, projection).
- ❖ When delivering the message, monitor the feedback constantly. Watch for unusual facial expressions, gestures, body movements. Be prepared to adjust your delivery or content in accordance with the listener's reactions.
- ❖ Know when you have said enough and try to end on a positive note.

Reflection

Do you use expressions like: um, er, you know, know what I mean, kind of, sort of? Take note of any speech patterns like this and try to correct them.

Activity 12.4

- ❖ Discuss the points to be remembered when communication with someone orally.
- ❖ What does the expression 'non-verbal communication' mean? Give examples of some non-verbal communication signals which you might associate with:
 - ❖ disagreement
 - ❖ sympathy
 - ❖ discomfort
 - ❖ boredom
 - ❖ attentive listening

12.6.3 Listening Skills

Listening is half of oral communication, and it is a skill that needs to be practiced and taken equally as seriously as speaking. All effective leaders and managers realize the importance of acquiring good listening skills.

Here are some guidelines to follow if you want to be an effective listener.

- ❖ **Prepare to listen:** Clear your mind so that your attention is assured. Concentrate on what is being said. Learn to listen, not just hear!
- ❖ **Avoid pre-judgment:** Do not pre-judge the speaker because of appearance of occupation, or jump to any conclusions before hearing what is said.
- ❖ **Be open-minded:** Hear what is being said, not what you would like to hear. Appreciate the speaker's point of view.
- ❖ **Establish eye contact:** This shows that you are listening, as does your posture.
- ❖ **Watch for signals:** Pick up aspects that the speaker considers important by watching posture and gestures, and listening to intonation in the speaker's words. This is like listening to the 'music' as well as the words.
- ❖ **Exact main points:** Pick out and repeat to yourself the key words or phrases. This will help to fix in your mind what is being said.
- ❖ **Give feedback:** Learns to give positive feedback non-verbally, by nodding and smiling. Be alert so that you can provide a suitable remark or ask a question to assist your understanding of the message.
- ❖ **Make note:** Record important conversations afterwards. Your notes will serve as a useful reminder. Develop your note-taking skills by jotting down the salient points of lectures or meetings.

Activity 12.5

Explain the importance of listening in oral communication and complete a short exercise. This exercise requires more than one person. You and one of your friends can carry it out. Describe to your partner something that you did recently - a movie you saw with an interesting story. Your talk should last about 4 to 5 minutes. Ask your partner to tell you the content of your talk. Then change over the roles and you do the listening. Let him narrate a story of the movie she/ he watched recently. Discover how good are your story telling and listening skills?

12.6.4 Interviews

One very important type of oral communication is an interview. You may be involved in various kinds of interviews:

- ❖ **Selection interview:** the kind when you consider someone for a job
- ❖ **Promotion interviews:** this takes place when you wish to be considered

for a job at a higher grade within your organization

- ❖ **Appraisal interviews:** this generally takes place annually to review progress and discuss the future
- ❖ **Counselling interviews:** this may be held to find out what has been troubling and employee or why someone has not been working to their usual high standard
- ❖ **Disciplinary interviews:** this is carried out when an employee has been accused of breaching usual procedures
- ❖ **Grievance interviews:** This is

carried out when an employee feels that he or she has been treated badly by another member of staff.

The Interviewer

If an interview is to be successful effective planning is essential. If the interviewer makes thorough preparations, the rewards will be well-structured, enjoyable, informative interviews for both the interviewer and the interviewee. Box 12.3 provides some useful inputs for such preparations before, during and after the interview.

Box 12.3 Preparations Before and During an Interview

Before the Interview

Aim: Think about the purpose of the interview and what you hope to achieve,

Information: Familiarize yourself with any relevant information - correspondence, job application forms, curriculum vitae, job specification, job description.

Setting: Choose a suitable time and place for the meeting. The room should be the right size and the furniture arranged appropriately, depending on the number of people involved. Consider if it is necessary to put a notice on the door to ensure you will not be interrupted, and to arrange for redirection of telephone calls.

Structure: Draw up a list of points for discussion so that you can discuss things in a logical order and make the most of the time available. Some companies have formal interview assessment forms which provide a permanent record of the interview and the applicant's suitability for the post.

During the Interview

- ❖ Your aim should be to put the interviewee at ease and help him or her to relax by being friendly and reassuring. Beware of closed questions which need no expansion; instead use open questions which give the interviewee an opportunity to talk freely and expand on important points.
- ❖ Give the interviewee your undivided attention. Smile, nod and use appropriate gestures to show that you have a genuine interest in what the interviewee is saying.
- ❖ Sum up the interview by stating any action you are going to take or anything expected of the interviewee after the meeting.

12.6.5 The Telephone

Most of us use the telephone several times a day to talk with friends or to make social arrangements. These calls are usually quite straightforward and require little planning. Using the telephone for business purposes is very different. In any organization the person on the telephone represents the centre

and gives an impression of the organization to the outside world. If you are to ensure good public relations, effective telephone techniques must be mastered. You should aim, to convey an impression of an efficient, friendly, progressive centre eager to give good service (for details see Box 12.4).

Box 12.4 Telephone Techniques**Before Calling**

Choose the right time to call: Consider the cost, urgency and convenience. When calling overseas you must also consider the time difference.

Check the number: A great deal of money is wasted each year on dialing wrong numbers.

Plan your call: Make a list of points and questions to be raised during your call.

Be prepared: Gather together any files, papers or other information which may be needed during the call. It is unprofessional to have to say 'Hold on while I look for that.'

Avoid interruptions Call at a time when you are unlikely to be distracted.

During the Call

Be courteous and establish a rapport: Make time for suitable pleasantries like 'How are you today Ashok?', 'Did you enjoy your holiday?'

Put a smile in your voice: Remember your caller cannot see you so use intonation to good effect and try to sound confident, decisive, helpful and interested.

Check your notes: Look back at your notes to ensure you have covered everything and quote figures and other data correctly.

Obtain feedback: Make sure the caller understands the message correctly, especially where deadlines and actions are involved.

Be courteous: Finish by thanking the caller for his or her time and trouble.

After the Call

Make notes: Let it be a habit to make notes of the call and place them in the appropriate file.

Take action: If you need to send a letter of confirmation or inform someone in your organization about any details of the call, do so immediately so that you do not forget important points.

TIP to REMEMBER

If you have to ask a caller to hold on, keep going back and assuring him/her that you will be as quick as possible.

12.6.6 Non-verbal Communication

In face-to-face encounters non-verbal communication is often just as important as verbal communication. As you are speaking information can be conveyed non-verbally as well as verbally. The non-verbal signals of listeners will provide instant feedback. Non-verbal communication is often referred to as body language.

Non-verbal communication techniques are often used unconsciously, for instance while speaking we may throw our arms around; while listening a sudden shock may result in a sharp intake of breath. Such non-verbal signals add impact to a meaning, and they combine to provide an instant impression in a way that written

communication or telephone calls cannot. Actions of this sort are an important part of the communication process.

Posture: The way people stand or sit can say an awful lot about how they feel. Someone who is nervous or anxious will fidget with their hands, tap their feet, drum the table with their fingers. Someone who is sitting well back in their chair, legs crossed at the ankle, may be seen as being relaxed and confident. Someone with a gloomy expression, head down and lifeless is probably feeling depressed or dejected. Someone sitting forward in their chair looking intently at the speaker, is showing a great deal of interest. The ability to interpret such signals and act as necessary is important in developing good human relations.

Facial expressions: Human faces are capable of communicating a wide range of expressions and emotion. A smile

conveys good humor, raised eyebrows denote questioning and disbelief, a frown denotes upset or worry.

Gestures: Many gestures are used as we speak, for example shaking a fist to denote anger, sweeping arms in excitement, using hands for emphasis. In listening, too, gestures are used, like nodding in agreement, shaking your head in disapproval, putting your hand to your chin in consideration, folding your arms in boredom. There are all valuable signs in communicating and you should learn to

read such gestures carefully.

Eye contact: The importance of eye contact is paramount. Looking someone directly in the eye suggests openness, honesty, confidence and comfort. Looking away gives an impression of being conniving or sly, or perhaps just unsure and uncomfortable. When speaking to one person try to look them in the eye. When speaking to a group avoid fixing your gaze on one or two people - let your eyes roam regularly to all corners of the room to let everyone feel involved.

Activity 12.6

Discuss with your colleagues the body language/facial expressions which may be used to express: anger, love jealousy, surprise, impatience, alertness, satisfaction, nervousness, assertiveness, friendship, hostility, sympathy, pain.

12.7 Apply What You Have Learnt

Finally, here are some tips for successful communication in Box 12.5 for you to practice as and when you have an opportunity to do so.

Box 12.5 Top Ten Tips for Successful Communication

- i. **Read:** Extend your knowledge of language by reading.
- ii. **Listen intelligently:** Remember that communication is a two-way process. Listening is just as important as speaking. Similarly, try reading your written message as if you were the recipient, and consider if it will be effective.
- iii. **Think and plan:** Think before you speak or write. Plan all your communications carefully, whether oral or written.
- iv. **Use appropriate language:** Use clear, simple language, and appreciate the same used by others.
- v. **Be open-minded:** Consider other people's viewpoints, be willing to adapt and change methods or procedures if necessary.
- vi. **Select appropriate media:** Consider carefully the method to be used for communicating your message. It should be appropriate to the desired objective.
- vii. **Time your communication appropriately:** Consider the best time for the communication and how long it should be.
- viii. **Use appropriate language:** Use words which are relevant to the topic and which will be understood by the recipient.
- ix. **Obtain feedback:** Obtain feedback to ensure that the communication was effective. If the message is not understood, rather than blame the recipient, ask yourself why the communication failed and how it could have been improved in order for it to be effective. Some questions you might ask are:
 - a) Did your expressions or language create confusion or misunderstanding?
 - b) Was your timing poor?
 - c) Was your message too long so that the main points were lost?
 - d) Were your tone and manner appropriate?
- x. **Aim high:** Set and maintain high standards in all your methods of communication, both in terms of language and presentation.



COMMUNICATION MEDIA, SYSTEMS AND STRATEGY

S GANGULY

Structure



- 13.1 Introduction
- 13.2 Communication Media
 - 13.2.1 Impact of Information Technology
 - 13.2.2 Visual Communication
 - 13.2.3 Examples of Visual Media
- 13.3 Communication Systems
 - 13.3.1 Communicating as a Part of Networks
 - 13.3.2 Various Forms of Communication
- 13.4 Communication Strategy
 - 13.4.1 Why, How and What of Communicating
 - 13.4.2 Selection of Tools and Methods
 - 13.4.3 Process of Communication
 - 13.4.4 Monitoring and Evaluation
 - 13.4.5 Restructuring the Message
- 13.5 Apply What You Have Learnt

Learning Objectives



It is expected that after going through Unit 13 on Communication Media, Systems and Strategy you would be able to

- ❖ Understand the prevailing nature of communication media
- ❖ Describe communication systems that enable transfer of information from one source to another
- ❖ Discuss the why, what and how of communication strategies for adult learning communities

13.1 Introduction

In Unit 12 you read about the means, forms and methods of communication. You also learnt that communication is an important strategy in the teaching-learning process of adult learners. Communication does not only entail using

good language and speaking clearly but also reaching to the receiver or making the receiver understand what you want to communicate. In order to go deeper in the realm of communication, Unit 13 is going to deal with communications

media, systems and strategy. What are all these? Media has an important role to play in effective communication and with the IT revolution it has now been of inevitable use and vitality. In adult learning from building up environment or motivating people for literacy to sensitizing people about population explosion, girl child education, health awareness, etc. visual media have played

a significant role. Communication system refers to dissemination of information. Communication is part of networking. Communication strategy in adult learning is significant to achieve effective transfer of information so that adult learners achieve the purpose of coming to the adult learning setup. Unit 13 is going to explain these issues at length.

13.2 Communication Media

Some of the earlier methods used for communication have been visual and audio in the form of gestures, sound and pictures/drawings. Technology today has transformed these sounds and gestures to produce speech, videos, films, posters and theatre. The evolution of different means has opened up a vast potential for communication. With a plethora of tools and methods to use, the communicator may find it difficult to choose an appropriate one. How is this choice to be made? Answer to this question depends on our understanding of the impact of information technology on our everyday life. Let us discuss this issue in the next section of the unit.

13.2.1 Impact of information technology

In recent years there has been an information technology (IT) revolution. While paper-based manual systems for processing information and communicating are still very much evident, computer-based technology is increasingly undertaking most office functions and procedures. The implications of IT on communication methods cannot be ignored. However, technology will always require people, and in communication it is the input of the human agency that will ensure effective communication (or otherwise). See Figure 13.1 to

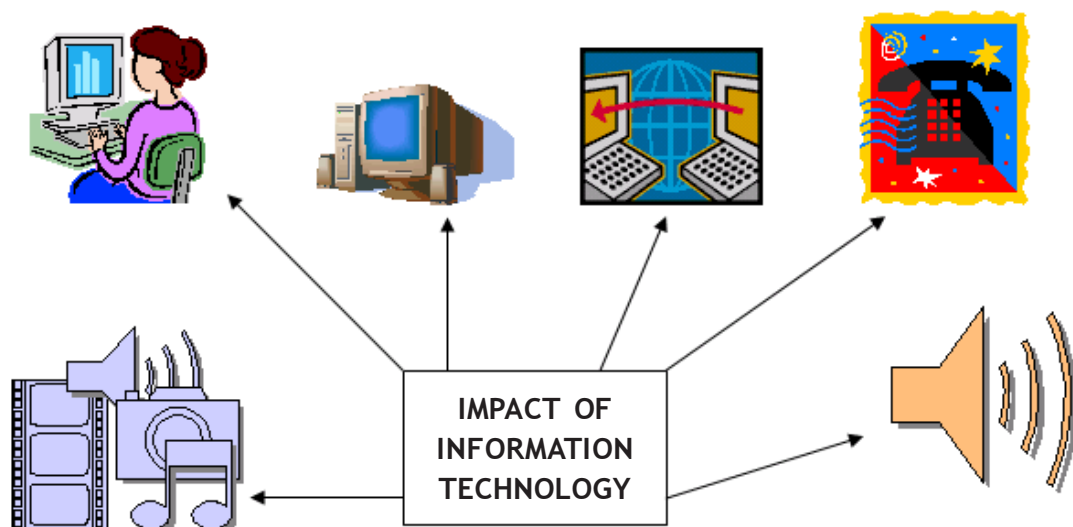


Figure 13.1 Impact of Information Technology

understand better the impact of information technology.

The fundamental skills of structure, tone and composition will always be of vital importance in ensuring effective communication. As originators of printed communications, people have control over these factors. However, while technological developments are making their role more interesting and challenging, the basic presentation techniques conventions should not be allowed to suffer. High standards must be set and maintained in order to ensure that your communications are not only appropriately worded and logically structured, but are also consistently and attractively presented.

13.2.2 Visual Communication

Visuals are used effectively to strengthen communication. Visuals help people remember what they hear. The trick is in relating what you hear to a picture. For a majority of people it is easier to remember pictures than to remember just words. People like to put into pictures what they are hearing. You can say that visuals play the following key roles in our life.

i) Relevance

Visuals can give accurate representation of ideas: visuals help to define facts and information easily and precisely. They can identify and describe in concrete terms giving meaning to words. However, it is important to remember that to give accurate information the visuals must also be accurate. So if it is necessary, take the help of skilled artists or use photographs.

ii) Visuals save time

Imagine that as a communicator you are talking about some common diseases. You want to give a description about

the digestive system in humans. Suppose you have to use only words to describe what happens to the food, if we consider only the time factor, the time taken will certainly be much more than if you had a visual of the digestive system.

iii) Visuals help memory

As we have already described earlier, visuals help people to remember and recall much better. Most adults, we find, will be able to recall things they had seen in their youth, than a talk heard just a day or two before.

vi) Visuals can stimulate the imagination

Pictures can often be used as a starting point for discussions and debates. Visuals are not only a quick way of acquiring facts but also of using them. Details presented in a picture can make people think and react.

v) Visuals provide a shared experience

We have seen that when the communicator and the audience share a common experience, communication becomes much easier. Visuals get two people thinking on similar lines about the same subject. It cuts down the possibility of there being ambiguity about the subject under discussion.

13.2.3 Examples of Visual Media

It is relevant to learn about various examples of visual media in more detail because you as a professional adult educator would have many occasions to use them at different forums.

The following seven categories of visual media have their own purposes, advantages and disadvantages and it is a good idea to be aware of strengths and weaknesses of each category. Hopefully the following discussion would

make explicit these aspects of each of the examples of visual media discussed in this unit.

- a) Pictures
- b) Puppets

- c) Dramas, street plays and roles plays
- d) Audio Cassettes
- e) Videos
- f) Broadcast media
- g) Teleconferencing

Activity 13.1

Give examples of two visual media that you have already used in your adult learning setup. Write in 300 words about its purpose and impact on the basis of your own experience.

a) Pictures

Pictures are the common factor in video, posters, charts, flip charts, slides and so on. For any of these tools to be understood we have to understand the basic principle of the tool that is the picture. The pictures that we select

must be appropriate to the purpose of the communication, the viewer (audience) and the subject (content) of the communication. See Box 13.1 for a discussion on the purpose of using pictures.

Box 13.1: Purpose

Pictures can be used for the purposes of stimulating imagination, teaching skills, presenting facts, organizing knowledge or changing attitudes. Any one or multiples of these are the purposes of the training of adult educators as well. While selecting a picture with a purpose in mind, there are three questions that a picture can help to answer.

What do I see?

What do I understand

What do I feel?

Depending on whether we are focusing on facts and information, discussion and debate or skills, the choice of the pictures will be made. It then becomes necessary that at each stage of our input we must decide the outcome of our communication. For example, if I am to talk about the importance of kitchen gardening, and want the women to learn the skills for developing a kitchen garden, I need to give them information on the vegetables to be grown in a kitchen garden, and make them see how nutritious food is necessary for healthy living. For each one of these statements there is a purpose and one can use a corresponding picture.

Besides understanding the purpose of using pictures to communicate ideas, it is necessary to keep in mind the profile of the audience or the viewer and you would obviously select the pictures appropriate to the theme of the message you want to communicate (see Box 13.2 on both who and what of

communicating through pictures). Some pictures can communicate more than what words can convey. In this sense, adult educator have a very good tool by way of pictures to communicate unusual messages. Hope that you will make use of this tool in your professional work.

Box 13.2: The Viewer and Subject of Communication through Pictures

A) Audience

- ❖ When communicating the idea, we must consider the background, education and experience of the audience. We need to know the media that they are familiar with. Knowing what our audience would understand and their emotional as well as intellectual levels will help us develop the right kind of pictures.
- ❖ The experience of a communicator may be much wider than that of the poor rural women and men. So try to discover to what extent they understand pictures. Conduct a few simple experiments, if need be.
- ❖ Understanding a picture is a skill that may have to be learned and many rural people may find it difficult to relate to black and white pictures and to three-dimensional objects to real life that they see everyday. When you look at a photograph, you have the help of experience behind you; thus you are able to decipher the perspectives in a photograph or a picture. You can understand the overlaps, highlights and shadows, but illiterate women may have a different perspective.
- ❖ In the experience of a poor rural woman, the converging railway lines may look like the end of a track and she may think that a train going along this track will certainly meet with an accident.

B) Theme

The theme or the content of the message will affect the choice of the picture material. If we are talking about fodder development in wasteland areas, we cannot show a picture with fodder being developed in an area which has sources of irrigation. In showing the usefulness of vaccination for BCG, it will be more helpful to show vaccination in progress rather than a victim of tuberculosis.

Using any means of communication has its advantages and disadvantages and it is important that we fully appreciate this dimension before deciding to use a

particular tool of communication (see Box 13.3 for a discussion of advantages and disadvantages of using pictures).

Box 13.3: Advantages and Disadvantages of Using Flat Pictures

- ❖ The advantages of using flat pictures are that they are easily available and easy to use. They are low-cost and can be stored and reused. Pictures can arouse interest and imagination. They provide a common experience for the audience to stimulate imagination and start a discussion.
- ❖ Disadvantages of using flat pictures are that all details may not be discernible to the viewer in a single picture and some ideas are too big for a single picture. For example, a single picture cannot convey the idea of necessity of good health.
- ❖ Pictures are static in that they show the action in a split second of time even if the activity extends over a period of time.

Slide sets/film strips are also examples of pictures only. Table 13.1 shows both pros and cons of slide sets or film strips.

Flip charts are yet another example of communication through pictures. Table 13.2 explains pros and cons of this means of communication.

Printed materials can also be treated as a kind of pictures and as such they present the pros and cons as given in Table 13.3.

b) Puppets

One of the best used forms of rural communication in India has been the

Table 13.1 Visual Communication- Pros and Cons of Using Slide Sets or Film Strips	
Pros	Cons
<p>Slide-sets are quite simple to produce because equipment for production and projection is low-cost and easily available. You can get very good color/visual quality. Filmstrips made of robust material are small and easy to transport.</p> <p>Slide-sets are excellent training medium for all subjects except those few for which showing movement is an absolute essential.</p>	<p>Production requires laboratory process</p> <p>Cannot be used in day light without a special rear-projection screen</p> <p>Lacks the appeal of video (which relates to TV in most minds)</p> <p>Turning slides into filmstrips requires laboratory process which is not always available in developing countries</p>
<p>Summary: Slide sets/film strips have proved an invaluable training aid in rural and agricultural development but they are tending to lose out to video, despite the higher cost of the latter.</p>	

Table 13.2 Visual Communication - Pros and Cons of Using Flip Charts	
Pros	Cons
<p>Cheap and simple to produce and use</p> <p>Good for training and extension support</p>	<p>Not as realistic as projected aids</p> <p>Care required for preparing drawings that are understandable to the audience</p> <p>Lack the attraction of audio-visual materials</p> <p>May be thought of as 'second-rate' by people with experience of electronic media</p>
<p>Summary: Flip charts are very useful to help extension workers/technicians in their work with rural people. Drawings notoriously difficult to understand for people with low visual literacy, so careful design and pre-testing needed.</p>	

Table 13.3 Visual Communication - Pros and Cons of Using Printed Materials	
Pros	Cons
<p>Relatively cheap, simple and easy to produce</p> <p>Can be taken home, consulted, and kept as a permanent reminder</p> <p>Particularly valuable for extension workers, technicians, and community leaders</p>	<p>Of limited use among illiterates but bear in mind "family literacy" as opposed to literacy of individual farmers</p>
<p>Summary: Well designed, carefully written for their intended audience printed materials can provide a vitally important and cheap source of reference for extension workers, and for literates among the rural population.</p>	

puppet. For ages this method of communication has held centre stage. Puppetry has evolved as an art form and in many regions of India it is a way of

livelihood for many artisans. Rajasthan is particularly famous for its puppets. See Box 13.4 on Advantages and Disadvantages of Using Puppets.

Box 13.4: Advantages and Disadvantages of Using Puppets

Advantages

Puppets make the audience responsive, as they get emotionally involved with them.

Audience can easily identify with the puppet-characters in the story and can get involved in their situations.

Puppets are not usually resented even when they depict sensitive subjects.

From a practical point of view, puppets are easier to operate, parts may be read, there are minimum rehearsals, unusual characters can be presented easily and there are few production problems, like stage setting, actor coordination, rehearsals, etc.

Puppets and suitable stories can be devised for all ages and for a wide variety of subjects. Puppets are also useful for exaggerated presentations. All types of scenes can be depicted using puppets. Animal puppets are particularly useful.

Disadvantages

Since they are small, puppets can sometimes cause problems in usage. In Rajasthan though, the art has been perfected so well that large life-size puppets are also made and managed properly.

Audience seating has to be managed carefully so that everyone can have a clear view and sound carries to the last person in the audience.

c) Dramas, Role-Plays and Street Plays

Drama is used in many countries, not just for entertainment but as a media for giving social messages. In India the street play or the nukkad natak is a common form of drama that is used for transmitting social messages.

The use of drama is an educative experience for both the performers as well as the audience. Many social activists have also used the formal theatre regularly. Drama takes many forms. Besides the role-play and street play, one also comes across the pantomime plays that do not use language but only facial expressions and body gestures. Dance is also one form of drama. The classical dances in Odissi, Kathakali, Rabindra natya, etc. have been used effectively in communication social messages.

To help us simplify the different forms

of drama we can club it in the following categories.

1. The formal drama with written scripts, rehearsals, actors, etc.
2. Impromptu dramatization where the situation and story are suggested and people make up actions and use their own words.
3. Informal theatre with a flexible script, interactions with the audiences and absence of costumes or props.

In different regions of India, adult educators have made efforts to use folk media to impart social messages. See Box 13.5 on the next page on pros and cons of using folk media.

d) Audio cassettes

Almost everywhere in the world, audio cassettes and nowadays compressed discs (CDs) have been used by adult

Table 13.4 Tools of Communication - Pros and Cons of Using Audio Cassettes	
Pros	Cons
Easy and cheap to produce programs Cassette players quite widely available Easy to localize information Good for feedback because farmers can record their questions/ reactions Can be used well in conjunction with rural radio	Audio only and so suffers some of the weaknesses of radio, though repeated listening may help to overcome it
Summary: Very good low-cost medium. Potential has not been sufficiently recognized. Especially useful when used in conjunction with extension and rural radio.	

Box 13.5 Folk Media (Theatre, Puppetry, Story telling etc.)	
Pros	Cons
Does not require capital investment Does not depend on technology that is liable to break down Intrinsically adapted to local cultural scene. May be highly credible and persuasive where folk media has a strong tradition	Requires skilled crafting of development messages into the fabric or the folk media May lack prestige vis-à-vis more modern media in some societies May be difficult to organize, and calls for close working relationship between development workers and folk media artists
Summary: Creative use of folk media in cultures where it is popular and well entrenched can be a subtle and effective way of introducing development ideas and messages. Care required to ensure that the mix of entertainment and development is appropriate, so it is possible to further the latter without damaging the former.	

educators as very effective tools of communication. Let us look in Table 13.4 at pros and cons of this useful means of communicating ideas.

e) Videos

Videos have been largely used as a mass media and dissemination tool. Many projects today have a separate unit for production of videos that can help in development work. The role of video in development communication has been to educate, helping to spread messages prepared by professional producers. It is necessary to have a better understanding of the advantages and disadvantages of the videography (see Box 13.6).

f) Broadcast Media - Television and Radio

In India, a high percentage of people have access to radio and slightly less percentage have access to television. Both these media are powerful channels of communication and have been used under many circumstances to spread developmental messages (see Box 13.7 on pros and cons of Television and Radio Broadcasting).

Both TV and radio programs can be used by a trainer in developmental work. In using the television, the communicator needs to know the content and timing of the program and how the program can be used. As we have said earlier, the TV can be used with other media,

Box 13.6: Pros and Cons of the Videography

Pros	Cons
<p>Highly persuasive</p> <p>Constantly improving technology is making it ever cheaper and more reliable</p> <p>Electronic image/sound recording gives immediate playback and production flexibility</p> <p>Allows more than one language to be recorded as commentary on a single tape. Can be shown in daylight using battery-powered equipment</p>	<p>Multiplicity of standards/formats</p> <p>Requires talent, skill, and experience to produce good programmes for development</p> <p>Requires rather sophisticated repair and maintenance facilities</p> <p>Dependent on the use to which it is to be put, may call for quite large capital investment</p> <p>Colour/visual quality mediocre in some standards</p>
<p>Summary: Video has become the media in the minds of many. Indeed it is highly effective but calls for a careful strategy and skilled producers.</p>	

Box 13.7: Pros and Cons of Television and Radio Broadcasting

Television	
Pros	Cons
<p>Prestigious and persuasive</p>	<p>Trends to be monopolized by powerful interests because of its prestige</p> <p>Not available in all rural areas</p> <p>Expensive production/reception</p> <p>Program production for agriculture can be difficult</p> <p>Difficult to localize information for agriculture unless there are local TV stations still are in developing countries</p>
<p>Summary: Although potentially powerful, television is not easy for agricultural and rural development in most developing countries.</p>	
Radio	
Pros	Cons
<p>Wide coverage and availability in rural areas</p> <p>Cheap production/reception</p> <p>Relatively simple programme production</p> <p>Local radio stations facilitate localized information</p>	<p>Weak as a medium for training and education since it is only audio</p>
<p>Summary: Radio has been an excellent medium for motivation and for drawing attention to new ideas and techniques but weak for providing detailed knowledge and training.</p>	

like posters or charts and other printed material. A communicator can also use a lecture or discussion mode coupled with TV viewing.

g) Teleconferencing

Teleconferencing is an interactive mode of communication, where high quality multi-media links and satellites are used

to establish links between the trainer and trainee.

Advantages

Teleconferencing is good option to provide uniform training to all the field functionaries.

Through Teleconferencing a good strategy can make all the project partners feel linked and involved directly. This is an important medium to provide a quick and uniform training to all field functionaries and it minimizes distortion and time lag in messages.

Disadvantages

It is a highly technical medium and

requires basic electronic media facilities like telephone, fax, etc., that are not easily available in rural areas. A trainer-trainee live interaction is absent because of the distances separating both.

When there are too many calls to attend, trainers may miss out some queries or may not be able to answer them satisfactorily.

The above description of various examples of visual media leads us to the quest for learning in detail about communication systems and strategy most suitable for adult educators and adult learners. Our next two sections will be devoted to these two themes.

Activity 13.2

- i. Explain how audience and theme are of concern while deciding the visual presentation through pictures.
- ii. Discuss any three pros and cons of using slide sets/film stripes.
- iii. Do you hold that printed materials are always effective to use? Give at least three reasons for your belief.
- iv. In adult education programs, dramas and nukkad nataks are popular means of conveying a message. Have you ever tried it out? What are your observations?
- v. How do you think the resources of folk media can be used in rural India for disseminating effective adult learning?
- vi. Do you agree with the view that radio is more reachable than any other form of media? Give reasons for your agreement.

13.3 Communication Systems

A system for communicating is generally called communication system that is often a facility comprising the structures set up for disseminating information. In other words, you could also describe a communication system as a facility to provide information transfer between persons and equipment.

13.3.1 Communicating as a Part of Networks

The system may be a collection of individual communication networks,

transmission systems and relay stations and terminal equipment for interconnecting and interoperating so as to make an integrated whole. The individual components of such a system possess a common purpose and employ common procedures and operate as a unified organizational structure. Often, nowadays a communication system is recognized as a telephone, radio, television, data transmission, or other system in which information-bearing signals originate at one place and are

reproduced at a distant point. We are here going to talk about communication systems in a more general and broad sense of the term.

13.3.2 Various Forms of Communication

Organization charts make it easier to see how communication can take place vertically (between levels), horizontally (between sections) and diagonally (between different levels and sections). It is important to keep all communication routes as open and as effective as possible. Let us briefly discuss the various communication systems in the following paragraphs.

Downward communication

This is by far the most frequent form of communication within an organization, where higher levels communicate with staff below them. In this category are communications like memos, notices, in-house newsletters, company handbook, procedure manuals.

Upward communication

The upward communication flow is equally important as the downward flow. Communications are directed upwards to managers, supervisors or directors by using memos, reports, meetings, informal discussions.

Horizontal communication

This occurs between people of the same status - sales staff, departmental heads, directors, supervisors. As well as memos and reports, horizontal communication could include committee meetings,

seminars and conferences.

Diagonal communication

Tasks frequently arise which involve more than one department and there is often no obvious line of authority. Diagonal communication often relies largely on cooperation, goodwill and respect between the parties concerned.

Unofficial communication

When the correct lines of communication are not used, the grapevine often results. This term describes an unofficial communication system, which is constantly changing. The grapevine is a vehicle for distortions of the truth; it is basically a kind of rumor and gossip. An active grapevine can cause much damage to an organization by spreading incomplete, false or exaggerated information. It results in low morale, cynicism, fear and an unsettled workforce. Although the grapevine may never be completely eradicated, one should take steps to reduce its influence by considering carefully ways in which information is communicated, particularly in times of uncertainty within the organization. The confidence of an organization's employees is vitally important, and adequate and accurate information should always be made available to the people concerned at the earliest possible opportunity, through the correct channels.

Let us now discuss the aspect of evolving a communication strategy suitable for development work carried out by adult educators.

Activity 13.3

- i. Describe the communication systems used in your family.
- ii. What is downward communication?
- iii. Give reasons for the belief that unofficial communications cause much damage to an organization.

13.4 Communication Strategy

In the overall communication strategy, we need to address five major questions which will help us define the communication strategy for our community.

- ❖ What is the message that we are communicating?
- ❖ Who is the target audience for our message?
- ❖ What behaviors should we promote among the target audience?
- ❖ What message concepts will promote perceived benefits of the new behavior?
- ❖ What channels of communication will reach our target audiences as often and as affordably as possible?

13.4.1 Why, How and What of Communicating

Why do we need to communicate?

This need was felt because of a variety of factors. As a useful exercise, perhaps you could write some of the reasons why working with the poor rural women is necessary or is a need based activity that arises from your assessment of the situation and your understanding of the goals of adult learning.

How do we assess and prioritize the needs?

First, we have to assess what the women want to know and then prioritize what should be communicated first. For example, women may want to know how to cultivate fodder in wastelands, they may want to know how to improve the breed of their cattle and they may want to know how a motion picture is made.

Now each of the needs is a topic for communication.

Deciding on what to communicate

After having understood the needs of the women, we now need to pick and choose what we have to communicate. There is a plethora of information available on any given subject, but as communicators we assess the level of understanding of the women and then decide what they will understand. Communication should always be targeted at the middle level so that it is not too simple, neither too technical. Suppose we are communicating about growing vegetables and kitchen gardening to a group of women belonging to the farming community. Then we presume that they will know the basics of growing vegetables. What we need to focus on in this case may be composting, varieties that can be grown, improving production or introducing new methods in horticulture.

13.4.2 Selection of Tools and Methods

We have spoken at length about this in the previous section. Based on the input to be given we can select the appropriate tools and methods for delivering the communication package. There are already many tools available to us through the Project. Many of the materials developed like posters, flip charts, handbooks, video-films can help us. In addition we can use programs on radio and television where such facilities are available.

13.4.3 Process of Communication

Once the needs are understood, the content of communication decided and the tools and methods selected, we can work on the process of communication. This simply means who will communicate what - using what tools - to whom - when - and - with what effect. When we answer these questions for each of our communications we are in addition focusing on two things.

- i) What is the time that we are setting for our communication - when?
- ii) What is the outcome that we expect from our communication - with what effect?

Deciding on the time to communicate is important. Suppose we organize an exposure visit for a community involved in farming and it is harvesting time, then people may join us but not participate fully.

13.4.4 Monitoring and Evaluation

What is the outcome that we expect from the communication? What is the objective of our communication in creating awareness? Is it only giving information? Is it providing skills? Does it aim to change behaviors? Depending on these objectives, we need to look for the impact of the communication

and also measure the impact.

For example, if we have taken the women out for an exposure visit to the Public Health Center (PHC), what is the outcome that we are looking for?

- ❖ That women will be aware of the facilities in a PHC?
- ❖ That women will know the route to the PHC and in case of need, be able to guide other people in the village to the PHC?
- ❖ That women will be aware of the vaccination schedules for children?
- ❖ That they would effectively ask for compulsory vaccinations of all children in their village (skill building for advocacy)?

13.4.5 Restructuring the Message

In a long-term communication process, monitoring and evaluation helps us in restructuring messages that we give. This means that when we find gaps that exist in our communication - in terms of content, tools, delivery, place and time - we must make adjustments before going in for another round of communication. Communication is a process of constant learning and innovation. We must understand that evaluating the communication cannot be done in isolation.

Activity 13.4

Discuss in 250 words the how, why and what of communication at your adult learning setup in terms of prioritizing the needs of adult community.

13.5 Apply What You Have Learnt

As an adult educator you need to form a strategy for selecting an appropriate set of

communication systems. For this purpose see Box 13.8 on forming a strategy.

Box 13.8 Forming a Strategy

- Evaluate
- Implement
- Pre-test (optional)
- Formulate communication material
- Plan coordinated timing of activities
- Identify communication channels and messages
- Identify barriers and opportunities
- Determine information needs
- Prioritized needs of audience
- Understand the audience
- Purpose of communication

You may like to carry out a short project to evolve a strategy of establishing effective tools of communication for

development work in the community of your choice. Keep in mind the above steps to form a strategy. Good luck!



14 ORGANIZATIONAL BEHAVIOR

T ASHRAF

Structure



- 14.1 Introduction
- 14.2 Understanding the Term 'Organizational Behavior'
- 14.3 Personality and Organization
 - 14.3.1 Measuring Personality
 - 14.3.2 Work Motivation
 - 14.3.3 Motivation: Improving Factors
- 14.4 Job Satisfaction and Reward Management
 - 14.4.1 Measuring Job Satisfaction, its Determinants and Consequences
 - 14.4.2 Effective Reward Management
- 14.5 Leadership
 - 14.5.1 Scope of Leadership
 - 14.5.2 Suggested Qualities of Leadership
 - 14.5.3 Leadership and Management
- 14.6 Authority, Power and Politics
 - 14.6.1 Distinction between Authority and Power
 - 14.6.2 Authority
 - 14.6.3 Power
 - 14.6.4 Politics
- 14.7 Apply What You Have Learnt

Learning Objectives



After going through the Unit 14 on Organizational Behavior, it is expected that you would be able to

- ❖ Understand organizational behavior in its broadest multi-disciplinary context
- ❖ Familiarise yourself with the theoretical and practical aspects of organizational behavior (OB).
- ❖ Appreciate the role of leadership in organizing community-based activities related to adult education.
- ❖ Discuss the relevance of the interplay between authority, power and politics.

14.1 Introduction

Running or managing an adult learning set-up involves some basic principles of organization that an adult educator has to keep in mind and follow while performing various functions. For

example, all such centers have staff members who need to be trained, motivated, satisfied and well-informed. Since running a learning resource set-up is a managerial task, it is essential

that those running such centers understand some basic principles of organizational behavior and routine management principles so that they can manage their respective centre in a better way. Unit 14 makes an effort to explain the basic and important principles of organizational behavior so as to equip the centre-in-charges with the theoretical knowledge of essential concepts and ideas which will help them in managing their work in a more organized and systematic fashion. In Unit 14 you will learn the practical aspects of organizational behavior.

As an adult educator, you carry out your work in an organizational set-up and therefore need to comprehend some of the concepts and problems associated

with the management of behavior in organizations. You have already learnt in detail about documentation, process documentation, dissemination of information, networking and human communication and at the very end of your course material you will be introduced to frameworks for understanding behavior in organizations and for diagnosing and dealing with day to day organizational problems. The basic purpose is to look at the relationship between individuals and the organizations in which they work. There is an emphasis on decision-making and leadership with regard to the formation and successful functioning of 'groups' in adult learning centres.

14.2 Understanding the Term 'Organizational Behavior'

Organizational behavior (OB) is a term related to the study of individual and group dynamics in an organizational setting, as well as the nature of the organizations themselves. Whenever people interact in organizations, many factors come into play. The subject of Organizational Studies attempts to understand and model these factors. This subject is becoming more important as people with diverse backgrounds and cultural values have to work together effectively and efficiently. OB seeks to emphasize the understanding of behavior in

organizations so as to develop competencies in foreseeing how people are likely to behave. This knowledge may then help in controlling those behaviors that are not befitting the objectives of the organizations. Factors like objectivity, replicability and sustainability are important while selecting the methods for this purpose. Questionnaire, interview, simulation and survey are generally used to elicit responses of individuals located in different types of organizations. To a large extent their personalities affect the nature of their responses.

14.3 Personality and Organization

As understanding personality is crucial for knowing behavior of an individual in an organization, we will discuss in this section of the unit the interface between personality and organization.

Personality refers to some qualities, characteristics skills and competencies of individuals along with certain other traits like grooming and attitude. Personality means very specific patterns

of behavior of an individual in a defined situation. But there are certain uniform characteristics which always emerge in a person on the basis of which certain inferences can be drawn. Examples could be dominant or submissive nature, aggressiveness or politeness. Personality consists of organization of feelings, thoughts, cognitions and visible behavior. However certain patterns of behavior are not visible and are known only after proper testing. Let us therefore discuss how to measure personality.

14.3.1 Measuring Personality

Since personality of an individual plays a crucial role in shaping an organization, several methods have been evolved to measure personality. By and large three methods of assessment are being used. These are Personality Inventories, Projective Tests and Assessment Centre. Let us now briefly discuss each method.

Personality Inventories

As a widely used method of measuring personality, it consists of several statements related with a specific dimension of personality and individuals are asked to indicate their degree of agreement or disagreement. This is usually done by asking both negatively and positively worded statements on selected common themes.

Projective Tests

This test is conducted to investigate more difficult and sophisticated aspects of an individual's personality. The assumption is that some of the dormant fantasies, feelings, hopes and aspirations can be measured to assess a personality. The test consists of ten pictures; one half being the same as other half. These are ambiguous, unstructured inkblots and the individuals are asked to indicate what they see in these pictures. Another projective method is the thematic appreciation. Morgan and Murray (1935) developed this test. It consists of twenty pictures, each of which represents a social setting. These pictures provide a relatively defined situations and the individual is asked to write a story of what might be happening in that social situation.

Assessment Centre

This test consists of a variety of methods used to evaluate the personality of employees in organizations. It may consist of situational tests, management problems, in-basket exercises, business plan presentations, letter and memo writing etc. It is followed by developing behavior categories to assess the performance on the key result areas. The dimensions assessed are personality characteristics such as sensitivity to others, career ambition, integrity, independence etc.

Reflection 14.1

You can make out that personality of an employee plays a key role in his or her work related behavior. It is a major criterion in selection, promotion and other developmental aspects of employees. Organizations can use combination of techniques to assess personality attributes most suitable to work requirements. Work out and then write a short note on how you would like to assess personality attributes of those working in an adult education center.

ACTIVITY 14.1

Please group the employees working in your adult learning set-up according to above mentioned attributes and prepare a detailed profile of each. In future, you may use the profile for assigning them various kinds of jobs. Describe briefly how you grouped the employees and how you plan to use the profile of each employee for assigning different jobs.

Most organizational behavior strategies are eventually meant to optimally utilize the capabilities of individuals and groups towards achievement of organizational objectives. The performance of an individual is a function of his or her ability and willingness or desire to use one's ability to achieve certain goals. However, it is important that staff is adequately motivated to fulfill these objectives. Once a manager is able to understand the traits of personality of an individual worker, she or he can use different methods of motivation. Let us discuss the point of work motivation.

14.3.2 Work Motivation

Motivation is a process that starts with physiological or psychological urge or need. It activates a behavior or a drive that is aimed at a goal or incentive. All individuals have a number of basic needs which can be thought as outlets that channel and regulate the flow of potential energy from the reservoir. Most individuals have, within a given socio-cultural system, a similar set of motives or energy outlets; but differ greatly in the relative strength or readiness of various motives and actualization of motives depends on specific situations in which a person finds himself or herself.

14.3.3 Motivation: Improving Factors

There are several ways in which motivation level of employees can be augmented and improved. Some of

these factors are described as under:

Job Enrichment: Jobs must be redesigned to provide opportunities for achievement, recognition, responsibility and growth. It comprises of variety in work contents, greater use of skills and opportunity for growth by providing employee with a complete unit of work and increased authority.

Flexi Time: The concept of flexi time is designed to provide employees some control on their work schedule. Entire work time is divided into "core time" and "flexi time". During core time, all employees are compulsorily present while during flexi time they are free to choose their own timings.

Empowerment: Empowerment essentially means providing authority to employees in their area of operation for resolving their work related problems without seeking approval from above.

Quality Circles: Quality circles are semi autonomous work groups which meet regularly to discuss and solve problems related to their specific area which aims at improving working conditions and self development.

Employees Stock Ownership Plan: It has become a major tool in retaining and motivating employees in business organizations. It is an organization's established benefit plan in which employees are offered company stock as part of their benefit package. It makes employees work harder as it directly affects the performance of the company and the value of their stock also raises.

ACTIVITY 14.2

Conduct a survey of those working at your adult learning set-up to find out their level of motivation. Undertake corrective measures in the light of the discussion in section 14.3. Write a short account of the process that makes clear the corrective measures you followed to increase the level of motivation of those employed in your adult learning set-up.

Work motivation and job satisfaction are closely linked with the overall performance of workers and subsequent rewards. A well motivated employee is likely to feel more satisfied and vice

versa. Hence it is essential to understand the relationship between these concepts so as to apply them in the day to day management of adult learning centers for better performance.

14.4 Job Satisfaction and Reward Management

Job satisfaction can be defined as an individual's overall attitude towards his or her job. It is a positive state resulting from the appraisal of one's job or job experience. It is regarded both as a general attitude as well as satisfaction with specific dimensions of the job such as pay, the work itself, promotion opportunities, supervision, co-workers etc. The degree of satisfaction may vary with how well outcomes fulfill or exceed expectations.

There are various theories of job satisfaction. The human relations movement suggested that real satisfaction with job could only be provided by allowing individuals enough responsibility and freedom to enable them to grow mentally while physical/ economic school emphasized the role of the physical arrangement of work, physical working conditions and pay. In recent years, the attitude of job satisfaction has come to be linked with broader approach to improve the job design, work organization and quality of life.

14.4.1 Measuring Job Satisfaction, its Determinants and Consequences

Measuring job satisfaction has been a challenging process to managers.

Several techniques have been developed over the years which are used extensively and are of great importance for practitioners. For instance individuals are made to recall some of the important and critical incidents which have caused satisfaction or dissatisfaction to them and conclusions are drawn from such exercises. In another method a small group of employees are brought together and encouraged to openly share their feeling regarding their job. In group environment people feel free to talk about various things.

Researchers have identified several factors leading to job satisfaction which are broadly divided into two categories, namely, Organizational Factors and Individual Determinants.

Organizational Factors

- 1 **Reward System:** The organizational reward system has been found to be related to job satisfaction. This pertains to how fairly pay benefits and promotions are distributed.
- 2 **Work:** The nature of work contributes heavily. The factors such as flexibility, freedom and discretion available in the

- performance of one's job bring a lot of job satisfaction.
- 3 Supervisory Behavior: Satisfaction tends to be higher when employees believe that their supervisor is competent and considerate.
 - 4 Working Conditions: Overall working conditions in an organization have a direct bearing on the level of satisfaction. Comfort, salary, challenge and resource availability are main components of working conditions.

Individual Factors

Various individual and socio-economic variables are linked to job satisfaction. Researchers have found that younger people are more satisfied. Similarly men are more influenced than women if they are provided more autonomy in their work (Malini 2001).

There is a direct link between job satisfaction and performance of an employee.

A satisfied worker makes extra efforts leading to better performance in his or her work.

There is higher outcome in an

organization if employees are more satisfied. Similarly it leads to decrease in absenteeism if employees are more satisfied in their jobs. It also leads to creativity among employees and better mental health.

14.4.2 Effective Reward Management

Employee recognition is a communication tool that reinforces and rewards the most important outcomes people create for your organization. When you recognize people effectively, you reinforce, with your chosen means of recognition, the actions and behaviors you most want to see people repeat. An effective employee recognition system is simple, immediate, and powerful tool.

When you consider employee recognition processes, you need to develop recognition that is equally powerful for both the organization and the employee. You must address five important issues if you want the recognition you offer to be viewed as motivating and rewarding by your employees and important for the success of your organization.

Box 14.1 Some Tips for Effective Recognition

You need to establish criteria for what performance or contribution constitutes behavior or actions worthy of reward.

*All employees must be eligible for recognition.

*The recognition must supply the employer and employee with specific information about what behaviors or actions are being rewarded and recognized.

*Anyone who then performs at the level or standard stated in the criteria receives the reward.

*The recognition should occur as close to the performance of the actions as possible, so the recognition reinforces behavior the employer wants to encourage.

*You don't want to design a process in which managers "select" people to receive recognition. This type of process will be viewed forever as "favoritism" or talked about as "it's your turn to get recognized this month." This is why processes that single out an individual, such as "Employee of the Month," are rarely effective.

Rewards and recognition that help both the employer and the employee get what they need from work are a win-win situation. Avoid employee recognition system that

- ❖ singles out a few employees who are mysteriously selected for the recognition,
- ❖ saps the morale of the many who failed to understand the criteria enough to compete and win, and
- ❖ seeks votes or other personalized, subjective criteria to determine winners.

Reflection 14.2

As you can make out job satisfaction and reward management are some of the most important component in the functioning of an organization. It has very close relationship with the overall survival and sustainability of organizations. There are several methods to assess the level of job satisfaction and thus arrive at some important conclusions. Work out how you would like to evolve a method to assess the level of job satisfaction at an adult education center.

Activity 14.3

Find out the job satisfaction level of the employees at your adult learning center. Try job rotation method to instill sense of satisfaction among those lacking it. Write a short account of the process about how you found out the job satisfaction level of the employees and how you tried to instill a sense of job satisfaction among them.

Leadership and job satisfaction are interlinked as a well meaning leadership helps the process of job satisfaction among employees by providing a motivating atmosphere. Ordinary workers look up to their leaders and feel

immensely satisfied if leaders take them into confidence and share their wisdom and experience. Hence it is essential that people who are managing adult learning centers understand the concept of leadership and its various dimensions.

14.5 Leadership

Most of us are familiar with the word 'leader'. The word leadership can refer to the process of leading, the concept of leading and those entities that perform one or more acts of leading. In our day to day life, leadership can be viewed as either actual or potential.

- ❖ Actual leader gives guidance or direction, as in the phrase "the emperor has provided satisfactory leadership".
- ❖ Potential leader has the capacity or ability to lead, as in the phrase "she could have exercised effective leadership"; or as implies in the concept "born to lead".

Leadership can have a formal aspect (as

in most political or business leadership) or an informal one (as in most friendships). The abstract term "leadership" usually implies that the entities doing the leading possess some "leadership skills" or competencies; while the term "leading" suggests action of leading.

Several types of entities may provide or exhibit leadership, actual or potential. Leadership emerges when an entity as "leader" contrives to receive deference from other entities who become "followers". The process of getting deference can become competitive in that the emerging "leader" draws "followers" from the factions of the

prior or alternative “leaders”.

In a democratic country, the people retain sovereignty (popular sovereignty) but delegate day-to-day administration and leadership to elected representatives.

Competence or perceived competence provides a possible basis for selecting leadership elites from a broader pool of potential talent. Political lobbying may prove necessary in electoral systems, but immediately demonstrated skill and character may secure leadership in smaller groups such as a service agency.

Many organizations and groups aim to identify, foster and promote what they see as leadership potential or ability - especially among younger members of society. The issues of succession planning or of legitimating a leader become important when leadership (particularly individual leadership) might or must change due to term-expiry, accident or senescence (growing old).

14.5.1 Scope of Leadership

One can govern oneself, or one can govern the whole earth. In between, we may find leaders who operate primarily within families, bands, tribes, states, nations or empires.

In addition to these, we also find, for example, religious leaders (potentially with their own internal hierarchies), work-place leaders (executives, officers, senior/upper managers, middle managers, staff-managers, line-managers, team-leaders, supervisors) and leaders of voluntary associations.

Believing that charisma and personality alone can work miracles, most leaders operate within a structure of supporters and groups of executives who carry out and monitor the expressed or filtered-

down will of the leader. This undercutting the importance of leadership may serve as a reminder of the existence of the follower. A more or less formal bureaucracy can promote an ordinary personality as an entirely effective leader. Bureaucratic organizations can also raise incompetent people to levels of leadership. These leaders may build coalitions and alliances. Political parties abound with such leaders. Still others depend on rapport with the masses: they labor on the actual work place or stand in the front-line of battle, leading by example.

14.5.2 Suggested Qualities of Leadership

Studies of leadership have suggested qualities that people often associate with leadership. They include the following qualities (see Fiedler 1967).

- ❖ Guiding others through providing a role model and through willingness to serve others first
- ❖ Talent and technical/specific skill at some task at hand
- ❖ Initiative and entrepreneurial drive
- ❖ Charismatic inspiration - attractiveness to others and the ability to leverage this esteem to motivate others
- ❖ Preoccupation with a role - a dedication that consumes much of leaders' life - service to a cause
- ❖ A clear sense of purpose (or mission) - clear goals - focus - commitment
- ❖ Results-orientation - directing every action towards a mission - prioritizing activities to spend time where results most accrue
- ❖ Optimism - very few pessimists become leaders
- ❖ Rejection of determinism - belief in one's ability to “make a difference”

- ❖ Ability to encourage and nurture those that report to them - delegate in such a way as people will grow
- ❖ Role models - leaders may adopt a *persona* that encapsulates their mission and lead by example
- ❖ Self-knowledge (in non-bureaucratic structures)
- ❖ Self-awareness - the ability to “lead” (as it were) one’s own self prior to leading other selves similarly
- ❖ With regards to people and to projects, the ability to choose winners - recognizing that, unlike with skills, one cannot (in general) teach attitude. Note that “picking winners” (“choosing winners”) carries implications of gamblers’ luck as well as of the capacity to take risks, but “true” leaders, like gamblers but unlike “false” leaders, base their decisions on realistic insight (and usually on many other factors partially derived from “real” wisdom).
- ❖ Understanding *what* others say, rather than listening to *how* they say things - this could partly sum this quality up as “walking in someone else’s shoes” (to use a common cliché).

Situational leadership theory (Stodgill 1957) proceeds from the assumption that different situations call for different traits. According to this group of theories, no single optimal psychographic profile of a leader exists. It has been said that leadership behavior becomes a function not only of the characteristics of the leader, but of the characteristics of followers as well. Other situational leadership models introduce a variety of variables. These variables include

- ❖ the nature of the task (structured or routine)

- ❖ organizational policies, climate, and culture
- ❖ the preferences of the leader’s superiors
- ❖ the expectations of peers
- ❖ the reciprocal responses of followers

Thus leadership is essentially about managing an organization on the basis of certain individual and situational qualities of managers. But there are several variants of leadership depending upon situation and kind of organization. An understanding of these various categories will help the managers of Adult Learning Centers to run these centers in an efficient way.

14.5.3 Leadership and Management

Some commentators (for example, Cagner 1992) link leadership closely with the idea of management; some would even regard the two as synonymous. If one accepts this premise, one can view leadership as

- 1 centralized or decentralized
- 2 broad or focused
- 3 decision-oriented or morale centered
- 4 intrinsic or derived from some authority

Any of the bipolar labels traditionally ascribed to management style could also apply to leadership style. Hersey and Blanchard (1982) use this approach. They claim that management merely consists of leadership applied to business situations; or in other words: management forms a sub-set of the broader process of leadership. According to Hersey and Blanchard (1982: 3), “Leadership occurs any time one attempts to influence the behavior of an individual or group, regardless of the reason. Management is a kind of leadership in which the achievement of organizational goals is paramount”.

However, a clear distinction between management and leadership may nevertheless prove useful. This would allow for a reciprocal relationship between leadership and management, implying that an effective manager should possess leadership skills, and an effective leader should demonstrate management skills.

Zaleznik (1977) for example, delineated differences between leadership and management. He saw leaders as inspiring visionaries, concerned about substance; while he views managers as planners who have concerns with process. Bennis (1989) further explicated a dichotomy between managers and leaders. He drew the following twelve distinctions between the two groups.

- ❖ Managers administer, leaders innovate
- ❖ Managers ask how and when, leaders ask what and why
- ❖ Managers focus on systems, leaders focus on people
- ❖ Managers do things right, leaders do the right things
- ❖ Managers maintain, leaders develop
- ❖ Managers rely on control, leaders inspire trust
- ❖ Managers have a short-term perspective, leaders have a longer-term perspective
- ❖ Managers accept the status-quo, leaders challenge the status-quo
- ❖ Managers have an eye on the bottom line, leaders have an eye on the horizon
- ❖ Managers imitate, leaders originate
- ❖ Managers emulate the classic good soldier, leaders are their own person
- ❖ Managers copy, leaders show originality

Box 14.2 gives the various leadership styles. Working with a community, an adult educator is always looking for actual or potential leaders and learning about different styles of leadership can help in identifying actual or potential leaders in a community.

Box 14.2 Leadership Styles

Leadership styles may be of relevance to in a variety of situations where there is a requirement to manage others. Effective performance will depend on many factors including the organizational culture in which the individual is operating.

Directive Leader: Directive Leaders are characterized by having firm views about how and when things should be done. As such they leave little leeway for subordinates to display independence, believing that they should adhere to the methods and schedules as originally laid down. Having a high goal-orientation and being particularly concerned with results the Directive Leader will tend to closely monitor the behavior and performance of others. This may lead them to be perceived as a little cool and detached.

Delegative Leader: As the name suggests, the style of Delegative Leaders is characterized by delegating work to subordinates. Since their style is not strongly democratic, the process of delegation may not involve consultation. As a result, subordinates will generally be assigned work rather than have active input into how projects should be conducted.

Participative Leader: Participative leaders are primarily concerned with getting the best out of a team as a whole. Hence, they encourage contributions from all members of a team and believe that by pooling ideas and coming to a consensus view the best solutions to problems will naturally arise.

Consultative Leader: The Consultative Leadership Style combines elements of both democratic and directive leadership orientations. They value group discussion and tend to encourage contributions from the separate members of the team. However, although

group discussions will be largely democratic in nature, Consultative Leaders typically make the final decision as to which of the varying proposals should be accepted.

Negotiative Leader: Negotiative Leaders motivate subordinates by encouraging them, through incentives etc., to work towards common objectives. Hence, through a process of negotiation attempts will be made to arrive at some mutually equitable arrangement with the other members of the team so as to motivate them to work in a particular way. Negotiative Leaders tend to rely on their skills of persuasion to achieve their stated goals.

Reflection

Leadership plays a crucial role in any organization. Change of leadership and reflection and rethinking in the top management team are powerful triggers for organizational change. Leaders create a context in which the status quo is challenged. Try to recollect an experience of crisis in matters of leadership during your career as an adult educator.

ACTIVITY 14.4

Please prepare an assessment-list of the leadership qualities of the staff working in your adult learning set-up and on that basis prepare them for undertaking higher responsibilities.

14.6 Authority, Power and Politics

Organizations or voluntary associations, though rational entities, often do not follow strictly their own well defined system leaving scope for power play and politics. It is therefore necessary to understand the dynamics of power, politics and authority so that organizations can be managed in a proper way. The concepts of authority, power and politics are inter-dependent in the sense that politics - whether of the specifically governmental kind (political parties, pressure groups, etc.), the economic kind (bureaucracies, the organization of the workplace into social hierarchies based upon status, etc.) or the interpersonal (relations between males and females, children and adults, etc) - involves the exercising of authority and power.

14.6. 1 Distinction between Authority and Power

Though authority and power are terms quite often used interchangeably but they are quite different. Specific differences can be described as below:

- 1 Authority is legally enforced and is derived from level of position in an organization. Power however is individual and independent and originates from charisma and social positioning.
- 2 Authority is formal based upon superior and subordinate relationship. Power is informal and is based upon individual understanding.
- 3 Since authority is related with position in an organization, it has limited scope and is confined to organizational structure whereas power is linked with an individual and

transcends boundaries.

- 4 Authority is just and applied equally whereas power may be used indiscriminately.

14.6.2 Authority

Authority is corner stone of an organization. It can be defined as the ability of an individual to seek compliance to the regulated instructions of the superior. It refers to the formal rights inherently available to a manager to give orders and see their compliance. According to Max Weber (1924), there are 3 types of authorities: Traditional, Rational and Charismatic authority. Traditional authority rests on an established belief in the sanctity of immortal traditions whereas legal authority rests on sheer legality of individual's position. Charismatic authority has its genesis in an individual's personal charisma and qualities.

Characteristics of Authority

- 1 Authority resides in the position and is individual independent
- 2 Nature of authority i.e. traditional, legal, charismatic, determines the nature of structure.
- 3 Authority is in proportion to levels in an organization.
- 4 Ideally there is a positive correlation between the authority and degree of competence.

14.6.3 Power

In social terms, power, almost by definition, involves the rule by the few over the majority and we have to understand the political processes (both Structural and Interpersonal) whereby power is legitimated (the process whereby power ceases to be nakedly coercive and becomes power that is based upon authority. By power is meant

the ability of individuals or groups to make their own concerns or interests count, even where others resist. Power sometimes involves the direct use of force, but is almost always also accompanied by the development of ideas (ideology) which justify the actions of the powerful. Politics, in this sense, is a concept that can be defined as a process involving the "exercise of control, constraint and coercion in society".

Power which is derived from social positioning lacks legitimacy. It is dependent upon individual strength and competencies. Depending upon situation, there are several kinds of power, some of which are described below.

- ❖ Reward power
- ❖ Coercive power
- ❖ Legitimate power
- ❖ Personal power
- ❖ Expert power
- ❖ Referent power

Reward power: The extent to which a manager can use extrinsic and intrinsic rewards to control other people is described as reward power. Success in accessing and utilizing rewards depends on **manager's skills**.

Coercive power: The extents to which a manager can deny desired rewards or administer punishments to control other people. Availability varies from one organization and manager to another.

Legitimate power: The extent to which a manager can use subordinates' internalized values or beliefs that the "boss" has a "right of command" to control their behavior. If legitimacy is lost, authority will not be accepted by subordinates.

Personal power: Personal power is derived from individual sources.

Expert power: Is ability to control another person's behavior through the possession of knowledge, experience, or judgment that the other person needs but does not have?

Referent power: The ability to control another's behavior because the person

wants to identify with the power source. It can be enhanced by linking to morality and ethics and long-term vision.

See Box 14.3 to understand the ways managers acquire the power that they need for leading those working under them.

Box 14.3 How do Managers acquire the Power needed for Leadership?

Managers can increase the visibility of their job performance by

- ❖ Expanding contacts with senior people.
- ❖ Making oral presentations of written work.
- ❖ Participating in problem-solving task forces.
- ❖ Sending out notices of accomplishment.

Additional tactics for acquiring and using power and influence include

- ❖ Using coalitions and networks to alter the flow of information and the analytical context.
- ❖ Controlling, or at least influencing, decision premises.
- ❖ Making one's own goals and needs clear.
- ❖ Bargaining effectively regarding one's preferred goals and needs.

14.6.4 Politics

What are organizational politics? Since organizations do not follow their systems and procedures fairly, there is lot of politics. It essentially implies lot of maneuverability in the allocation of responsibilities, rewards and resources. Politics is the use of power to develop socially acceptable ends and means that balance individual and collective interests.

Political behavior may take many forms. It may comprise passing a chain of commands, withholding information, spreading rumors, leaking confidential information, lobbying, using pressure tactics etc. The following are the characteristics and reasons of political behavior.

- ❖ It is outside one's job requirements.

- ❖ It is an attempt to influence the decision making process.
- ❖ It may involve give and take strategy.
- ❖ It is usually devoid of morality and ethics.

A number of factors can lead to political behavior. If there is lack of clarity in organizational policies and presence of over ambitious individuals in workforce is higher, there are more chances of politics. Limited promotional avenues, discriminatory behavior of management can aggravate political behavior.

There are several ways in which politics takes place in organizations. Feyol (1949) describes the following political strategies.

- ❖ **Impression Management:** An attempt is made to create an impression that everything is good because of us and

anything wrong has nothing to do with us.

- ❖ Extra Role Relationship: Flattery, creating goodwill and being overtly friendly are some of the tactics through which political behavior is promoted.
- ❖ Coalition: Like minded people come together and promote a particular cause which is essentially political in nature.
- ❖ Bargaining: Bargaining, negotiations etc. are used to get extra benefits which are normally not available.

Activity 14.5

Please make a questionnaire with some of the above-mentioned strategies and ask the staff at your adult learning set-up to fill it. This exercise will help you to assess your leadership qualities.

14.7 Apply What You Have Learnt

Please undertake the following activities to apply and demonstrate the main points covered in Unit 14.

- ❖ What are some important characteristics of the personality of each staff at your adult learning set-up? Prepare a comparative chart showing these characteristics.
- ❖ Narrate the factors which have been found to affect the motivation level of the employees of your adult learning set-up.
- ❖ Undertake a job satisfaction survey of the staff members at any of the adult learning set-up and match them with their personality traits.



DYNAMICS OF WORKING TOGETHER

T ASHRAF

Structure



- 15.1 Introduction
- 15.2 Working Together
 - 15.15.1 Difference between Team and Group and Importance of Team Work
 - 15.15.2 Types of Teams
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 - 15.5.5 Functions of Organizational Structure
- 15.6 Apply What You Have Learnt

Learning Objectives



It is expected that after going through Unit 15, you would be able to

- ❖ Examine the processes of working together at your workplace.
- ❖ Discuss structures and functions of organizations.
- ❖ Manage organizational changes

15.1 Introduction

Organizations generally consist of groups of people who work together for the achievement of common goals. These groups are further divided in

teams for better coordination and efficient working of the system. The teams are formed keeping in mind several considerations depending upon

nature of organization and number of people working therein. Hence it is essential to understand concept of team, its advantages and functioning.

Similarly the concepts of Change Management and Negotiations are integral part of any organization. To cope up with several emergent situations, changes are introduced which have to be managed effectively and many a times managers have to enter into negotiations with their subordinate staff for various reasons. Despite all organizations essentially being formal in nature, there are still several informal

dimensions, which are embedded into their day to day functioning. These informal elements are derived from nature of leadership, management style and power play.

Since adult learning setups are also run on the principles of formal organizations, these elements are essential part of their functioning too. Hence it is paramount for the managers of these setups to have the knowledge of concepts like team building, change management and negotiations. Unit 15 deals with all these aspects of organizational behavior.

15.2 Working Together

A team comprises any group of people linked in a common purpose. A group in itself does not necessarily constitute a team.

Thus teams of sports players can form (and re-form) to practice their craft. Transport logistics executives can select teams of horses, dogs or oxen for the purpose of conveying goods.

Theorists in business in the late 20th century popularized the concept of constructing teams. Differing opinions exist on the efficacy of this new management fad. Some see “team” as a four-letter word: overused and under-useful. Others see it as a panacea that finally realizes the human relations movement’s desire to integrate what that movement perceives as best for workers and as best for managers. Teams are especially appropriate for conducting tasks that are high in complexity and have many interdependent subtasks.

Large teams can sub-divide into sub-teams according to need.

Tuckman and Jensen (1977) identified a life-cycle of stages through which most teams go through, namely, forming, storming, norming, performing and adjourning. Team begins with the forming stage, where members are beginning to associate themselves with the team. At this stage, the team lacks a clear vision, purpose and structure whereas in storming stage members realize the complexity of the problem and might get polarized into sub - groups. In norming stage team members form relationship with other colleagues and the team clearly defines the specific expectations from individual members in terms of both actions and behaviors. The fourth stage of team development is the performance stage where team is set to perform the task after which team gets into adjourning stage where it does not possess the kind of energy demonstrated in the performance stage.

All organizations have formal and informal teams. Companies that employ a sizeable number of employees find it difficult to mobilize individuals towards

organization's goals without teams. Sometimes the organizational teams are formally created, while at times teams are independently formed by like-minded individuals. Managers encourage organizational team building.

15.2.1 Difference between Team and Group and Importance of Teamwork

First let us understand that teams are not the same as groups. In groups, there are no formally elected leaders. Also, groups are informal gatherings of people. Groups don't necessarily have a goal or an objective; groups could be formed for social reasons.

On the other hand, organizational teams are formed with intent, a goal or a mission. Team members are carefully selected so that each member of the team is competent to work towards the common objective. Team leaders are also elected so that there is no ambiguity on authority. Roles are duly assigned to members of the team, so each member works in coordination with fellow team players.

Teams in organizations need to accomplish corporate goals. While the organization is hub of all activities, the teams are the spokes which generate output. Teamwork can yield much more than a sum of individual efforts simply due to organized efforts and streamlined work processes. Work efficiency is enhanced and needless multiplication of processes is eliminated.

Organizational teams also build the spirit of camaraderie. There is a sense of belonging among employees when they are a part of a closely knit team. Vertical and horizontal communications are stronger and influential. Hence, organizations can spread the corporate

message to the last employee down the structure. Employees feel a part of a greater mission.

Organizational teams, just like individuals have their own identity. Every team is different from the other. Even within an organization, different teams have different protocols. The collective style of individuals that form the team makes the team persona. Organizational teams are like human beings; they have ambitions, strengths, weaknesses and even ego. Teams can compete, wrestle, succeed or fail. A good organizational team can be an invaluable asset to the organization. A bad team can break the internal structure of the organization.

Companies need to understand the power of teams. Organizational team leaders need to be nurtured and equipped to build teamwork and team efficiency. Teams can also be a source of power conflicts and bad politics. Hence, a vigilant eye must be maintained on teams to ensure that there is no power play or inter departmental politics. While a healthy competition is required to keep all teams on their toes; it is essential that competition is a positive motivating factor (Parker 1996).

15.2.2 Types of Teams

Of particular importance is the concept of different types of teams.

Work Teams: These are kind of permanent teams in organizations that are liable to produce output in the form of produce or services. Membership is well defined and stable.

i) Project and Developmental Teams

A team used only for a defined period of time and for a separate, concretely definable purpose, often becomes

known as a project team. Managers commonly label groups of people as a “team” based on having a common function. Members of these teams might belong to different groups, but receive assignment to activities for the same project, thereby allowing outsiders to view them as a single unit. These kinds of teams are temporary in nature and are linked to some special project and consist of experts.

ii) Parallel Teams: In such teams members are drawn from the regular organizational structure, but work in parallel on a specific issue. Such teams are formed when specific problems arise that can not be handled within the existing organizational structure.

iii) Independent and Interdependent Teams: A football team is clearly an interdependent team: no significant task can be accomplished without the help of essentially all team members, team members typically specialize in different tasks (carrying the ball, kicking the ball, blocking opposing players), and the success of every individual is inextricably bound to the success of the whole team. No quarterback, no matter how talented, has ever won a season by playing alone.

On the other hand, a tennis team is a classic example of an independent team: matches are played and won by individuals or partners, every person performs basically the same actions, and whether one player wins or loses has no direct effect on the performance of the next player.

iv) Virtual Team: A virtual team consists of members joined electronically, with nominal in-person contact. Virtual teaming is made possible with technology tools, especially the Internet.

This allows teams to be formed of players otherwise unavailable.

15.2.3 Principles of Team Work

Working together poses several challenges on account of factors that surface as members begin to interact as team. These differences need to be resolved and leveraged for the benefit of the team, with the help of setting norms/ criteria/ standards of performance. The following group dynamic factors play an important role in team effectiveness.

i) Norms: Norms are laid down which contains some acceptable norms and standards shared across the group. The norms are mostly formal or informal, explicit or implicit which help members to bind together. Such a binding leads to better coordination.

ii) Cohesiveness: A feeling of closeness within team members on account of interpersonal attraction, social identification leads to better coordination. It provides emotional support and fosters belongingness.

iii) Team Energy: It refers to the extent to which members of team are able to relate to the team goals effectively and meaningfully. A team with high energy levels might lead to higher productivity if canalized properly

15.2.4 Team Composition and Size

A judicious composition of team is very important for its proper functioning. In constituting a team, a right mix of technical, interpersonal and decision making are needed. As teams are diverse in nature, it is important that key processes like conflict management, interpersonal communication are done efficiently.

Though size of team essentially depends upon nature of task and context in which task is being performed, yet it is necessary that team should be balanced and should not be unwieldy.

15.2.5 Team Performance

In order to manage team performance effectively, Levy (2001) consider that the managers need to undertake the following tasks.

- i) Clearly identifying the purpose of team
- ii) Define team agenda clearly
- iii) Make the agenda operational in measurable terms

- iv) Map the activities of each member
- v) Map the team resources
- vi) Evolve parameters of team evaluation

Reflection

Team building is a tedious process but it is a necessary step to improve performance of an organization. The primary challenge in institutionalizing team working arrives from inappropriate system of rewarding team performance. An equitable system of rewarding the individuals in the team, for both the team output, and his or her contribution to the team will foster and reinforce team bonding.

Activity 15.1

Group your staff members in various teams and assign them some combined responsibilities and observe their performance. Write a short account of the process of grouping the staff in various teams and assigning them combined responsibilities.

15.3 Managing Organizational Change

Beckhard and Gleicher (1969) developed the formula for change that is sometimes referred to as Gleicher's Formula. It brings out that the combination of organisational dissatisfaction, vision for the future and the possibility of immediate, tactical action must be stronger than the resistance within the organisation in order for meaningful change to occur.

15.3.1 Management's Role

Management's first responsibility is to detect trends in the macroenvironment so as to be able to identify changes and initiate programs. It is also important to estimate what impact a change will likely have on employee behaviour patterns, work processes, technological

requirements, and motivation. Management must assess what employee reactions will be and craft a change program that will provide support as workers go through the process of accepting change. The program must then be implemented, disseminated throughout the organization, monitored for effectiveness, and adjusted where necessary.

In general terms, a change program should:

- ❖ Describe the change process to all people involved and explain the reasons why the changes are occurring. The information should be complete, unbiased, reliable, transparent, and timely.

- ❖ Be designed to effectively implement the change while being aligned with organizational objectives, macroenvironmental trends, and employee perceptions and feelings.
- ❖ Provide support to employees as they deal with the change, and wherever possible involve the employees directly in the change process itself.

15.3.2 Change: Behavior Reaction

There are certain reactions based on individual behavioural patterns to change.. Individual's attitude, personality and learning ability, uncertainty, fear of loss or hope of gain motivates people to behave in a particular fashion. While some people have enhanced motivation to act and move towards change others may have negative reactions like disengagement, disidentification, disenchantment and disorientation.. Management should be able to diagnose these factors so as to devise strategy to counter it.

Following strategies can be used to counter resistance to change (see Carr 1996).

- i) Education and communication
- ii) Participation and involvement
- iii) Facilitation and support
- iv) Negotiation and agreement
- v) Manipulation and co-operation
- vi) Explicit or implicit coercion

In bringing about change, managers make strategic choices regarding the speed of the effort, the amount of planning and the involvement of others.

A manager should carefully identify the current situation, problems and factors and analyse relevant factors for producing the needed change. He should monitor the implementation process and should make mid-course correction (see Fisher 1995).

15.3.3 Role of Leadership

Change is always dependent upon good leadership skills. Following steps are needed to be followed for successfully leading change:

- i) Establishing a sense of urgency
- ii) Forming a powerful guiding coalition
- iii) Creating a Vision
- iv) Communicating Vision
- v) Consolidating improvement

An effective change programme requires the change agent to have a skilled and orderly approach. The change agent should exhibit traits of common sense, hard work, and systematic goal-oriented approach.

Reflection

To bring about effective and sustainable change, the change agent requires assembling a team of change agents. The team may consist of both internal and external members. There is always a need to create a new vision so that the organisation is prepared to commit a change in terms of alignment of new structures, resource generation, and structural design to suit the new expectations.

Activity 15.2

Make some changes in the duties of your staff. Study the resistance, if any, and analyse it keeping in mind the variables like age, seniority and qualification. Write in brief what changes you made and what sort of resistance there was to those changes and which variables you took into account while analysing the nature of resistance.

Negotiations between various components of an organisation are integral part of organisational behaviour studies. Since no organisation is perfect and has to undergo constant changes, there has to be regular negotiations

between managers and staff members on various issues concerning the organisation. As manager of adult learning centre, it is important for you to learn art of negotiations.

15.4 Managing Negotiations

Negotiation is the process where interested parties resolve disputes, agree upon courses of action, bargain for individual or collective advantage, and/or attempt to craft outcomes which serve their mutual interests. Negotiation is usually regarded as a form of alternative dispute resolution. The first step in negotiation is to determine whether the situation is in fact a negotiation. The essential qualities of negotiation are: the existence of two parties who share an important objective but have some significant difference(s). The purpose of the negotiating conference is to seek to compromise the difference(s). The outcome of the negotiating conference may be a compromise satisfactory to both sides, a standoff (failure to reach a satisfactory compromise) or a standoff with an agreement to try again at a later time. Negotiation differs from “influencing” and “group decision making.”.

15.4.1 Approaches to Negotiation

Given the above definition, negotiation occurs in business, non-profit organizations, government branches, legal proceedings, among nations and in personal situations such as marriage and parenting.

Traditional negotiating is sometimes called *win-lose* because of the assumption of a fixed “pie”, that one

person’s gain results in another person’s loss. Another view is that in negotiation both parties are equals by definition and that the best possible outcome is reached when both parties agree to it. If the two parties were not equals, the stronger party would dictate the outcome and there would be no negotiation at all.

New terrains: the role of emotions

According to negotiation scholars Michael Moffitt and Robert Bordone (1981) the newest frontiers in the field of negotiation include such topics as exploring the role of emotions in negotiation. Indeed, the Harvard Negotiation Project’s Roger Fisher and Daniel Shapiro published the groundbreaking bestseller *Beyond Reason: Using Emotions as You Negotiate*, a follow-up to *Getting to YES*. The book suggests that negotiations need not be at the mercy of emotions; it discusses five “core concerns” that anyone can use to stimulate helpful emotions.

15.4.2 Negotiation as a Process

According to Burt (1984) negotiation process can be divided into six steps in three phases

Phase 1: Before the Negotiation

- ❖ **Step 1: Preparing and Planning:** In this step, first determine what you must have and what you are willing

to give (bargaining chips). Gather facts about the other party, learn about the other party's negotiating style and anticipate other side's position and prioritize issues. To ensure smooth negotiation, one should also prepare alternatives proposals and establish BATNA (the Best Alternative To a Negotiated Agreement). Estimate the other party's needs, bargaining chips and BATNA

Phase 2: During the Negotiation

- ❖ **Step 2: Setting the Tone**
- ❖ **Step 3: Exploring Underlying Needs:** Also important is to actively listen for facts and reasons behind other party's position and explore underlying needs of the other party. If conflict exists, try to develop creative alternatives. In a difficult situation, don't say anything. Take time out. When we say nothing we give nothing away.
- ❖ **Step 4: Selecting, Refining, and Crafting an Agreement:** It is a step in which both parties present the starting proposal. They should listen for new ideas, think creatively to handle conflict and gain power and create cooperative environment.
- ❖ **Step 5: Reviewing and Recapping the Agreement:** This is the step in which both parties formalize agreement in a written contract or letter of intent.

Phase 3: After the Negotiation

- ❖ **Step 6: Reviewing the Negotiation:** Reviewing the negotiation helps one to learn the lessons on how to achieve a better outcome. Therefore, one should take the time to review each element and ask oneself, "what went well?" and "what could be improved next time"

15.4.3 Negotiation Tactics

According to Druckman (1977) skilled negotiators use many tactics including:

- ❖ Analyzing the negotiation or conflict management style of their counterpart
- ❖ Setting pre-conditions before the meeting
- ❖ Declining to speak first
- ❖ Volunteering to keep the minutes of the meeting
- ❖ Presenting demands
- ❖ Time targets, i.e. Deadlines
- ❖ Limited authority
- ❖ Walking out
- ❖ Concession patterns
- ❖ Intimidation
- ❖ Fait accompli (what's done is done)
- ❖ Take it or leave it
- ❖ Rejecting an offer
- ❖ tit for tat technique
- ❖ Wagon in front of the horse technique
- ❖ Stop the time technique
- ❖ Package deal technique

15.4.4 Kinds of Negotiation

Negotiations should be based on fair and reasonable exchange of information to create a mutually satisfying outcome. By and large negotiations have been classified into two broad categories-Distributive and Integrative negotiations Lewicki and Litter (1985).

Distributive negotiations take place when the resources are fixed and limited and each individual party wants to get a larger share for itself. Therefore distributive negotiations becomes essentially a competitive situation where gains of one individual is the loss of others. Distributive negotiations are lengthy and typically involve deceptive arguments and few concessions.

Integrative negotiations are focussed at having an agreement on a mutually

satisfying outcome. The resources here too may be limited but there is

willingness to generate other options and agree on them to create a mutually utilitarian outcome.

Reflection

While the process of negotiation require preparation, planning and patience, it may also be a source of irritation, frustration and dissatisfaction. In any case it can be considered a way of getting what one wants from others in the process of decision making. Negotiations should be based on merit as against traditional negotiation. There should be focus on interest and not on position and a variety of possibilities should be debated before taking a final decision

Activity 15.3

Please conduct a negotiation exercise in your adult learning set-up. Divide yourself between the groups of the employer and the employee. The success in negotiation would be judged in terms of the amount of raise and other terms and conditions agreed upon between the employer and the employee. The objective of the employee would be to get as favorable a deal as possible and the objective of employer would be to provide a deal which does not disturb the existing remuneration for the staff in the same position. Write a short account of the negotiation process you went through.

Organizational structure and designing is last section of Unit 15. After studying the constituent components of Organizational Behavior, this section intends to provide a larger view of the

organizations, their structuring and designing. It will help the managers to assess the functioning of the organization in view of different processes and variant aspects

15.5 Organizational Structure and Design

Organizations are rational entities which have been developed to perform some important functions. Therefore it is important to know structures and functions of organizations. Though organizational structures are not fixed and keep changing yet there are certain broad patterns allowing coordination within organization

15.5.1 Organizational Design

Organizational design can be described as managerial activity to make choices relevant to the requirements of the goals. While organizational structures provide the necessary means to achieve the goals of organizations while design

provide the necessary and sufficient conditions to achieve the changing goals of the organizations. While structures allocate responsibilities, how these responsibilities would be met are the concerns of design

Organizational design, like the structure, is not a fixed scheme. It is a dynamic process and keeps changing within the organization from time to time and across organizations. Managers in their own wisdom may develop initial design which may change according to changing situation.

15.5.2 Kinds of Organizational Structure

According to Barnard (1938) though of many types but mostly organizational structures are of two types, namely, Tall and Flat. They are identified by the hierarchical levels in organizations relative to its total population.

Flat Structure: It is characterized by a few responsibility centers in a smaller number of hierarchies. The numbers of positions are few and focus in a flat structure is on end responsibilities and being a small organization, there are few promotions only. Hence growth possibilities are very limited. An average employee may have greater flexibility in the performance of their tasks because there is lot of emphasis on performance and merit.

Because a flat organization is small, there is lot of flexibility and decentralization in decision making process.

Tall Structures: As organizations grow, they are transformed into tall structures. A tall structure is invariably hierarchical and numbers of opening at top get decreased. Due to existence of many levels, tall structures provide greater opportunity for upward moment. There is always requirement for greater control and interdependence.

In tall structures, span of control is small and the number of subordinates is smaller. But on account of their being very large such structures are formal and bureaucratic.

15.5.3 Variables in Organizational Structure

Structures have been created to regulate and control behavior of the employees

in organization. To achieve organizational goals, some variable play a significant role in structuring the organization. Fayol (1949) has described the following variables.

Formalization: Formalization refers to rules, policies and procedures, norms govern the behavior of employee in an organization for the purpose of making behavior of employees more predictable by standardizing it. All these mechanisms of regulating behavior vary on a scale of restrictive- flexible dimension.

Differentiation: Differentiation refers to the degree of differences that exist in various activities if organization. These could be in the actual roles that employees perform, or these could be differences in the orientation and approach followed by various units within the organization. A job description based upon job analysis defines the responsibilities and differentiations in work of employees.

Departmentalization: Another popular form of differentiation is departmentalization and divisions. It refers to grouping of individuals by units of related activities.

Departmentalization can be done on the basis of functions like marketing department, HR department and Finance department.

Similarly departmentalization can be done by place like Delhi, Mumbai and Kolkata. Departments can be created on the basis of products/ services like Tatas have publishing, printing as well as steel producing business.

Reporting Relationship: One very important variable in organizational structure is how reporting structure has been developed. Since a lot of people work in organizations in hierarchical

fashion, to smoothly run the organization. It is necessary that there is clear reporting structure. Reporting relationship assures accountability and the consequences therein by regulating the span of control and the unity of command.

Span of Control: It refers to the number of subordinates a supervisor can direct. A wide span of control would mean a large number of employees reporting to superior while a narrow span of control would mean a large a large number of employees.

Unity of Command: It specifies that no organizational participant should receive orders from more than one superior. It may lead to contradiction and confusion in entire organization.

15.5.4 Functions of Organizational Structure

Haynes (1959) describes the following functions as performed by organizational structures.

- i) **Allocation of Responsibilities:** Most important function of an organization is to clearly allocate responsibilities. It helps in fixing accountability and eliminates duplication of work.
- ii) **Reporting Relationship:** It should be clearly laid down that who is reporting to whom. For coordination to be effective monitoring by immediate supervisor required because it ensures that individuals do whatever is supposed to be done by them.
- iii) **Rewarding and Punishment:** Once responsibilities are allocated and reporting relations are clearly defined, the supervisor gets the requisite authority to punish for incompetent or insufficient

completion of task or to reward a performance.

- iv) **Communication Flow:** Smooth flow of functions within organization is very important. Hence it is one of the functions of organizational structure to ensure it.

If above functions are not defined clearly, it may lead to confusion and different supervisors may use their own judgment creating problems of morale and motivation. It could lead to lack of uniformity in reward and punishment for same kind of performance. It could also lead to delay in decision making and several new opportunities could be missed.

15.5.5 Decision Process

Decision making is an important function of an organization. An organization's decision making process has to ensure that the chosen alternative is such that it maximizes the return on minimum investment and organization is able to meet its goals with limited resource utilization. There are three important processes which are stated below.

Centralization: Centralized decision making refers to the concentration of power at the higher levels in the organization. As most decisions are centralized at the top levels in the organization a greater uniformity in decision making is possible. However, in centralized decision making process, top management may be overloaded and may sometimes lead to faulty decisions.

Decentralization: In decentralized decision making system there is low concentration of decision making at higher levels and decisions are taken at several levels. It provides opportunities to develop the competence of employees

to take decision at lower level and is considered as useful mechanism to motivate employees.

Delegation: Sometime a manager may delegate certain decision making powers to his subordinate in view of his or her

competencies and trust earned in the organization. It is essentially an informal arrangement where manager carve out a part of their responsibilities and hand over them to their subordinates.

15.6 Apply What You Have Learnt

On the basis your experience of working in your adult learning set-up, prepare a chart detailing out its strengths and weaknesses of the overall structure

and suggest the appropriate changes to make it more functional as a simple organization.



16 MANAGING A LIBRARY

S M DHAWAN

Structure



16.1 Introduction

16.2 Library Objectives

16.3 How to Manage a Library

16.3.1 Step 1: Library Policies and Programs for Collection Development

16.3.2 Step 2: Library Authority and Library Advisory Committee

16.3.3 Step 3: Procedures for Library Organization and Administration

16.3.4 Step 4: Library Space, Equipment and Tools for Library Operations and Services

16.3.5 Step 5: Procedures for Maintenance of Library Collections

16.4 Apply What You Have Learnt

Learning Objectives



After going through Unit 16, it is expected that you would be able to

- ❖ Understand why library support in adult education set-ups is important for meeting the institutional objectives
- ❖ Describe what is the relative importance of different management functions in managing a library in adult education set-ups
- ❖ Discuss what are the important procedures for managing library collections and services
- ❖ Implement the procedures for managing a small library

16.1 Introduction

Unit 16 throws light on one of the most important aspects of adult learning. It explains that libraries in adult education set-ups have an important role to play in facilitating access to information for learning, education and training. They also play important role in supporting research programs of adult education set-ups as well as their outreach programs designed to educate and inform adult user groups on social, economic and educational issues, and problems. Another role of libraries is to raise awareness about economic

opportunities available in the marketplace. Like any other library in academic set-up or research institutions, adult education libraries have also to be planned, organized and managed using standard management principles and standard library procedures and techniques for access and retrieval. Unit 16 deals with all these issues and provides PALDIN learners with very useful skills to perform their tasks better.

Besides enabling physical access to collections, libraries have to be organized for rendering information services such

as instructions in the use of library catalogue and reading materials, reference service, information

dissemination, etc. You will read about this dimension of library management in Unit 17.

16.2 Library Objectives

Strategic planning and development of a library is guided mainly by the goals and objectives of the parent institution of which the library is a part. In any given adult education set-up, you could frame library objectives along the following lines.

- i) Facilitate access to information for knowledge, education, and learning.
- ii) Support research activities and programs of the set-up by offering proactive information services
- iii) Support outreach programs of the adult education set-up, designed to

educate and inform adult user groups on social, economic and educational issues, problems, and opportunities of interest them.

- iv) Offer proactive services for effective use of all types of library materials.
- v) Store and preserve information of archival nature such as local traditions, customs, and locally generated process documentation reports, etc.
- vi) Use library as the platform for social, economic, and cultural development of the target communities.

Activity 16.1

Explain on the basis of your past experience why libraries are relevant in achieving the objectives of adult education setups.

16.3 How to Manage a Library

Library management involves functions such as planning, organizing, leading, and controlling. Planning is about systematically making decisions about the library goals. Organizing is about assembling and coordinating human, financial, physical, informational, and other resources needed to achieve library goals. Leading is about functions that involve efforts on the part of the librarian to stimulate high performance by employees, and controlling about monitoring various library operations and services. These four management functions are highly integrated, but libraries that excel in organizing material

resources and in leading their human capital are known to give better performance.

Keeping in view the fact that libraries in adult education set ups are, by design, small budget libraries, confined to one room space, and adult education staff manages them manually on part time basis, these four management functions would occur in varying degree. In such a typical set up, the functions of organizing and controlling would receive greater attention compared to other two functions. For managing a library you may take the following step-by-step approach.

Step 1: Defining library policies for collection development

Step 2: Defining library authority and library advisory committee

Step 3: Define procedures for library organization and administration

Step 4: Defining library space, equipment and tools for library operations and services

Step 5: Defining procedures for maintenance of library collections

Let us discuss each step in a little more detail.

16.3.1 Step 1: Library Policies for Collection Development

Step 1 includes the following task:

i) Define the objectives of your library: State clearly the purpose of its existence.

ii) Define your user community and their information needs: This requires complete knowledge and understanding about library stakeholders. This may include adult education teams, extension workers and adult education professionals, local community members and those who provide funds for the library. Their information needs can be assessed through library surveys, personal interviews, and informal discussions with all stakeholders.

iii) Define library policy for building collections: The policy states the guiding principles and procedures under which collection development activities, including the selection, maintenance, and weeding of print, electronic, and media library materials will occur. This would also mean specifying subject areas of interest to library stakeholders, their languages preferences, and formats of published and unpublished material (*i.e.*

print, non-print, or electronic format). Non-print material could include films, slides, transparencies, photographs, maps posters, charts, etc. The policy must also define the limits in terms of collection size, keeping in view the users strength in a given subject, space available within the library premises, and annual budget earmarked for the purpose. The policy may also specify the subject areas in which the library is going build its archival collection, if any. Such a policy statement on the part of the library ensures continuity and consistency in selection and revision of materials for the library collections.

iv) Define what different collections are required to be developed and sustained keeping in view users' information needs: The possible options include books collection, reports collection, pamphlet collection, multi-media collection, and reference collection (comprising dictionaries, yearbooks, directories, who's who almanacs, general and subject encyclopedias), etc. The library may decide on developing some of these collections keeping in view the users' information needs.

v) Define your book selection policy: State the distribution of library budget by subject and by collection. The policy may also state guidelines for acquiring multiple copies of books, guidelines for accepting books from donors, and guidelines for weeding out material.

16.3.2 Step 2: Library Authority and Library Advisory Committee

Libraries in adult education setups are, by design, small budget libraries, confined to one room space, and managed manually on part time basis by adult education staff. The person in-

charge of the library should be the library authority, responsible for organization and management of the library. He/she should play a dominant role in decision making, should enjoy the authority to communicate freely with groups across the organization, and enjoy financial and administrative powers for managing library operations and services smoothly. The financial and administrative limits of the library authority should correspond to staff of equivalent status in the organizational hierarchy. The library authority should be reporting to the top management in the organization. There is a need to set up a Library Advisory Committee, which would perform the role of advising the library on its growth and development. It will also act as interface between the library management and the top management in the organization and between the users groups, for ensuring smooth functioning of the

library operations and services without compromising on policies set out for library development. The Committee should comprise members mainly drawn from the organization, and representing various user groups on the Committee. Its terms of reference could be worked out on the following lines:

- i) To formulate policy for developing library resources for reading, reference and projects.
- ii) To develop a general program of library services to suit the interests and requirements of different categories of users
- iii) To frame, review and approve library rules
- iv) To recommend suitable budgetary provisions for the library and resource centre
- v) To make recommendations for proper functioning of library as knowledge centre

Activity 16.2

Do you have a Library Advisory Committee in your adult learning setup? Do you think that we need Library Advisory Committee in managing a library? Make a case for setting up such a committee in each adult learning setup library.

16.3.3 Step 3: Procedures for Library Organization and Administration

In any larger set up, library organization tasks involve assembling, forming logical units of works, defining hierarchical structures, identifying staffing requirements, assigning tasks and responsibilities, coordinating human, financial, physical, informational, and other resources needed to achieve library goals. Administration is another activity required to be undertaken for performance and achieving library goals. It is defined as the process of getting things done through men and materials within the organizational framework.

Library organization and library administration are closely related to each other. The distinction between the two is very subtle. Organization comes before administration. The latter starts when the organization ends. One lays down theoretical principles, whilst the other puts those principles into practice.

In the adult education set up, wherein libraries by design are small and are going to be managed on part time basis by adult education staff, not much needs to be done in so far as library organization is concerned. In such flat hierarchical structures, the staff has no option but to perform multitasking

operations such as administration, technical functions, service support, and library maintenance. For effective performance, it is advisable for the library to opt for outsourcing of library maintenance operations such as stack maintenance, catalogue card maintenance, photocopy services, library up keep, stock verification, gate security, etc. It may also consider outsourcing classification and cataloguing operations if circumstances so warrant.

The libraries in adult education set ups need to undertake planning activities such as strategic planning (*i.e.* identifying library goals, objectives, methods, resources needed to carry out methods, responsibilities and dates for completion of tasks), budget planning (for document collections, library equipments, library furniture, library stationery, media library equipments, if planning for a multi-media library), and

library promotion planning. These are not perennial activities and are required to be undertaken once in year. The extent of budget planning activities would depend upon the size of adult education programs, network linkages, and staff deployed within the organization, etc. For building a library from the scratch, it must begin with a small annual budget of Rs.100, 000/- during the first three years. In the subsequent years, budget requirements may be reviewed and decided based on collection already built and actual requirements. It is a good practice to undertake budget planning exercise in consultation with the Library Advisory Committee for developing collections, library equipments, library furniture, media equipments, etc. It is also a good practice to formulate library plans for promoting and popularizing library services.

Activity 16.3

Explain the four functions of library management. Assess the extent your adult learning setup library is able to carry out each of these functions.

16.3.4 Step 4: Library Space, Equipment and Tools for Library Operations and Services

Bureau of Indian Standards provides that a library should have a stack room, a Librarian's room and a Reading Room having seating capacity of 40 to 120 chairs. The stack room should be big enough to accommodate between 6,000 and 10,000 books. A Sample Layout of Library is given as a suggestion in the Appendix A. The library-in-charge would need to plan actual library size and seating capacity of 'reading room' keeping in view the optimum number of members in an adult education set-

up, the variety of library services it is planning to offer, and the members of the adult community who would be coming to visit the library for social interactions.

The library equipments and tools like furniture, fittings and accessories should of standard pattern and design, so that users feel comfortable in using them. The following is the list of essential furniture and fittings for an adult education set up.

- 1 Reading tables
- 2 Chairs for pupils
- 3 Librarian's table
- 4 Circulation or charging desk and

- chair
- 5 Librarian's shelf list trays
- 6 Card catalogue trays
- 7 Card catalogue cabinet
- 8 Bulletin board and notice board
- 9 Book supporters
- 10 New arrivals display case
- 11 Dictionary stands
- 12 Periodicals display stand
- 13 Newspaper display stand

- 14 Storage cabinet for work room
- 15 Filing cabinets
- 16 Atlas stand
- 17 Wall clock

Besides, the library may acquire radio and television set, tape recorder/player, VCR and VCP, slide and film projector, overhead projectors, computers with internet connection, Xerox machine, etc.

Activity 16.4

What methods do you use for understanding the information needs of library users in your adult education set up?

16.3.5 Step 5: Procedures for Maintenance of Library Collections

You will find that the following procedures help in maintenance of library collections.

Preservation of library material: Proper care of library collections is necessary with a view to prolong its life. This requires preserving and protecting books against decay and deterioration. As preventive measures, dusting and cleaning of books and shelves must be carried out on regular basis. Books must be exposed to adequate air and sunlight for a short time in case the library room does not get sufficient sunlight. Avoid keeping books in damp places. Pest control treatment may be got done on periodic basis. Books and other reading material may be got bound from time to time. Besides, book supporters may be used to keep books upright on the shelves. Reference books such as dictionaries, encyclopedias, directories and picture books are costly and heavy in weight. They must be handled with care.

Organizing reading materials on shelves and their rectification: Normally, books and other reading

materials in a library are organized into different collections such as book collection, rare book collection, periodical collection, and reference collection, etc. Books are arranged according to classified order. Besides, when some books are more in demand than others in such cases the library may consider creating a separate sequence of books in great demand. Reference books are also arranged in classified order. Periodicals are arranged by journal title. Shelving and shelf rectification of reading material in different collections must be done preferably every day to ensure that shelf arrangement of books and other reading material is as per prescribed order. Shelf rectification is undertaken to ensure that books and other reading are kept on the shelves as per prescribed order. In case they are not, necessary rectification is done to restore their order on the shelves. This is important so that one could trace books on shelves from their prescribed locations on the shelves when required. Other activities of library maintenance are: taking out worn out books and other material for repair or binding, sending new books and journals for binding,

display of new books and other reading material received in the library, preparing stack room guides, and shelving volumes returned after use,

etc. Library may also perform stock verification on periodical basis, with a view to weed out books, as per its policy, and writing off books, etc.

Activity 16.5

Have you ever faced the problem of not being able to trace a resource in your library? What do you think is the main reason for such a state of affairs in a library? Do you consider shelf rectification to be important for improving library performance?

16.5 Apply What You Have Learnt

Have you ever taken an interest in managing library of your adult learning setup? Do you think that there is a difference between library organization and library administration? Will you like to handle both at your adult learning

setup? If yes, explain how you would carry them out. If no, give reasons for not doing so. See Figure 16.1 in Appendix A for suggested layout of library.

Appendix A: Suggested layout of Library

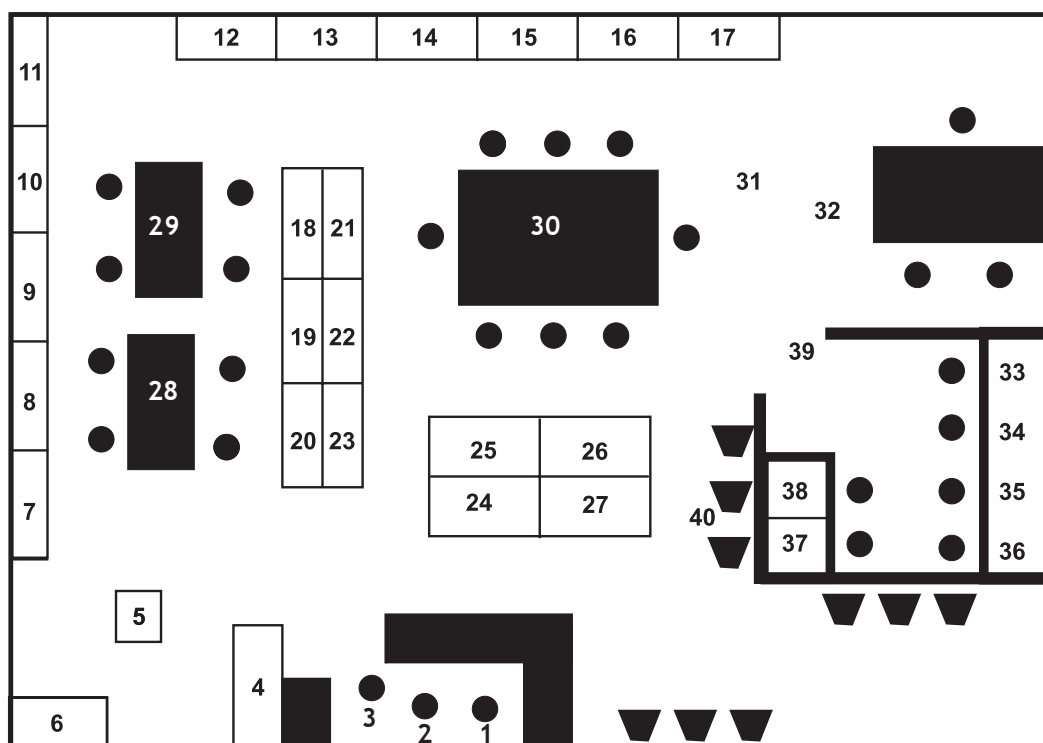


Figure 16.1 Suggested Layout of Library

Proposed layout of a library room has been improvised out of a classroom size 20" x 30" with entrance 4' wide and suitable windows for light and ventilation. See Index on page 188 for numbers mentioned in Figure 16.1.

Index

1	Display Board
2	Issue and Return Counter
3	Computer Desk
4	Catalogue Cards
5	Revolving Stand for magazines
6	Reference Books
7-27	Racks for Library Books
28 -29	Table 2' x 4' top
30	Large Table top size 5' x 6'
31	Magazines & Periodicals with Partition
32	Librarians Cabin with seating capacity for 3
33-38	Study Tables
39	Special Information Boards 4'x4' Softboard
40	Information on New Arrivals



BUILDING LIBRARY RESOURCES AND SERVICES

S M DHAWAN

Structure



- 17.1 Introduction
- 17.2 Building Library Resources and Services
 - 17.2.1 Step 1: Acquisition Procedures
 - 17.2.2 Step 2: Classification and Cataloguing Procedures
 - 17.2.3 Step 3: Library Services
- 17.3 Tips for Improving Library Value
- 17.4 Apply What You Have Learnt

Learning Objectives



After going through Unit 17, it is expected that you would be able to

- ❖ Understand library skills and techniques for building library collections for access and retrieval
- ❖ Discuss the services offered in a library and the procedures for rendering them
- ❖ Implement library techniques in your own adult education set-up for building and managing a small library collection and offering services.

17.1 Introduction

Like any other library in academic set-up or research institutions, resources in adult education libraries have also to be planned, developed, and organized for access and retrieval. Besides, such libraries need to offer library and information services such as instructions in the use of library catalogue and reading materials, reference service, information dissemination, etc. Unit 17 describes the procedures for building library resources and rendering library services and explains the procedures for

library management. It discusses the techniques for classification and cataloguing of books and other reading material for information access and retrieval. In addition, it describes the services that a library in an adult education set up needs to offer its clientele.

Let us now begin with a discussion on building library resources and services for adult learners. On the basis of your experience, you may also add some inputs to this in Unit 17.

17.2 Building Library Resources and Services

The libraries in adult education set ups are, by design, small budget libraries, confined to one room space, and adult education staff manages them manually on part time basis. Keeping this in view, library procedures described in Unit 17 are basically quite simple and elementary in nature. Such members of adult educators who do not have any formal education and training in library and information science would find it easy and simple to learn library skills and apply them for building library collections and rendering library services. They can take the following step-by-step approach.

Step 1: Acquisition Procedures

Step 2: Classification and Cataloguing Procedures

Step 3: Library Services

17.2.1 Step 1: Acquisition Procedures

Library acquisition is about procedures for selection of published material for library acquisition, procedures for placing orders for purchase books and other reading material, their accessioning as well as of material received as gratis. It also about procedures for payment of bills, and about upkeep and maintenance of records as required for the purpose.

Procedure for Book Selection: The first step in book selection operations is to invite recommendations from users for purchase of new books and other reading material. For this, the library could take initiative by inviting books on approval from booksellers, or give users publisher catalogues for selection, or send them to visit book exhibitions. Based on this exercise, a tentative listing of useful books is compiled. The second step is to get the compiled list

of books approved by the Library Advisory Committee. The Committee might approve it in total or shortlist it as per their judgment. While finalizing books and other reading materials for purchase, the Committee should pay special attention to the usefulness of the selected material, currency of information given in the books, their cost and availability of funds. The book selection exercise should be undertaken on regular basis through out the year, and not towards the end of the financial year once, just to exhaust book budget.

Procedure for Book Purchase: The second step in book acquisitions is to initiate action for placing orders with the approved vendors or booksellers for selected books. In this regard, the Library needs to obtain first the financial sanction of the competent authority in the organization. It could be either head of the organization, or its deputy or any other designated person for the purpose. For operational performance, it will be useful if the In-Charge Library is given financial authority to sanction expenditure, say, up to Rs.5000/- only in respect of such books and other reading material as recommended by the Library Advisory Committee. The library should by default purchase only latest edition of a book, unless desired otherwise specifically. Sometimes cheap editions of foreign books are printed. In such cases, it is advisable to go for cheaper editions only. However, if one of the roles of the library is to archive books for future, in such a case the library should purchase books printed on good quality paper.

The Library may draw up a panel of vendors/ booksellers as per following criteria. It may purchase books from

booksellers on the panel.

- ❖ Bookseller must have membership of the Delhi State Booksellers Association/ Federation of Indian Publishers/
- ❖ Bookseller must have experience in the line for at least two years
- ❖ Must have PAN Number from the Income Tax
- ❖ The panel may be reviewed every year for performance on the parameters of relevance, quality and comprehensiveness of the books displayed for approval or on the parameter of efficiency and effectiveness with which the bookseller supplied books against order.

The next step is to place formal orders with approved for purchase of books. There is no need for inviting quotations since as per financial rules of the

Government of India books are not store items. Purchase orders can be placed on the catalogue price of the book. As per standard practice, booksellers offer discount on the catalogue price of books, ranging from 10 to 15 percent. Books priced in foreign currencies are to be paid in Rupee currency. The foreign currency conversion is done as per bank's TT selling rate as prevalent on the day of the supply of books. Information about bank conversion rate can be had from newspapers such as *The Economic Times*, and *The Financial Times*. The booksellers are required to supply books along the bill in triplicate. One copy of bill is to be returned to the bookseller duly signed as a token of receipt of books supplied. The library should insist on price proof of the book and bank conversion rate from the booksellers before accepting the supply of books.

Activity 17.1

List steps for acquiring reading material for library.

Accession of Books: Libraries need to maintain records of the books acquired in accession register. This register constitutes a permanent record of the library. Figure 17.1 shows a sample outline of columns of an accession registers. Printed accession registers are also available in the market. Before accessioning, the library needs to physically check the books supplied against order in terms of latest edition, year of publication, and price.

The next step in book acquisition is accession of books by making record

entries in the accession register, wherein each book is assigned an accession number. This number is reproduced later on several different pages in the book accessioned such as (i) back of the title page - bottom portion, (ii) secret page in a book. (This is a discrete page in a book which invariably carries its accession number. The secret page number is known only to the library staff and hence it is known as a secret page), and (iii) on the last page of the book; and on all the copies of the bill/cash memo.

Date	Accession Number	Author	Title	Ed	Place & Publisher	Year of Publication	Vol	Pages	Cost	Vendor	Bill No and Date	Remarks
------	------------------	--------	-------	----	-------------------	---------------------	-----	-------	------	--------	------------------	---------

Figure 17.1 A Sample Outline of Columns of Accession Register

Printed accession registers are available in multiple of 1000 entries per register with a minimum of 5000 entries. Accession register starts from accession number 1 and goes up to 5000. Additional accession register, if required, should begin in continuation of the last accession number in the previous register. Avoid overwriting and cuttings of any kind in the Accession register. The competent authority in the Library must affix a certificate in the beginning pages of the Accession Register certifying that “This register contains ... (so many) pages in which accession

number run from ... to”

While making entry in the Accession register it is advisable to use ink of lasting quality so that its color doesn't fade away with the passage of time. The Accession register is a valuable document and must be kept under lock and key when not in use.

After accessioning, books stamped bearing the name of the library. Book tag, book plate, book card pockets and due date slip are to be pasted at the appropriate places in the book as decided upon by the library.

Activity 17.2

What precautions would you take in accession of books?

17.2.2 Step 2: Classification and Cataloguing Procedures

Each accessioned book is classified, for assigning it a unique (numeric or alphanumeric) call number, and catalogued to facilitate its access and retrieval from the card catalogue by author, title, subject, and call number. The call number of the book is reproduced on the back of the title page, book plate, and on the book card. The book card records necessary information about the book such as its accession number, author, and title. After verifying all these details, the book is released for circulation.

Classification: One of the major management tasks of the librarian is to organize the reading material for

browsing, searching and retrieval by subject and language. The job of classifier involves giving each book in the library a unique numeric or alphanumeric number called ‘Call Number’ – as per library parlance. This number defines placement/ shelving position of the book in the stacks. The other objective of call number is to bring books on the same subject together for browsing and retrieval. According to Ranganathan (1959) a classified arrangement should be such that the library staff is able to:

- 1 Locate a book demanded by a reader immediately even if the library has miles of shelves of books.
- 2 Replace the book at its correct place on the shelf.

- 3 Find out a proper place for a newly purchased book among other books on the same subject.
- 4 Find a place for a new book on a new subject among the already existing books on related subjects

Choice of the Scheme of Classification: Quite a few schemes of classification have been in use in libraries. These include Colon Classification, Dewey Decimal Classification, Universal Decimal Classification, and Library of Classification, etc. Some of the small libraries design and develop their local scheme of classification. Applying an established and widely used scheme of classification is always better than designing and developing a local one. This gives the library the benefit of continuity in experience in classifying documents and to build thereby the foundation for the future.

Most libraries use Dewey Decimal Classification (DDC). It is now running into 22nd edition. This speaks volumes about its popularity amongst libraries throughout the world. One of the advantages of using DDC is that it can be adapted to the needs of any large or small library. Its abridged editions are designed to meet the special requirements of small libraries. A copy of schedule of 100 classes is given as Appendix A. This schedule alone may not be found adequate to represent all the facets of a subject. Therefore, the use of the Standard Subdivisions of 1000 classes (Appendix B) at times may be found necessary to separate a book from other books having the same ultimate class. These standard subdivisions are not in themselves class number and hence can't be used in isolation, but may be suffixed/and added to any number from the schedule.

Activity 17.3

Why do need to classify books? Why can't we arrange books by accession number?

Cataloguing: A library catalogue is a vital link between the reader and the book. It serves as the key to ascertain the availability of wanted book in a library and its physical location in the stacks. Conventionally, cataloguing of books in libraries is done by using standard cataloguing codes such as Anglo-American Cataloguing Rules (AACR), Classified Cataloguing Code. According to these cataloguing codes, the levels of cataloguing differ from library to library. For example, a major library may apply for highest level of

cataloguing, in which information that goes into the cataloguing entry is very extensive and detailed. However, a small library set up – like the one in adult education organizations – could consider going in for lowest level of cataloguing, in which the elements that go into the cataloguing entry are minimal to ensure access and retrieval of a book by author, title, and subject. A sample catalogue entry using AACR2 code is given below for illustration. This entry is made on a model on 5"x3" cataloguing card (see Box 17.1).

Box 17.1 Cataloguing Card

Class No.

Book No Main Access Point

Title Proper / First statement of responsibility, if different from main entry heading in form or number or if there is no main entry heading. - Edition statement. - Material (for type of publication) specific details. - First publisher, date of publication. - Extent of item. - Note(s). - Standard number

Tracing Section.

Main Entry and Added Entry Cards:

The cataloguing can be done by using cataloguing software or manually. If a library plans to go in for manual cataloguing, cataloguing entries are to be made on 5"x3" card catalogues. For every book, main entry as per sample given above is made. Additional entries are made in case the book has more than one author. Additional entries are also made for access by title and subject. For making added entry cards, main entry card is made in duplicate, and search element such as second author, title, or subject heading is imposed on the top of each duplicated card. For example, if there are two authors then there would one added entry card for the second author, the first author has already been given access point in the main entry card.

Catalogues are of different types such as author catalogue, title catalogue, or subject catalogue. Each catalogue type has catalogue entry cards arranged alphabetically (letter-by letter or word-by-word). These different types of catalogue entries can also be merged together and filed in a single sequence. Such a catalogue is known as dictionary catalogue. For convenience in searching information from the cataloguing tray, for every bunch of 100 cards, guide cards is inserted. Appropriate starting letters in the alphabetical sequence are inscribed on the guide cards. The

cataloguing tray can hold 1000-1500 catalogue cards. Sample catalogue entries for one book are given in the Appendix C for illustration.

17.2.3 Step 3: Library services

The services offered by libraries can be grouped as conventional library services and the services for promoting library use.

- i) Conventional Library Services
 - a) Library Rules
 - b) Circulation: Issue & Return of Books
 - c) Inter-Library Loan Service
- ii) Service Promoting Library Use
 - a) Initiation/Orientation Service
 - b) Reference Service
 - c) Current Awareness Service
 - d) New Books Display
 - e) Thematic Display
 - f) Press Clipping Service

Let us first discuss conventional library rules and then deal with service promoting library use.

i) Conventional Library Services

a) Library Rules: Every library frames a set of rules for regulating its services to members. Rules are framed keeping in mind the library objectives and members interests. As far as possible rules should be explicit, free from any ambiguity. The basic issues addressed in framing library rules are the following:

- 1 Who can use the library?

- 2 Opening and closing hours of the library
- 2 How many books can a member borrow at a time?
- 3 For how long can the member retain borrowed books?
- 4 Conditions of loan, fine for the late return of books, loss or damage of books during the loaned period
- 5 Reservation of books
- 6 Recall of issued books
- 7 Renewal of loans
- 8 Suspension of membership privileges
- 9 Personal books/property counter, etc.

b) Circulation: Issue & Return of Books: Circulation means issuing books to valid members on loan, and canceling loans them from issue records upon return of books by members. It is one of the most important activities of a library from users' perspective. For managing circulation, the library needs a proper circulation system designed and developed for the effective control of circulation operations in terms of time per transactions, manpower deployment requirement, and accuracy in record keeping. The manual systems currently in use are: 'Newark' system, 'Browne' system, 'Passbook' system. Of all these systems, Browne system of issue and return is most popular for its efficiency in time per transaction. It is therefore important that a library in the adult education set up may apply Browne system for managing its circulation operations.

Browne System: In Browne system, the members are given Reader's Ticket(s) to enable them to borrow books from the library. The design of the reader ticket is such that it has a pouch on its front side. The pouch is used to hold Book card when a book is issued to a member. For every library book, a Book

card is made. It is kept inside the 'Book Pocket' provided in the book. While issuing a book the Circulation-in-Charge simply removes the Book Card from the Book Pocket and inserts it in the Reader's Ticket pouch, puts in due date stamp on the date slip provided in the book. The 'Book Card' coupled with the 'Reader's Ticket' is arranged behind date guides in the charging tray. This is the simplest of all the methods for issue and return of books. It reduces paper work in managing circulation transactions to the bare minimum. At the time of receiving books from the borrowers, Book card is separated from the Reader's Ticket and it is inserted back in the Book Pocket of the book received. At the close of the day, the issue record is got rearranged and filed behind Due Date guides. For books not received by due date, it is a good practice to send reminders to the borrowers for returning the overdue books. Secondly, the library may consider giving grace period to members before issuing such reminders.

Late Fine: Though it may be unfair to impose fines for the late return of borrowed books, yet it is essential in a library to enforce discipline amongst members. This is done mainly as a deterrent since the amount collected as fine is always very trivial. Formal receipt is, however, issued after realizing late fee money from defaulters in cash. As far as possible, a library in an adult education set up may not resort to this system unless it is warranted by circumstances.

Conscience Box: An alternative to fine system for late return of books is Conscience Box. This concept was designed and developed by Dr S R Ranganathan (1959). In this method no formal receipt is issued to the borrower,

You can use the following devices to promote the use of library by adult members of a community.

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instead money as overdue charges is dropped in the Consciences Box. The key to this Box always remains with the authority in the organization. The Conscience Box is opened at a

convenient time in the presence of several officials. The distinct advantage of this method is that it saves time and develops in members a feeling of civic sense and responsibility.

Activity 17.4

Why is Browne System of Issue and Return used most in libraries?

Reservation of Books: Books in heavy demand usually remain in circulation. Members in the waiting list could reserve such books so that they could get the priority in borrowing them upon their receipt in the library. The library informs the member in the waiting list about the availability of the reserved book.

Loss of Books: Books reported as lost by borrowers are required to be dealt as per library rules. Usually, the borrower is advised to replace the book with a new copy. If, however, the book is out of stock in the market, he may be asked to pay the current price of the book after getting it verified from the Publisher's catalogue or from trade bibliographies. The price may also be got ascertained from the Accession Register and formal receipt issued to the borrower. Necessary postings may be done in the Accession Register indicating in the Remarks Column about the "Lost and cost realized vide receipt no... dated...."

c) Inter-Library Loan Service: Every library has a liaison with other libraries in the vicinity. In case of urgent requirements, the resource of such nearby libraries could be harnessed for borrowing books on inter-library loan, or get a photocopy made of the wanted material. The library in the adult education set up could consider building such type of cooperative networks for the purpose.

ii) Service Promoting Library Use

You can use the following devices to promote the use of library by adult members of a community.

Initiation/Orientation Service: For most of users, a visit to the library is the first encounter with the world of books. The users have to be made aware of the privileges they are entitled to as also the rules they are to follow to derive full benefits from the library. There are certain 'do's and don'ts which need to be explained to users at the time of their first formal visit to the library. This information is given to new members upon registration during initiation/orientation service. This service is also important for inculcating reading habits in neo-literates.

Reference Service: Reference service is a reactive service given to members on demand. In an adult education set up, the emphasis in reference service should be on giving knowledge and not just information or documents.

Current Awareness Service: For promoting library services, the library needs to offer proactive services such as current awareness service, selective dissemination of information service, etc. Section 6.5 of Unit 6 has covered detailed information in this regard.

New Books Display & Thematic Display: All the books added into the library stock must be put on display for

a limited period so as to bring them to the notice of all library users. On special occasions, such as birth day of an important author or leader, festivals, sport events, relevant books may be separated from the general sequence and put on a display to bring them to the notice of users.

Press Clipping Service: Newspapers are the most important sources of latest information. It would be most appropriate if the relevant cuttings of write-ups, editorials letters, statements, news items, events etc. are organized in some logical order for future reference and use.

17.4 Tips for Improving Library Value

The following useful tips may help you improve library value at your adult learning setup.

- 1 The library collection must be kept relevant (*i.e.* it must be need based, and irrelevant material if any must be weeded out), current (*i.e.* it must offer latest and novel information), accessible (*i.e.* it must provide tools for such as catalogues, databases for access to information), and available (*i.e.* document wanted by users must be available on the shelf and success rate of the library in this regard should be at least 80 per cent).
- 2 Organize customized information services and give information to users in the form that they can understand and use. For example, audio-visual media is most suitable form of information delivery to adult community lacking in literacy.
- 3 Customized information services include information repacking (such as rehashing technical information for non-technical audience), information condensation (such as preparing abstracts, digests, summaries of useful documents for information dissemination), and information consolidation (such as state-of-the-art information giving an overview of the trends in the literature)
- 4 Customized information services should aim at disseminating information for adding and updating knowledge of individuals, increasing their awareness on issues of interest to them
- 5 Use customized information services as a tool to enable the library to play its role as knowledge gatekeeper on topics of interest to the organization and its clientele
- 6 Make library as a place for social interactions by organizing discussions on issues of topical importance
- 7 Follow the best practices in library management, operations and services
- 8 Library operations and services must kept be efficient and library response time must not exceed users expectations
- 9 Increase the library penetration by enlarging its users base
- 10 Develop a special collection of books and publications frequently in use
- 11 Keep the library circulation current so that books do not remain with the borrower for more than a prescribed period of loan
- 12 Books not in circulation or not in use must be removed from the shelves and be considered actively for weeding them out

- 13 Organize library collections in classified sequence to facilitate information browsing, searching and retrieval by subject
- 14 Publish bibliographies on hot topics of interest to users
- 15 Undertake user survey of library services on periodical basis to ensure that library services are focused and effective
- 16 Keep the library ambience pleasant and inviting
- 17 Develop networking with other libraries for sharing resources
- 18 Ensure regular training of library staff on library skills and procedures
- 19 For collections exceeding 10,000 volumes, the library must consider using any library management system for library automation.

17.5 Apply What You Have Learnt

Suppose you are responsible for improving the library services to the adult community that your adult learning setup covers. Write a note of

about 800 words about the various steps you would undertake to promote the library and its services for the adult community.

Appendix A: Copy of Dewey Decimal Schedule of 100 classes Second Summary* The Hundred divisions

000 Generalities

- 010 Bibliography
- 020 Library & information sciences
- 030 General encyclopedic works
- 040 [Unassigned]
- 050 General serial publications
- 060 General organizations & museum science
- 070 News media, journalism & publishing
- 080 General collections
- 090 Manuscripts & rare books

100 Philosophy & psychology

- 110 Metaphysics
- 120 Epistemology, causation & humankind
- 130 Parapsychology & occultism
- 140 Specific philosophical schools
- 150 Psychology
- 160 Logic
- 170 Ethics
- 180 Ancient, medieval & eastern philosophy
- 190 Modern western philosophy

200 Religion

- 210 Philosophy & theory of religion
- 220 Bible
- 230 Christianity & Christian theology
- 240 Christian moral & devotional theology
- 250 Christian orders & local church
- 260 Social & ecclesiastical theology
- 270 History of Christianity & Christian church
- 280 Christian denominations & sects
- 290 Other religions

300 Social Sciences

- 310 Collections of general statistics
- 320 Political science
- 330 Economics
- 340 Law
- 350 Public administration & military science
- 360 Social problems & services; associations
- 370 Education
- 380 Commerce, communications & transportation
- 390 Customs, etiquette & folklore

400 Language

- 410 Linguistics
- 420 English & Old English
- 430 Germanic languages; German
- 440 Romance languages; French
- 450 Italian, Romanian & related languages
- 460 Spanish & Portuguese languages
- 470 Italic languages; Latin
- 480 Hellenic languages; classical Greek
- 490 Other languages

500 Natural science & mathematics

- 510 Mathematics
- 520 Astronomy & allied sciences
- 530 Physics
- 540 Chemistry & allied sciences
- 550 Earth sciences
- 560 Paleontology; paleozoology
- 570 Life sciences; biology
- 580 Plants (Botany)
- 590 Animals (Zoology)

600 Technology

- 610 Medicine & health
- 620 Engineering & allied operations
- 630 Agriculture & related technologies
- 640 Home & family management
- 650 Management & auxiliary services
- 660 Chemical engineering
- 670 Manufacturing
- 680 Manufacture for specific uses
- 690 Buildings

700 The arts; fine & decorative arts

- 710 Civic & landscape art
- 720 Architecture
- 730 Plastic arts; sculpture
- 740 Drawing & decorative arts
- 750 Painting & paintings
- 760 Graphic arts; printmaking & prints
- 770 Photography, photographs & computer art
- 780 Music
- 790 Recreational & performing arts

* Consult schedule for complete and exact heading

800 Literature & rhetoric

- 810 American literature in English
- 820 English & Old English literatures
- 830 Literatures of Germanic languages
- 840 Literatures of Romance languages
- 850 Italian, Romanian & related literatures
- 860 Spanish & Portuguese literatures
- 870 Italic literatures; Latin literature
- 880 Hellenic literatures; classical Greek
- 890 Literatures of other languages

900 History & geography

- 910 Geography & travel
- 920 Biography, genealogy & insignia
- 930 History of ancient world to ca. 499
- 940 History of Europe
- 950 History of Asia; Far East
- 960 History of Africa
- 970 History of North America
- 980 History of South America
- 990 History of other areas

Appendix B: Copy of Dewey Decimal Schedule of 1000 classes

Third Summary*

The Thousand divisions

000 Computer science, information & general works

- 001 Knowledge
- 002 The book
- 003 Systems
- 004 Data processing & computer science
- 005 Computer programming, programs & data
- 006 Special computer methods
- 007 [Unassigned]
- 008 [Unassigned]
- 009 [Unassigned]

010 Bibliography

- 011 Bibliographies
- 012 Bibliographies of individuals
- 013 [Unassigned]
- 014 Of anonymous & pseudonymous works
- 015 Bibliographies of works from specific places
- 016 Bibliographies of works on specific subjects
- 017 General subject catalogs
- 018 Catalogs arranged by author, date, etc.
- 019 Dictionary catalogs

020 Library & information sciences

- 021 Library relationships
- 022 Administration of physical plant
- 023 Personnel management
- 024 [Unassigned]
- 025 Library operations
- 026 Libraries for specific subjects
- 027 General libraries
- 028 Reading & use of other information media
- 029 [Unassigned]

030 General encyclopedic works

- 031 Encyclopedias in American English
- 032 Encyclopedias in English
- 033 Encyclopedias in other Germanic languages
- 034 Encyclopedias in French, Occitan & Catalan
- 035 In Italian, Romanian & related languages
- 036 Encyclopedias in Spanish & Portuguese
- 037 Encyclopedias in Slavic languages
- 038 Encyclopedias in Scandinavian languages
- 039 Encyclopedias in other languages

040 [Unassigned]

- 041 [Unassigned]
- 042 [Unassigned]
- 043 [Unassigned]
- 044 [Unassigned]
- 045 [Unassigned]
- 046 [Unassigned]
- 047 [Unassigned]
- 048 [Unassigned]
- 049 [Unassigned]

050 General serial publications

- 051 Serials in American English
- 052 Serials in English
- 053 Serials in other Germanic languages
- 054 Serials in French, Occitan & Catalan
- 055 In Italian, Romanian & related languages
- 056 Serials in Spanish & Portuguese
- 057 Serials in Slavic languages
- 058 Serials in Scandinavian languages
- 059 Serials in other languages

060 General organizations & museum science

- 061 Organizations in North America
- 062 Organizations in British Isles; in England
- 063 Organizations in central Europe; in Germany
- 064 Organizations in France & Monaco
- 065 Organizations in Italy & adjacent islands
- 066 In Iberian Peninsula & adjacent islands
- 067 Organizations in eastern Europe; in Russia
- 068 Organizations in other geographic areas
- 069 Museum science

070 News media, journalism & publishing

- 071 Newspapers in North America
- 072 Newspapers in British Isles; in England
- 073 Newspapers in central Europe; in Germany
- 074 Newspapers in France & Monaco
- 075 Newspapers in Italy & adjacent islands
- 076 In Iberian Peninsula & adjacent islands
- 077 Newspapers in eastern Europe; in Russia
- 078 Newspapers in Scandinavia
- 079 Newspapers in other geographic areas

080 General collections

- 081 Collections in American English
- 082 Collections in English
- 083 Collections in other Germanic languages
- 084 Collections in French, Occitan & Catalan
- 085 In Italian, Romanian & related languages
- 086 Collections in Spanish & Portuguese
- 087 Collections in Slavic languages
- 088 Collections in Scandinavian languages
- 089 Collections in other languages

090 Manuscripts & rare books

- 091 Manuscripts
- 092 Block books
- 093 Incunabula
- 094 Printed books
- 095 Books notable for bindings
- 096 Books notable for illustrations
- 097 Books notable for ownership or origin
- 098 Prohibited works, forgeries & hoaxes
- 099 Books notable for format

Philosophy & psychology**100 Philosophy & psychology**

- 101 Theory of philosophy
- 102 Miscellany
- 103 Dictionaries & encyclopedias
- 104 [Unassigned]
- 105 Serial publications
- 106 Organizations & management
- 107 Education, research & related topics
- 108 Kinds of persons treatment
- 109 Historical & collected persons treatment

110 Metaphysics

- 111 Ontology
- 112 [Unassigned]
- 113 Cosmology
- 114 Space
- 115 Time
- 116 Change
- 117 Structure
- 118 Force & energy
- 119 Number & quantity

120 Epistemology, causation & humankind

- 121 Epistemology
- 122 Causation
- 123 Determinism & indeterminism
- 124 Teleology
- 125 [Unassigned]
- 126 The self
- 127 The unconscious & the subconscious
- 128 Humankind
- 129 Origin & destiny of individual souls

130 Parapsychology & occultism

- 131 Parapsychological & occult methods
- 132 [Unassigned]
- 133 Specific topics in parapsychology & occultism
- 134 [Unassigned]
- 135 Dreams & mysteries
- 136 [Unassigned]
- 137 Divinatory graphology
- 138 Physiognomy
- 139 Phrenology

140 Specific philosophical schools

- 141 Idealism & related systems
- 142 Critical philosophy
- 143 Bergsonism & intuitionism
- 144 Humanism & related systems
- 145 Sensationalism
- 146 Naturalism & related systems
- 147 Pantheism & related systems
- 148 Eclecticism, liberalism & traditionalism
- 149 Other philosophical systems

150 Psychology

- 151 [Unassigned]
- 152 Perception, movement, emotions & drives
- 153 Mental processes & intelligence
- 154 Subconscious & altered states
- 155 Differential & developmental psychology
- 156 Comparative psychology
- 157 [Unassigned]
- 158 Applied psychology
- 159 [Unassigned]

160 Logic

- 161 Induction
- 162 Deduction
- 163 [Unassigned]
- 164 [Unassigned]
- 165 Fallacies & sources of error
- 166 Syllogisms
- 167 Hypotheses
- 168 Argument & persuasion
- 169 Analogy

170 Ethics

- 171 Ethical systems
- 172 Political ethics
- 173 Ethics of family relationships
- 174 Occupational ethics
- 175 Ethics of recreation & leisure
- 176 Ethics of sex & reproduction
- 177 Ethics of social relations
- 178 Ethics of consumption
- 179 Other ethical norms

180 Ancient, medieval & eastern philosophy

- 181 Eastern philosophy
- 182 Pre-Socratic Greek philosophies
- 183 Socratic & related philosophies
- 184 Platonic philosophy
- 185 Aristotelian philosophy
- 186 Skeptic & Neoplatonic philosophies
- 187 Epicurean philosophy
- 188 Stoic philosophy
- 189 Medieval western philosophy

190 Modern western philosophy

- 191 Philosophy of United States & Canada
- 192 Philosophy of British Isles
- 193 Philosophy of Germany & Austria
- 194 Philosophy of France
- 195 Philosophy of Italy
- 196 Philosophy of Spain & Portugal
- 197 Philosophy of former Soviet Union
- 198 Philosophy of Scandinavia
- 199 Philosophy in other geographic areas

200 Religion

- 201 Religious mythology & social theology
- 202 Doctrines
- 203 Public worship & other practices
- 204 Religious experience, life & practice
- 205 Religious ethics
- 206 Leaders & organization
- 207 Missions & religious education
- 208 Sources
- 209 Sects & reform movements

210 Philosophy & theory of religion

- 211 Concepts of God
- 212 Existence, knowability & attributes of God
- 213 Creation
- 214 Theodicy
- 215 Science & religion
- 216 [Unassigned]
- 217 [Unassigned]
- 218 Humankind
- 219 [Unassigned]

220 Bible

- 221 Old Testament (Tanakh)
- 222 Historical books of Old Testament
- 223 Poetic books of Old Testament
- 224 Prophetic books of Old Testament
- 225 New Testament
- 226 Gospels & Acts
- 227 Epistles
- 228 Revelation (Apocalypse)
- 229 Apocrypha & pseudepigrapha

230 Christianity & Christian theology

- 231 God
- 232 Jesus Christ & his family
- 233 Humankind
- 234 Salvation & grace
- 235 Spiritual beings
- 236 Eschatology
- 237 [Unassigned]
- 238 Creeds & catechisms
- 239 Apologetics & polemics

240 Christian moral & devotional theology

- 241 Christian ethics
- 242 Devotional literature
- 243 Evangelistic writings for individuals
- 244 [Unassigned]
- 245 [Unassigned]
- 246 Use of art in Christianity
- 247 Church furnishings & articles
- 248 Christian experience, practice & life
- 249 Christian observances in family life

250 Christian orders & local church

- 251 Preaching
- 252 Texts of sermons
- 253 Pastoral office & work
- 254 Parish administration
- 255 Religious congregations & orders
- 256 [Unassigned]
- 257 [Unassigned]
- 258 [Unassigned]
- 259 Pastoral care of families & kinds of persons

260 Social & ecclesiastical theology

- 261 Social theology
- 262 Ecclesiology
- 263 Days, times & places of observance
- 264 Public worship
- 265 Sacraments, other rites & acts
- 266 Missions
- 267 Associations for religious work
- 268 Religious education
- 269 Spiritual renewal

270 History of Christianity & Christian church

- 271 Religious orders in church history
- 272 Persecutions in church history
- 273 Doctrinal controversies & heresies
- 274 History of Christianity in Europe
- 275 History of Christianity in Asia
- 276 History of Christianity in Africa
- 277 History of Christianity in North America
- 278 History of Christianity in South America
- 279 History of Christianity in other areas

280 Christian denominations & sects

- 281 Early church & Eastern churches
- 282 Roman Catholic Church
- 283 Anglican churches
- 284 Protestants of Continental origin
- 285 Presbyterian, Reformed & Congregational
- 286 Baptist, Disciples of Christ & Adventist
- 287 Methodist & related churches
- 288 [Unassigned]
- 289 Other denominations & sects

290 Other religions

- 291 [Unassigned]
 - 292 Greek & Roman religion
 - 293 Germanic religion
 - 294 Religions of Oldic origin
 - 295 Zoroastrianism
 - 296 Judaism
 - 297 Islam, Babism & Bahai Faith
 - 298 (Optional number)
 - 299 Religions not provided for elsewhere
- Dewey Decimal Classification 22nd ed. Summaries*

300 Social sciences

- 301 Sociology & anthropology
- 302 Social interaction
- 303 Social processes
- 304 Factors affecting social behavior
- 305 Social groups
- 306 Culture & institutions
- 307 Communities
- 308 [Unassigned]
- 309 [Unassigned]

310 Collections of general statistics

- 311 [Unassigned]
- 312 [Unassigned]
- 313 [Unassigned]
- 314 General statistics of Europe
- 315 General statistics of Asia
- 316 General statistics of Africa
- 317 General statistics of North America
- 318 General statistics of South America
- 319 General statistics of other areas

320 Political science

- 321 Systems of governments & states
- 322 Relation of state to organized groups
- 323 Civil & political rights
- 324 The political process
- 325 International migration & colonization
- 326 Slavery & emancipation
- 327 International relations
- 328 The legislative process
- 329 [Unassigned]

330 Economics

- 331 Labor economics
- 332 Financial economics
- 333 Economics of land & energy
- 334 Cooperatives
- 335 Socialism & related systems
- 336 Public finance
- 337 International economics
- 338 Production
- 339 Macroeconomics & related topics

340 Law

- 341 Law of nations
- 342 Constitutional & administrative law
- 343 Military, tax, trade & industrial law
- 344 Labor, social, education & cultural law
- 345 Criminal law
- 346 Private law
- 347 Civil procedure & courts
- 348 Laws, regulations & cases
- 349 Law of specific jurisdictions & areas

350 Public administration & military science

- 351 Public administration
- 352 General considerations of public administration
- 353 Specific fields of public administration
- 354 Administration of economy & environment
- 355 Military science
- 356 Infantry forces & warfare
- 357 Mounted forces & warfare
- 358 Air & other specialized forces
- 359 Sea forces & warfare

360 Social problems & services; associations

- 361 Social problems & social welfare in general
- 362 Social welfare problems & services
- 363 Other social problems & services
- 364 Criminology
- 365 Penal & related institutions
- 366 Associations
- 367 General clubs
- 368 Insurance
- 369 Miscellaneous kinds of associations

370 Education

- 371 Schools & their activities; special education
- 372 Elementary education
- 373 Secondary education
- 374 Adult education
- 375 Curricula
- 376 [Unassigned]
- 377 [Unassigned]
- 378 Higher education
- 379 Public policy issues in education

380 Commerce, communications & transportation

- 381 Commerce
- 382 International commerce
- 383 Postal communication
- 384 Communications; telecommunication
- 385 Railroad transportation
- 386 Inland waterway & ferry transportation
- 387 Water, air & space transportation
- 388 Transportation; ground transportation
- 389 Metrology & standardization

390 Customs, etiquette & folklore

- 391 Costume & personal appearance
- 392 Customs of life cycle & domestic life
- 393 Death customs
- 394 General customs
- 395 Etiquette (Manners)
- 396 [Unassigned]
- 397 [Unassigned]
- 398 Folklore
- 399 Customs of war & diplomacy

Language**400 Language**

- 401 Philosophy & theory
- 402 Miscellany
- 403 Dictionaries & encyclopedias
- 404 Special topics
- 405 Serial publications
- 406 Organizations & management
- 407 Education, research & related topics
- 408 Kinds of persons treatment
- 409 Geographic & persons treatment
- 410 Linguistics**
- 411 Writing systems
- 412 Etymology
- 413 Dictionaries
- 414 Phonology & phonetics
- 415 Grammar
- 416 [Unassigned]
- 417 Dialectology & historical linguistics
- 418 Standard usage & applied linguistics
- 419 Sign languages

420 English & Old English

- 421 English writing system & phonology
- 422 English etymology
- 423 English dictionaries
- 424 [Unassigned]
- 425 English grammar
- 426 [Unassigned]
- 427 English language variations
- 428 Standard English usage
- 429 Old English (Anglo-Saxon)
- 430 Germanic languages; German**
- 431 German writing systems & phonology
- 432 German etymology
- 433 German dictionaries
- 434 [Unassigned]
- 435 German grammar
- 436 [Unassigned]
- 437 German language variations
- 438 Standard German usage
- 439 Other Germanic languages

440 Romance languages; French

- 441 French writing systems & phonology
- 442 French etymology
- 443 French dictionaries
- 444 [Unassigned]
- 445 French grammar
- 446 [Unassigned]
- 447 French language variations
- 448 Standard French usage
- 449 Occitan & Catalan

450 Italian, Romanian & related languages

- 451 Italian writing systems & phonology
- 452 Italian etymology
- 453 Italian dictionaries
- 454 [Unassigned]
- 455 Italian grammar
- 456 [Unassigned]
- 457 Italian language variations
- 458 Standard Italian usage
- 459 Romanian & related languages

460 Spanish & Portuguese languages

- 461 Spanish writing systems & phonology
- 462 Spanish etymology
- 463 Spanish dictionaries
- 464 [Unassigned]
- 465 Spanish grammar
- 466 [Unassigned]
- 467 Spanish language variations
- 468 Standard Spanish usage
- 469 Portuguese

470 Italic languages; Latin

- 471 Classical Latin writing & phonology
- 472 Classical Latin etymology
- 473 Classical Latin dictionaries
- 474 [Unassigned]
- 475 Classical Latin grammar
- 476 [Unassigned]
- 477 Old, postclassical & Vulgar Latin
- 478 Classical Latin usage
- 479 Other Italic languages

480 Hellenic languages; classical Greek

- 481 Classical Greek writing & phonology
- 482 Classical Greek etymology
- 483 Classical Greek dictionaries
- 484 [Unassigned]
- 485 Classical Greek grammar
- 486 [Unassigned]
- 487 Preclassical & postclassical Greek
- 488 Classical Greek usage
- 489 Other Hellenic languages

490 Other languages

- 491 East Indo-European & Celtic languages
- 492 Afro-Asiatic languages; Semitic languages
- 493 Non-Semitic Afro-Asiatic languages
- 494 Altaic, Uralic, Hyperborean & Dravidian
- 495 Languages of East & Southeast Asia
- 496 African languages
- 497 North American native languages
- 498 South American native languages
- 499 Austronesian & other languages

Science

500 Natural sciences & mathematics

- 501 Philosophy & theory
- 502 Miscellany
- 503 Dictionaries & encyclopedias
- 504 [Unassigned]
- 505 Serial publications
- 506 Organizations & management
- 507 Education, research & related topics
- 508 Natural history
- 509 Historical, geographic & persons treatment

510 Mathematics

- 511 General principles of mathematics
- 512 Algebra
- 513 Arithmetic
- 514 Topology
- 515 Analysis
- 516 Geometry
- 517 [Unassigned]
- 518 Numerical analysis
- 519 Probabilities & applied mathematics

520 Astronomy & allied sciences

- 521 Celestial mechanics
- 522 Techniques, equipment & materials
- 523 Specific celestial bodies & phenomena
- 524 [Unassigned]
- 525 Earth (Astronomical geography)
- 526 Mathematical geography
- 527 Celestial navigation
- 528 Ephemerides
- 529 Chronology

530 Physics

- 531 Classical mechanics; solid mechanics
- 532 Fluid mechanics; liquid mechanics
- 533 Gas mechanics
- 534 Sound & related vibrations
- 535 Light & infrared & ultraviolet phenomena
- 536 Heat
- 537 Electricity & electronics
- 538 Magnetism
- 539 Modern physics

540 Chemistry & allied sciences

- 541 Physical chemistry
- 542 Techniques, equipment & materials
- 543 Analytical chemistry
- 544 [Unassigned]
- 545 [Unassigned]
- 546 Inorganic chemistry
- 547 Organic chemistry
- 548 Crystallography
- 549 Mineralogy

550 Earth sciences

- 551 Geology, hydrology & meteorology
- 552 Petrology
- 553 Economic geology
- 554 Earth sciences of Europe
- 555 Earth sciences of Asia
- 556 Earth sciences of Africa
- 557 Earth sciences of North America
- 558 Earth sciences of South America
- 559 Earth sciences of other areas

560 Paleontology; paleozoology

- 561 Paleobotany; fossil microorganisms
- 562 Fossil invertebrates
- 563 Fossil marine & seashore invertebrates
- 564 Fossil mollusks & molluscoids
- 565 Fossil arthropods
- 566 Fossil chordates
- 567 Fossil cold-blooded vertebrates; fossil fishes
- 568 Fossil birds
- 569 Fossil mammals

570 Life sciences; biology

- 571 Physiology & related subjects
- 572 Biochemistry
- 573 Specific physiological systems in animals
- 574 [Unassigned]
- 575 Specific parts of & systems in plants
- 576 Genetics & evolution
- 577 Ecology
- 578 Natural history of organisms
- 579 Microorganisms, fungi & algae

580 Plants (Botany)

- 581 Specific topics in natural history
- 582 Plants noted for characteristics & flowers
- 583 Dicotyledons
- 584 Monocotyledons
- 585 Gymnosperms; conifers
- 586 Seedless plants
- 587 Vascular seedless plants
- 588 Bryophytes
- 589 [Unassigned]

590 Animals (Zoology)

- 591 Specific topics in natural history
- 592 Invertebrates
- 593 Marine & seashore invertebrates
- 594 Mollusks & molluscoids
- 595 Arthropods
- 596 Chordates
- 597 Cold-blooded vertebrates; fishes
- 598 Birds
- 599 Mammals

Technology**600 Technology**

- 601 Philosophy & theory
- 602 Miscellany
- 603 Dictionaries & encyclopedias
- 604 Special topics
- 605 Serial publications
- 606 Organizations
- 607 Education, research & related topics
- 608 Inventions & patents
- 609 Historical, geographic & persons treatment

610 Medicine & health

- 611 Human anatomy, cytology & histology
- 612 Human physiology
- 613 Personal health & safety
- 614 Incidence & prevention of disease
- 615 Pharmacology & therapeutics
- 616 Diseases
- 617 Surgery & related medical specialties
- 618 Gynecology, obstetrics, pediatrics & geriatrics
- 619 [Unassigned]

620 Engineering & allied operations

- 621 Applied physics
- 622 Mining & related operations
- 623 Military & nautical engineering
- 624 Civil engineering
- 625 Engineering of railroads & roads
- 626 [Unassigned]
- 627 Hydraulic engineering
- 628 Sanitary & municipal engineering
- 629 Other branches of engineering

630 Agriculture & related technologies

- 631 Techniques, equipment & materials
- 632 Plant injuries, diseases & pests
- 633 Field & plantation crops
- 634 Orchards, fruits & forestry
- 635 Garden crops (Horticulture)
- 636 Animal husbandry
- 637 Processing dairy & related products
- 638 Insect culture
- 639 Hunting, fishing & conservation

640 Home & family management

- 641 Food & drink
- 642 Meals & table service
- 643 Housing & household equipment
- 644 Household utilities
- 645 Household furnishings
- 646 Sewing, clothing & personal living
- 647 Management of public households
- 648 Housekeeping
- 649 Child rearing & home care of persons

650 Management & auxiliary services

- 651 Office services
- 652 Processes of written communication
- 653 Shorthand
- 654 [Unassigned]
- 655 [Unassigned]
- 656 [Unassigned]
- 657 Accounting
- 658 General management
- 659 Advertising & public relations

660 Chemical engineering

- 661 Industrial chemicals
- 662 Explosives, fuels & related products
- 663 Beverage technology
- 664 Food technology
- 665 Industrial oils, fats, waxes & gases
- 666 Ceramic & allied technologies
- 667 Cleaning, color & coating technologies
- 668 Technology of other organic products
- 669 Metallurgy

670 Manufacturing

- 671 Metalworking & primary metal products
- 672 Iron, steel & other iron alloys
- 673 Nonferrous metals
- 674 Lumber processing, wood products & cork
- 675 Leather & fur processing
- 676 Pulp & paper technology
- 677 Textiles
- 678 Elastomers & elastomer products
- 679 Other products of specific materials

680 Manufacture for specific uses

- 681 Precision instruments & other devices
- 682 Small forge work (Blacksmithing)
- 683 Hardware & household appliances
- 684 Furnishings & home workshops
- 685 Leather, fur goods & related products
- 686 Printing & related activities
- 687 Clothing & accessories
- 688 Other final products & packaging
- 689 [Unassigned]

690 Buildings

- 691 Building materials
- 692 Auxiliary construction practices
- 693 Specific materials & purposes
- 694 Wood construction & carpentry
- 695 Roof covering
- 696 Utilities
- 697 Heating, ventilating & air-conditioning
- 698 Detail finishing
- 699 [Unassigned]

Art & Recreation

700 The arts; fine & decorative arts

- 701 Philosophy of fine & decorative arts
- 702 Miscellany of fine & decorative arts
- 703 Dictionaries of fine & decorative arts
- 704 Special topics in fine & decorative arts
- 705 Serial publications of fine & decorative arts
- 706 Organizations & management
- 707 Education, research & related topics
- 708 Galleries, museums & private collections
- 709 Historical, geographic & persons treatment

710 Civic & landscape art

- 711 Area planning
- 712 Landscape architecture
- 713 Landscape architecture of trafficways
- 714 Water features
- 715 Woody plants
- 716 Herbaceous plants
- 717 Structures in landscape architecture
- 718 Landscape design of cemeteries
- 719 Natural landscapes

720 Architecture

- 721 Architectural structure
- 722 Architecture to ca. 300
- 723 Architecture from ca. 300 to 1399
- 724 Architecture from 1400
- 725 Public structures
- 726 Buildings for religious purposes
- 727 Buildings for education & research
- 728 Residential & related buildings
- 729 Design & decoration

730 Plastic arts; sculpture

- 731 Processes, forms & subjects of sculpture
- 732 Sculpture to ca. 500
- 733 Greek, Etruscan & Roman sculpture
- 734 Sculpture from ca. 500 to 1399
- 735 Sculpture from 1400
- 736 Carving & carvings
- 737 Numismatics & sigillography
- 738 Ceramic arts
- 739 Art metalwork

740 Drawing & decorative arts

- 741 Drawing & drawings
- 742 Perspective
- 743 Drawing & drawings by subject
- 744 [Unassigned]
- 745 Decorative arts
- 746 Textile arts
- 747 Interior decoration
- 748 Glass
- 749 Furniture & accessories

750 Painting & paintings

- 751 Techniques, equipment, materials & forms
- 752 Color
- 753 Symbolism, allegory, mythology & legend
- 754 Genre paintings
- 755 Religion
- 756 [Unassigned]
- 757 Human figures
- 758 Other subjects
- 759 Historical, geographic & persons treatment

760 Graphic arts; printmaking & prints

- 761 Relief processes (Block printing)
- 762 [Unassigned]
- 763 Lithographic processes
- 764 Chromolithography & serigraphy
- 765 Metal engraving
- 766 Mezzotinting, aquatinting & related processes
- 767 Etching & drypoint
- 768 [Unassigned]
- 769 Prints

770 Photography, photographs & computer art

- 771 Techniques, equipment & materials
- 772 Metallic salt processes
- 773 Pigment processes of printing
- 774 Holography
- 775 Digital photography
- 776 Computer art (Digital art)
- 777 [Unassigned]
- 778 Fields & kinds of photography
- 779 Photographs

780 Music

- 781 General principles & musical forms
- 782 Vocal music
- 783 Music for single voices; the voice
- 784 Instruments & instrumental ensembles
- 785 Ensembles with one instrument per part
- 786 Keyboard & other instruments
- 787 Stringed instruments
- 788 Wind instruments
- 789 (Optional number)

790 Recreational & performing arts

- 791 Public performances
- 792 Stage presentations
- 793 Indoor games & amusements
- 794 Indoor games of skill
- 795 Games of chance
- 796 Athletic & outdoor sports & games
- 797 Aquatic & air sports
- 798 Equestrian sports & animal racing
- 799 Fishing, hunting & shooting

Literature

800 Literature & rhetoric

- 801 Philosophy & theory
- 802 Miscellany
- 803 Dictionaries & encyclopedias
- 804 [Unassigned]
- 805 Serial publications
- 806 Organizations & management
- 807 Education, research & related topics
- 808 Rhetoric & collections of literature
- 809 History, description & criticism

810 American literature in English

- 811 American poetry in English
- 812 American drama in English
- 813 American fiction in English
- 814 American essays in English
- 815 American speeches in English
- 816 American letters in English
- 817 American humor & satire in English
- 818 American miscellaneous writings
- 819 (Optional number)

820 English & Old English literatures

- 821 English poetry
- 822 English drama
- 823 English fiction
- 824 English essays
- 825 English speeches
- 826 English letters
- 827 English humor & satire
- 828 English miscellaneous writings
- 829 Old English (Anglo-Saxon)

830 Literatures of Germanic languages

- 831 German poetry
- 832 German drama
- 833 German fiction
- 834 German essays
- 835 German speeches
- 836 German letters
- 837 German humor & satire
- 838 German miscellaneous writings
- 839 Other Germanic literatures

840 Literatures of Romance languages

- 841 French poetry
- 842 French drama
- 843 French fiction
- 844 French essays
- 845 French speeches
- 846 French letters
- 847 French humor & satire
- 848 French miscellaneous writings
- 849 Occitan & Catalan literatures

850 Italian, Romanian & related literatures

- 851 Italian poetry
- 852 Italian drama
- 853 Italian fiction
- 854 Italian essays
- 855 Italian speeches
- 856 Italian letters
- 857 Italian humor & satire
- 858 Italian miscellaneous writings
- 859 Romanian & related literatures

860 Spanish & Portuguese literatures

- 861 Spanish poetry
- 862 Spanish drama
- 863 Spanish fiction
- 864 Spanish essays
- 865 Spanish speeches
- 866 Spanish letters
- 867 Spanish humor & satire
- 868 Spanish miscellaneous writings
- 869 Portuguese literature

870 Italic literatures; Latin literature

- 871 Latin poetry
- 872 Latin dramatic poetry & drama
- 873 Latin epic poetry & fiction
- 874 Latin lyric poetry
- 875 Latin speeches
- 876 Latin letters
- 877 Latin humor & satire
- 878 Latin miscellaneous writings
- 879 Literatures of other Italic languages

880 Hellenic literatures; classical Greek

- 881 Classical Greek poetry
- 882 Classical Greek dramatic poetry & drama
- 883 Classical Greek epic poetry & fiction
- 884 Classical Greek lyric poetry
- 885 Classical Greek speeches
- 886 Classical Greek letters
- 887 Classical Greek humor & satire
- 888 Classical Greek miscellaneous writings
- 889 Modern Greek literature

890 Literatures of other languages

- 891 East Indo-European & Celtic literatures
- 892 Afro-Asiatic literatures; Semitic literatures
- 893 Non-Semitic Afro-Asiatic literatures
- 894 Altaic, Uralic, Hyperborean & Dravidian
- 895 Literatures of East & Southeast Asia
- 896 African literatures
- 897 North American native literatures
- 898 South American native literatures
- 899 Austronesian & other literatures

History & geography

900 History & geography

- 901 Philosophy & theory
- 902 Miscellany
- 903 Dictionaries & encyclopedias
- 904 Collected accounts of events
- 905 Serial publications
- 906 Organizations & management
- 907 Education, research & related topics
- 908 Kinds of persons treatment
- 909 World history

910 Geography & travel

- 911 Historical geography
- 912 Atlases, maps, charts & plans
- 913 Geography of & travel in ancient world
- 914 Geography of & travel in Europe
- 915 Geography of & travel in Asia
- 916 Geography of & travel in Africa
- 917 Geography of & travel in North America
- 918 Geography of & travel in South America
- 919 Geography of & travel in other areas

920 Biography, genealogy & insignia

- 921 (Optional number)
- 922 (Optional number)
- 923 (Optional number)
- 924 (Optional number)
- 925 (Optional number)
- 926 (Optional number)
- 927 (Optional number)
- 928 (Optional number)
- 929 Genealogy, names & insignia

930 History of ancient world to ca. 499

- 931 China to 420
- 932 Egypt to 640
- 933 Palestine to 70
- 934 India to 647
- 935 Mesopotamia & Iranian Plateau to 637
- 936 Europe north & west of Italy to ca. 499
- 937 Italy & adjacent territories to 476
- 938 Greece to 323
- 939 Other parts of ancient world to ca. 640

940 History of Europe

- 941 British Isles
- 942 England & Wales
- 943 Central Europe; Germany
- 944 France & Monaco
- 945 Italian Peninsula & adjacent islands
- 946 Iberian Peninsula & adjacent islands
- 947 Eastern Europe; Russia
- 948 Scandinavia
- 949 Other parts of Europe

950 History of Asia; Far East

- 951 China & adjacent areas
- 952 Japan
- 953 Arabian Peninsula & adjacent areas
- 954 South Asia; India
- 955 Iran
- 956 Middle East (Near East)
- 957 Siberia (Asiatic Russia)
- 958 Central Asia
- 959 Southeast Asia

960 History of Africa

- 961 Tunisia & Libya
- 962 Egypt & Sudan
- 963 Ethiopia & Eritrea
- 964 Northwest African coast & offshore islands
- 965 Algeria
- 966 West Africa & offshore islands
- 967 Central Africa & offshore islands
- 968 Southern Africa; Republic of South Africa
- 969 South Indian Ocean islands

970 History of North America

- 971 Canada
- 972 Middle America; Mexico
- 973 United States
- 974 Northeastern United States
- 975 Southeastern United States
- 976 South central United States
- 977 North central United States
- 978 Western United States
- 979 Great Basin & Pacific Slope region

980 History of South America

- 981 Brazil
- 982 Argentina
- 983 Chile
- 984 Bolivia
- 985 Peru
- 986 Colombia & Ecuador
- 987 Venezuela
- 988 Guiana
- 989 Paraguay & Uruguay

990 History of other areas


- 991 [Unassigned]
- 992 [Unassigned]
- 993 New Zealand
- 994 Australia
- 995 Melanesia; New Guinea
- 996 Other parts of Pacific; Polynesia
- 997 Atlantic Ocean islands
- 998 Arctic islands & Antarctica
- 999 Extraterrestrial worlds

Appendix C: Sample catalogue cards


Main Entry

658.8 KOT	Kotler, Philip	
234567		<p>Introduction to marketing. 2nd ed. - New York: Prentice Hall. 1999</p> <p>xvi, 345p. ,23cm. - (Prentice Hall Series Marketing: 29)</p> <p>I. Marketing. I. Title II (Series)</p> <div style="text-align: center; margin-top: 20px;">○</div>


Added Entry (Subject)

658.8	Kotler. Philip	
234567		<p>Introduction to marketing. 2nd ed. - New York: Prentice Hall. xvi, 345p. ,23cm. - (Prentice Hall Series Marketing: 29)</p> <p>I. Marketing. I. Title II (Series)</p> 

Added Entry (Series)

658.8	Kotler. Philip	
234567		<p>Introduction to marketing. 2nd ed. - New York: Prentice Hall. xvi, 345p. ,23cm. - (Prentice Hall Series Marketing: 29)</p> <p>I. Marketing. I. Title II (Series)</p> 

Added Entry (Title)

658.8 KOT	Kotler. Philip	
234567		<p>Introduction to marketing. 2nd ed. - New York: Prentice Hall. 1999 xvi, 345p. ,23cm. - (Prentice Hall Series Marketing: 29)</p> <p>I. Marketing. I. Title II (Series)</p> 



References and Further Reading

PALDIN learners, please note that the references in the list below refer to the sources used by course developers for writing the units of Course 1. Some of the references have been added as further reading. Those of you interested in reading more and going to the sources of information in PALDIN course material will find this list very useful.

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