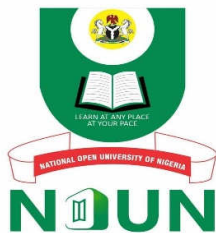


**COURSE  
GUIDE**

**LIS415  
INFORMATION RESOURCES IN SUBJECT AREAS**

**Course Team**      Abdulkadir, Aliyu (Ph.D) (Course  
Developer/Writer) - NOUN  
  
Mr. Chukwuemeka Nwosu (Copy Editor) - NOUN



**NATIONAL OPEN UNIVERSITY OF NIGERIA**

© 2022 by NOUN Press  
National Open University of Nigeria  
Headquarters  
University Village  
Plot 91, Cadastral Zone  
Nnamdi Azikiwe Expressway  
Jabi, Abuja

Lagos Office  
14/16 Ahmadu Bello Way  
Victoria Island, Lagos

e-mail: [centralinfo@nou.edu.ng](mailto:centralinfo@nou.edu.ng)

URL: [www.nou.edu.ng](http://www.nou.edu.ng)

All rights reserved. No part of this book may be reproduced, in any form or by any means, without exclusive permission in writing from the publisher.

Printed 2022

ISBN: 978-978-058-291-3

<b>CONTENTS</b>	<b>PAGE</b>
Introduction.....	iv
What You Will Learn In This Course.....	iv
Learning Outcomes.....	iv
Working through this Course.....	v
Study Units.....	vi
Assessment.....	vi
Final Examination and Grading.....	vi
Course Marking Scheme.....	vii
Course Overview.....	vii
How to Get the Most from this Course.....	vii
Facilitators/Tutors and Tutorials.....	xi
Summary.....	xi

## INTRODUCTION

Welcome to **LIS415: Information Resources in Subject Areas**. This is a first-semester course with a two-credit unit that will last for a minimum duration of one semester. It is also suitable courseware for library students who wish to acquire the needed knowledge on information resources by subject. This course will help students gain practical skills in selected disciplines within the broad subject areas of the humanities, the social sciences, pure and applied sciences. The course examined the definition of concepts, communication patterns; bibliographic organisation and information resources in the subject areas; overview through the field(s) and provision of practice in reference resources to solve users' information needs; provide experience in the use of databases related to the field(s).

## WHAT YOU WILL LEARN IN THIS COURSE

This course LIS415 Information Resources in Subject Areas has been designed to help you understand information resources from different subject areas in both print and non-print format. The course will highlight:

- Concept of information resources
- Concept of bibliographies
- Reference sources
- Communication patterns and structure
- Types of bibliographies
- Databases
- Information services.

## LEARNING OUTCOMES

By the end of this course, you will be able to:

- i. Discuss information resources by subject disciplines: Humanities, Social Sciences. Pure and Applied Sciences have been selected because they illustrate different information use patterns and various information resources.
- ii. Examines the nature of the subject and how information is generated and communicated in the subject to provide a background and setting for identifying, evaluating, and using information resources relevant to the subject.
- iii. Identify communication patterns in an organisation
- iv. Understand the bibliographic organisation and information resources in the subject areas

- v. Have an overview through the field(s) and provision of practice in reference resources to solve users' information need
- vi. Provide experience in the use of databases related to the field(s).

### **WORKING THROUGH THIS COURSE**

It is imperative that you thoroughly go through the modules, carefully read the study units, do all assessments, and examine the links in order to complete this course. Also, reading all the recommended books and other related materials for efficient grasp of the subject matter is germane. Each study unit has an introduction, intended learning outcomes, the main content, summary conclusion, and references/further readings.

There are two main forms of assessments – the formative and the summative. The formative assessments will help you monitor your learning. This is presented as in-text questions, discussion forums and Self-Assessment Exercises. The summative assessments would be used by the university to evaluate your academic performance. This will be given as Computer-Based Test (CBT) which serves as continuous assessment and final examinations. A minimum of three computer-based tests will be given with only one final examination at the end of the semester. You are required to take all the computer base tests and the final examination.

### **STUDY UNITS**

There are 18 study units in this course, divided into five modules. The modules and units are presented as follows:

#### **Module 1 Definition**

- Unit 1 Communication
- Unit 2 Bibliographies
- Unit 3 Information Resources and Services
- Unit 4 Documentary sources of Information
- Unit 5 Reference Resources

#### **Module 2 Communication Patterns**

- Unit 1 Communication Patterns
- Unit 2 Communication Flow Patterns and Network
- Unit 3 Communication Process and Barriers

**module 3      Bibliographic Organisation**

Unit 1	Bibliography
Unit 2	Types of Bibliographies
Unit 3	Enumerative Bibliography

**Module 4      Information Resources and Reference Services In Subject Areas**

Unit 1	Humanities
Unit 2	Social Sciences
Unit 3	Pure and Applied Sciences
Unit 4	Reference Services
Unit 5	Types of Reference Sources

**Module 5      Use of Databases Related to The Fields**

Unit 1	Library Database
Unit 2	Types of Library Database

**PRESENTATION SCHEDULE**

You can find the crucial dates for finishing your computer-based assessments, taking part in forum discussions, and attending facilitation on the presentation schedule. Keep in mind that you must turn in all of your assignments on time. Avoiding delays and plagiarism in your work is a good idea.

**ASSESSMENT**

There are two main forms of assessments in this course that will be scored: The Continuous Assessments and the final examination. The university uses summative assessments to evaluate your academic performance in the courseware you studied. The summative assessment, a Computer-Based Test (CBT), comprises objectives and sub-objective questions. There are three continuous assessments, 10% each and final examinations are based on 70%. You are required to take all the computer-based tests and the final examination.

**FINAL EXAMINATION AND GRADING**

At the end of the course, you are required to take an examination which will last for a 2-hour duration. It has a value of 70% of the total course grade. The examination will consist of questions that will reflect the type of self-assessment, practice exercises carefully.

Try to use time between the finishing the last unit and sitting for the examination to revise the entire course. You may find it useful to review your Tutor-Marked Assignment or activities before the examination.

### **COURSE MARKING SCHEME**

The following table lays out how the actual course marking is done

Assessment	30% (Undergraduate) 40% (Postgraduate)
Final Examination	70% (Undergraduate) 60% (Postgraduate)
Total	100% of Course work

### **COURSE OVERVIEW**

#### **HOW TO GET THE MOST FROM THIS COURSE**

In Open and Distance Learning (ODL), the study units replace the university lecture. This is one of the advantages of ODL. You can read and work through specially designed study materials at your own pace and at a time and place that is convenient for you. Just as a lecturer may give you classroom exercises, your study units provide exercises for you to do at a particular point in time.

Each of the study units follows a common format. The first item is an introduction to the subject matter of the study unit and how a specific study unit is integrated with the other study and the course as a whole. Following the introduction is the intended learning outcomes which helps you to know what you should be able to do by the time you have completed the study unit. When you are through studying the unit, you should endeavour to go back and check if you have achieved the stated learning outcomes. If you consistently do this, you will improve your chances of passing the course. The main content of the study unit guides you through the required reading from recommended sources.

Tutor-Marked Assignment (TMAs) are found at the end of every study unit. Working through these SAEs will help you to achieve the objectives of the study units and prepare you for the examination.

You should do every SAE as you come to it in the study units. There will also be examples given in the study units. Work through these when you come to them too.

The following is a practical strategy for working through the course. If you encounter any problem, telephone your tutor immediately.

Remember, that your tutor's job is to help you. When you need help, do not hesitate to call and ask your tutor to provide it.

1. The main body of the unit guides you through the required reading and directs you to other sources, if any.
2. Your first assignment in this course is to read this course guide thoroughly.
3. Organise a study schedule: Refer to the course overview for more details. You should note that it is expected of you to devote at least 2 hours per week for studying this course. Note important information such as details of your tutorials, dates for submission of TMAs, exams etc. and write it down in your diary.
4. Once you have created your own study schedule, do everything to stay faithful to it. The major reason that students fail is that they get behind with their course work. If you get into difficulties with your schedule, please let your tutor know before it is too late to help.
5. Turn to Unit 1, and read the introduction and the objectives for unit 1.
6. Assemble the study materials. You will need your references and the unit you are studying at any point in time.
7. As you work through the unit, you will know the sources to consult for further readings.
8. Visit your study centre whenever you need up to date information
9. Well before the relevant due dates (about 4 weeks before the due dates), visit your study centre for your next required assignment. Keep in mind that you will learn a lot by doing the assignment carefully. They have been designed to help you meet the objectives of the course and, therefore, will help you pass the examination. Submit all assignments not later than the due date.
10. Review the objectives for each study unit to confirm that you have achieved them. If you feel unsure about any of the objectives, review the study materials or consult your tutor. When you are confident that you have achieved a unit's objectives, you can start on the next unit. Proceed unit by unit through the course and try to space your study so that you can keep yourself on schedule.
11. When you have submitted an assignment to your tutor for marking, do not wait for its return before starting on the next unit. Keep to your schedule. When the assignment is returned, pay particular attention to your tutor's comments, both on the tutor-marked assignment form and also the written comments on the ordinary assignments.
12. After completing the last unit, review the course and prepare yourself for the final examination. Check that you have achieved the unit objectives (listed at the beginning of each unit) and the course objectives (listed in the Course Guide).



## FACILITATION

You will receive online facilitation. The facilitation is learner centred. The mode of facilitation shall be asynchronous and synchronous. For the asynchronous facilitation, your facilitator will:

- Present the theme for the week;
- Direct and summarise forum discussions;
- Coordinate activities in the platform;
- Score and grade activities when needed;
- Upload scores into the university recommended platform;
- Support and help you to learn. In this regard personal mails may be sent;
- Send videos, audio lectures and podcasts to you.

For the synchronous:

- There will be eight hours of online real time contacts in the course. This will be through video conferencing in the Learning Management System. The eight hours shall be of one-hour contact for eight times.
- At the end of each one-hour video conferencing, the video will be uploaded for viewing at your pace.
- The facilitator will concentrate on main themes that are must know in the course.
- The facilitator is to present the online real time video facilitation timetable at the beginning of the course.
- The facilitator will take you through the course guide in the first lecture at the start date of facilitation

Do not hesitate to contact your facilitator. Contact your facilitator if you:

- do not understand any part of the study units or the assignments.
- have difficulty with the self-assessment exercises.
- have any question or problem with an assignment or with your tutor's comments on an assignment.

Also, use the contact provided for technical support.

Read all the comments and notes of your facilitator especially on your assignments; participate in the forums and discussions. This gives you the opportunity to socialise with others in the programme. You can discuss any problem encountered during your study. To gain the maximum benefit from course facilitation, prepare a list of questions before the

discussion session. You will learn a lot from participating actively in the discussions.

Finally, respond to the questionnaire. This will help the university to know your areas of challenges and how to improve on them for the review of the course materials and lectures.

Information Resources in Subject Areas, is intended to make you understand the various types of information resources pertinent to different subject areas, methods of communication, databases and information services. Adherence to the instructions will aid you to achieve the objectives at the end of the course. We wish you success as you adhere strictly to the instructions and advice given to you for this course.

**MAIN  
COURSE**

**CONTENTS**

<b>Module 1</b>	<b>Concepts Information Resources in Subject Areas.....</b>	<b>1</b>
Unit 1	Communication .....	1
Unit 2	Bibliographies.....	5
Unit 3	Information Resources and Services.....	9
Unit 4	Documentary sources of Information.....	16
Unit 5	Reference Resources .....	32
<b>Module 2</b>	<b>Communication Patterns.....</b>	<b>42</b>
Unit 1	Communication Patterns.....	58
Unit 2	Communication Flow Patterns and Network.....	62
Unit 3	Communication Process and Barriers.....	66
<b>Module 3</b>	<b>Bibliographic Organisation.....</b>	<b>58</b>
Unit 1	Bibliography.....	58
Unit 2	Types of Bibliographies.....	62
Unit 3	Enumerative Bibliography.....	66
<b>Module 4</b>	<b>Information Resources and Reference Services In Subject Areas.....</b>	<b>73</b>
Unit 1	Humanities .....	73
Unit 2	Social Sciences.....	80
Unit 3	Pure and Applied Sciences.....	84
Unit 4	Reference Services.....	91
Unit 5	Types of Reference Sources.....	95
<b>Module 5</b>	<b>Use of Databases Related to The Fields.....</b>	<b>110</b>
Unit 1	Library Database .....	110
Unit 2	Types of Library Database .....	115



### **1.3 Communication**

Communication means transferring ideas from one person to another, and it has several forms such as intrapersonal, interpersonal, group and mass communication. Communication is fundamental to the existence and survival of humans as well as to an organisation. It is a process of creating and sharing messages, data, views, facts, feelings, etc., among people to reach a common understanding. Communication is the key to directing the function of management. Communication is the life wire of new institutions. It is through it that they maintain fruitful relationships with their many publics. As it is in all human affairs, communication plays a vital role in all aspects of managerial life. Conventionally, communication has been described from an array of viewpoints, in terms of the hierarchical position of the sender and receiver, the direction of the communication, its level of abstraction, the function of the communication, and its content and form, among others (Postmes, Haslam, & Jans, 2013).

### **1.4 Dimensions of Communication**

Communication can take different dimensions, such as:

**1.4.1 Upward dimension:** the flow of information from lower levels to higher-levels is known as upward communication. People respond to directions and instructions through upward communication. Matters such as students to lecturers suggestions, ideas, opinions, feelings about the subject matter, reporting of lecturers etc. flow through upward communication. Informal channels of communication can increase the efficiency of upward communication. Use of suggestion schemes, grievance procedures, periodic reports, committees, open-door policy etc. is also helpful in this regard.

**1.4.2 Downward dimension:** refers to the flow of information from higher to lower levels in defined settings. Information flows from the top-most authority to the bottom-most persons (workers) through various levels. This flow of information generally prevails where the autocratic style of management is dominant. Downward communication can be oral or written. Oral communication is done through speeches, telephone, face-to-face interaction or meetings. Written communication is done through letters, handbooks, pamphlets, posters, bulletins, annual reports, policy statements, notices, circulars etc. The written form of downward communication is used when a confidential matter to be reported requires documentary evidence.

**1.4.3 Horizontal dimension:** the flow of information amongst people at the same level is known as horizontal communication. It is interaction

amongst peer groups. It involves communication with people at the same level. The most common horizontal communication happens amongst students in the class.

**1.4.4 Cross-wise communication:** the flow of information amongst people of different departments at different levels is known as cross-wise communication. When a student from a department talks to another student from a different department, cross-wise communication is said to have taken place.

## 1.5 Summary

In this unit, we have discussed what communication is all about and the different dimensions of communication. If you remember, we defined;

- Communication as a means of transferring a message from one point to another
- It is through communication that organisations maintain fruitful relationships with their many publics
- Dimensions of communication were also discussed.

### SELF-ASSESSMENT EXERCISE

1. What is communication?
2. Explain the dimensions of communication.

## 1.6 Glossary

Communication is a means of transferring a message from one point to another.

## 1.7 References/Further Reading/Web Resources

- Dennis, H.S. (1974). *A Theoretical and Empirical Study of Managerial Communication climate in Complex Organisations*. Ann Arbor, MI.: Purdue University.
- James, S., Isaac, O. & Oludayo, S. (1999). *Introduction to Communication for Business and Organisations*. Ibadan: Spectrum Books.
- Postmes, T. (2003). A social identity approach to communication in organisations. *Social identity at work: Developing theory for organisational practice, 81*, 191-203.
- Postmes, T., Haslam, S. A., & Jans, L. (2013). A single-item measure of social identification: Reliability, validity, and utility. *British Journal of Social Psychology, 52*(4), 597-617.
- Saumure, K. & Shiri, A. (2008) Knowledge organisation trends in library and information studies: a preliminary comparison of the pre-

and post-web eras. *Journal of Information Science*,  
34(5)651–666.<http://citeseerx.ist.psu.edu/viewdoc/download>

### **1.8 Possible Answers to Self-Assessment Exercise(S) Within The Content**

1. Communication means transferring ideas from one person to another, and it has several forms such as intrapersonal, interpersonal, group and mass communication.
2. Upward Communication
3. Downward Communication
4. Horizontal Communication
5. Cross-Wise Communication

## UNIT 2 BIBLIOGRAPHIES

### Unit Structure

- 2.1 Introduction
- 2.2 Intended Intended Intended Intended Learning Outcomes
- 2.3 Concept of Bibliography
- 2.4 Types of Bibliography
  - 2.4.1 Enumerative bibliography
  - 2.4.2 Analytical bibliographies
  - 2.4.3 Annotated bibliographies
  - 2.4.4 Author bibliography
  - 2.4.5 Subject bibliography
- 2.5 Summary
- 2.6 Glossary
- 2.7 References/Further Reading/Web Resources
- 2.8 Possible Answers to self- Assessment Exercise(s) within the context

### 2.1 Introduction

Having learned about communication and the different dimensions of communication in unit 1. We will now discuss bibliography and forms of bibliographies in this unit.

### 2.2 Intended Intended Intended Intended Learning Outcomes

At the end of this unit, you will be able to:

- define the term bibliography
- differentiate a selective bibliography with other bibliographies
- give examples of bibliographies

### 2.3 Concept of Bibliography

The term bibliography is the term used for a list of sources (e.g. books, articles, websites) used to write an assignment (e.g. an essay). It usually includes all the sources consulted even if they are not directly cited (referred to) in the assignment. Bibliographies are regarded as the most important tool in libraries and documentation centres. This is because they allow the free flow of bibliographic information on the published literature of all disciplines. Bibliographies guide other information sources. They are lists of books and other materials that present author, title, and publication information. Similarly, bibliography can be seen as



a systematic list of works by a particular author, subject or place of publication.

## 2.4 Types of Bibliography

**2.4.1** Enumerative bibliography lists references according to some specific arrangement. Students writing research papers use this type of bibliography most often. Enumerative bibliographies are arranged by author, subject, date or some other scheme. The items they list share a common theme, such as topic, language or period. Enumerative bibliography gives enough information about the source to direct readers to it. The physical qualities of the book are not included in an enumerative bibliography. A card catalogue, a list of references in a research paper, or the works cited in the back of a history book is all examples of enumerative bibliographies.

**2.4.2** Analytical bibliographies include information about printers and booksellers, descriptions of paper and binding, or discussions of issues that unfolded as the book evolved from a manuscript to a published book. Three types of analytical bibliographies include descriptive, historical, and textual. A descriptive bibliography closely examines the physical nature of the book. A historical bibliography discusses the context in which the book was produced.

**2.4.3** Annotated bibliographies deal with the concise description or summary of an item.

**2.4.4** Author bibliography which indicates materials published by a particular author.

**2.4.5** Subject bibliography shows books in a particular subject area.

Bibliographies are available on almost every topic and may focus on specific persons, groups, subjects, or periods. Many bibliographies are selective and do not attempt to include all publications.

**Examples:** *American Fiction, 1774-1850*, *Bibliography of Education: An Annotated Bibliography*, *A Bibliography of Sir Walter Scott*, *MLA Bibliography*, *Current Bibliographies in Medicine* (NLM), [Alutiig Ethnographic Bibliography](#) (ANKN).

## 2.5 Summary

In this unit, we have discussed what a bibliography is all about and the different purposes of bibliographies. If you remember:

- A bibliography allows the free flow of information on the published literature of all disciplines.
- There are different types of bibliographies.

## SELF-ASSESSMENT EXERCISE

Now test your level of understanding by attempting the self-assessment exercise below:

- Define bibliographies.
- Distinguish between analytical bibliography and annotated bibliography.

### 2.6 Glossary

1. Bibliography is the term used for a list of sources
2. Enumerative Bibliography
3. Analytical bibliography
4. Annotated bibliography
5. Subject bibliography
6. Author bibliography

### 2.7 References/Further Reading/Web Resources

Evans, G. Edward. (1987). *Developing Library and Information Center Collections*, 2<sup>nd</sup> ed. Englewood Cliffs, CO.: Libraries Unlimited.

Gardener, Richard K. (1981). *Library Collections: Their Origin, Selection, and Development*. New York: McGraw-Hill.

Lombardo, Jennifer (2018). *Barriers to Effective Communication: Definition & Examples*. Retrieved from: <https://study.com/academy/lesson/barriers-to-effective-communicationdefinition-examples.html>.

Lancaster, F.W. (2003). *Indexing and Abstracting in Theory and Practice*. 3<sup>rd</sup> ed. Illinois:University of Illinois.

## **2.9 Possible Answers to self-Assessment Exercise(s)**

1. Bibliographies guide other information sources.
2. Annotated bibliographies deal with the concise description or summary of an item.
3. Author bibliography which indicates materials published by a particular author.
4. Subject bibliography shows books in a particular subject area.
5. Analytical bibliographies include information about printers and booksellers, descriptions of paper and binding, or discussions of issues that unfolded as the book evolved from a manuscript to a published book.

## UNIT 3 INFORMATION RESOURCES

### Unit Structure

- 3.1 Introduction
- 3.2 Intended Intended Intended Intended Learning Outcomes
- 3.3 Concept of Information Resources
- 3.4 Types of Information Resources
  - 3.4.1 Print resources
  - 3.4.2 Non-print resources
- 3.5 Dissemination of Information
- 3.6 Selective Dissemination of Information
- 3.7 Current Awareness Services (CAS)
  - 3.7.1 Contents-by-Journal Service
  - 3.7.2 Documentation Bulletins or Current Awareness Lists
  - 3.7.3 Research-in-Progress Bulletins
  - 3.7.4 Newspaper Clipping Service
- 3.8 Summary
- 3.9 Glossary
- 3.10 References/Further Reading/Web Resources
- 3.11 Possible Answers to self-Assessment Exercise(s) within the context

### 3.1 Introduction

In unit 2, we discussed bibliography, its features, analytical bibliography and annotated bibliography. In this unit, we will discuss other library information resources. We will discuss the types extensively and their features.

### 3.2 Intended Intended Learning Outcomes

At the end of this unit, you will be able to:

- discuss information resource
- classify different types of information resources.

### 3.3 Concept of Information Resources

The term 'resource' means a source of supply, usually in large volume. An individual is said to be 'resourceful' when he or she can handle complicated situations. Generally, resources are aids to the scholar. They are those materials, strategies, manipulations, apparatuses or consultations that enhance research and development. Therefore, information resources include all forms of information carriers that can

be used to promote and encourage practical research activities and projects.

### 3.4 Types of Information Resources

**3.4.1** Print resources: Print information resources are information resources in physical and tangible formats. Examples of print information resources are books, journals, pamphlets, newsletters and reference sources. They also include projected aids, visual aids, three-dimensional aids and non-projected aids.

**3.4.2** Non-print resources: These are materials that appeal to the senses of hearing and touch such as records and record players, tapes and tape recorders, language laboratories, radio, and resources that appeal to the senses of sight, hearing and touch such as sound film, filmstrip projector, television, videotape recorder and tapes, VCD, DVD, etc. In other words, non-print information resources are non-tangible and requires accessibility aid.



Fig 1: Information Resources

Source: <https://www.tutorialspoint.com>

### 3.5 Dissemination of Information

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, organisation, 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. 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 underprivileged and economically weaker sections of society with technical skills and education. However, organising programs meant mainly for raising awareness, education, and training are information and communication dependent. Information dissemination as such constitutes critical factor for the success of adult education and learning programs. More often than not, organisers 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, a two-way form of communication is relatively more relevant and effective for organising awareness programs and activities in adult education. Information dissemination requires the systematic collection, organisation, and storage of information relevant to the needs of the 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.

### **3.6 Selective Dissemination of Information**

Selective dissemination of information (SDI) was originally a phrase related to library and information science. SDI refers to tools and resources used to keep a user informed of new resources on specified topics. Contemporary analogous systems for SDI services include alerts, current awareness tools or trackers. These systems provide automated searches that inform the user of the availability of new resources meeting the user's specified keywords and search parameters. Alerts can be received in a number of ways, including email, RSS feeds, voice mail, Instant messaging, and text messaging. The selection is based on an "interest profile," a list of keywords that described their interests. In some organisations, the 'interest profile' is much more than a simple list of keywords. Librarians or information professionals conduct extensive interviews with their clients to establish a fairly complex profile for each individual. Based on these profiles, the information professionals would then distribute selectively appropriate information to their clients. This labour-intensive operation is costly. Selective Dissemination of Information assists a user in keeping up-to-date on current literature in particular subject areas. The purpose of SDI is to help users cope with information overload. The sources of the literature may vary, from

various materials such as books, serials, proceedings and also electronic sources.

### 3.7 Current Awareness Services (CAS)

Modern libraries and information centres offer a variety of new documentation and information services to provide support to research and development, industrial productivity, management, marketing and trade, all programmes of development of governments and institutions, etc. There has been a tremendous increase in the volume and variety of publications coming out from all corners of the world. This unprecedented growth of publications has posed serious problems for those involved in these activities, to keep themselves abreast of current developments. It has, therefore, become necessary for libraries and information centres to design and develop new and innovative information services. Two such services are Current Awareness Services and Selective Dissemination of Information.

#### Types of CAS

Four types of Current Awareness Services (CAS) are described in this unit with their characteristic features. These types of services are: Contents-by-journal, Documentation Bulletin, Research-in Progress Bulletin, and Newspaper Clippings Services.

**3.7.1 Contents-by-Journal Service:** This type of service is provided by the library or documentation centre, by distributing a publication which contains copies of the contents pages of journals in a broad subject area, e.g. medical sciences. The simplest way in which this can be done is to duplicate the contents pages of journal issues and circulate them individually or in a compiled form to users. The Contents-by-Journal Service is perhaps the cheapest and quickest way of providing a degree of current awareness.

**3.7.2 Documentation Bulletins or Current Awareness Lists:** This is by far the most predominant form of current awareness service. In this kind of service, the library or documentation centre scans primary journals and other sources of current information received in the library to identify potentially useful articles of interest to their users. The bibliographical details of such articles are collected, and classified or grouped into broad or narrow subject groups. At periodic intervals, the collected bibliographic entries are listed under the different subject headings, class numbers, or groups. The list is then duplicated and circulated to users. A documentation bulletin may include abstracts of papers listed in the bulletin. Current awareness lists are published or issued both by the library of an organisation for use within the organisation as well as by professional or learned bodies, international agencies and commercial

organisations for use by any user interested in the subject areas covered by the list.

**3.7.3 Research-in-Progress Bulletins:** As the name suggests it alerts users to new research projects and progress made in ongoing research projects. Such current -awareness services<sup>2</sup>—usually require the joint effort of more than one organisation working in similar or closely related research areas. A research-in-progress bulletin usually contains information about the laboratory at which the project is being done, names of principal and associate researchers, funds and sources of funds, duration of the project, and special equipment in use if any. In addition, it includes a narrative description of the research project and/or progress achieved to date.

**3.7.4 Newspaper Clipping Service:** Newspapers are a current-awareness media, since they publish news of recent happenings on the political, social, and economic front of a nation or region. Newspapers carry useful information to everyone from housewives to top management of companies and cabinet ministers. Many organisations maintain newspaper clippings and have a separate section for this service. Examples include: daily newspaper maintains a comprehensive collection of newspaper clippings that can be referred to as and when necessary. Some libraries send copies of the clippings to identified users for keeping them up-to-date with the latest news in their area of interest.

### **Current Awareness Services - Characteristics**

A current awareness service has the following characteristics:

- usually in the form of a publication
- attempts to bring information that is current, new or of recent origin to the attention of its users
- usually confined to a well-defined subject area or topic, though topics from related areas are also covered in the service
- does not seek to answer any specific questions that the user may have sometimes confined to a given type of literature, e.g. patents, standard.
- could be bibliographical (such as a list of references) with or without abstracts; discursive, (ex. a Newsletter) in nature.
- attempts to inform its users of recent development or news as quickly as possible and make browsing convenient and easy for the user.

### **3.8 Summary**

This unit discussed what an information resource is all about and the different types of information resources. If you remember, we defined:



- Information resources to include all forms of information carriers that can be used to promote research activities
- Print resources are printed books, journals, pamphlets, newsletters and reference sources. Non-print resources are materials that appeal to the senses of sight, hearing and touch
- Current Awareness Service
- Selective Dissemination of Information

### **SELF- ASSESSMENT EXERCISE**

Now test your level of understanding by attempting the self-assessment exercise below.

- Explain information resources
- Enumerate two types of information resources
- Describe Current Awareness Service
- Explain Selective Dissemination of Information.

### **3.9 Glossary**

1. Information resources are materials, strategies, manipulations, apparatuses or consultations that enhance research and development
2. Print resources are tangible in format
3. Electronic information resources are type of information resources in electronic format

### **3.10 References/Further Reading/Web Resources**

- Aina, L.O., Mutula, S.M. & Tihamiyu M.A. (2008). *Information and Knowledge Management in the Digital Age: Concepts, Technologies and African Perspectives*. Ibadan: Third World Information Services Limited, 36-42.
- Dike, V. W. (1999). *Library Resources in Education*. Enugu: ABIC Publishers
- Elson, S. R. (1999). *Seven Signs of information fallout from the information explosion*. Retrieved from [https://www.quirks.com/articles/seven-signs-of-falloutfrom-the-information explosion](https://www.quirks.com/articles/seven-signs-of-falloutfrom-the-information-explosion)
- Imo, N. T., & Igbo, U. H. (2011). Providing Access to Knowledge in Africa: The Need for Capacity Building in Classification, Indexing, and Abstracting Skills. *Library Philosophy and Practice*, 601.
- Kumar, K. (1979). *Theory of Classification*. New Delhi: Vikas Publishing House.

**3.11 Possible answers to self-assessment exercise(s)**

1. Print and non-print information resources.
2. Information resources are materials that enhance research and development.
3. List of current information resources displayed for awareness and user consumption.
4. Selective Dissemination of Information is the provision of information resources according to user profile.

## UNIT 4 DOCUMENTARY SOURCES OF INFORMATION

### Unit Structure

- 4.1 Introduction
- 4.2 Intended Intended Intended Intended Learning Outcomes
- 4.3 Document
  - 4.3.1 Original Document
  - 4.3.2 Legal Document
  - 4.3.3 Legal Literature
  - 4.3.4 Academic: Thesis, paper, journal
- 4.4 Printed and Non-printed Sources
  - 4.4.1 Print Sources
    - 4.4.1.1 Printed Sheets
    - 4.4.1.2 Leaflets
    - 4.4.1.3 Printed Cards
    - 4.4.1.4 Pamphlets
    - 4.4.1.5 Books
    - 4.4.1.6 Periodicals
    - 4.4.1.7 Newspapers
  - 4.4.2 Non-print Sources
- 4.5 Categories of Documentary Sources of Information
  - 4.5.1 Primary Sources
  - 4.5.2 Secondary Sources
  - 4.5.3 Tertiary Sources
- 4.6 Categories of Non-documentary Sources of Information
- 4.7 Summary
- 4.8 Glossary
- 4.9 References/Further Reading/Web Resources
- 4.10 Possible answers to self-assessment exercise(s) within the context

### 4.1 Introduction

A “source” is anything that provides you with needed information. Sources may be documentary or non-documentary. Documentary sources are physical sources of information that are fit for physical handling or they are the recorded in some physical form. The non-documentary sources of information are live sources that provide information instantly. The non-documentary sources of information include research organisations, societies, industries, government establishment, departments, learned and professional bodies, universities, technological institutions, etc.

## 4.2 Intended Intended Intended Intended Learning Outcomes

After studying this unit, you will be able to:

- Define the concept of document
- Explain the classification of documentary sources of information
- Identify primary, secondary and tertiary sources
- Explain the non-documentary Sources of Information

## 4.3 Document

A document is embodied idea that is a record of effort on paper that is suitable for physical handling, transportation across space, and long-term preservation. Manuscripts, handwritten and engraved materials, as well as printed books, magazines, microforms, pictures, phonograph records, tape records, and other media, may be included. Recent breakthroughs in science and technology have aided the creation of a new type of document in computer-readable formats, such as CDs, DVDs, pen drives, hard disks, and web resources. All documents, on the other hand, are recordings of human observation and thought, necessitating direct human action in their formation. Documents offer users with information. The library, as a knowledge portal, allows access to a wide range of documentary sources of information.

A "document" is a basic theoretical notion in both Library and Information Science and Documentation Science. It refers to anything that can be maintained or represented in order to serve as evidence for a certain purpose. Any concrete or symbolic indicator, kept or recorded, for recreating or verifying a phenomenon, whether physical or mental, has been defined as a document. In digital technology, a traditional document, such as a mail message or a technical report, exists literally as a string of bits in a digital environment. It has been turned into a document as a study object. Those who research it have turned it into physical evidence.

### Types of Documents

In libraries, there are many distinct types of documents. Each document type has its own set of properties. Each document type has the potential to be linked to other papers in the library. The sections that follow discuss the various sorts of documents.

#### 4.3.1 Original Document

Scanned images of recorded facts are referred to as original documents. These could include provincial gazettes or other printed legal documents that have been scanned, processed, and posted to the library in Adobe Acrobat Portable Document File (PDF) format. One or more laws, orders, and regulations may be included in a scanned image of an actual legal

document. Original papers are scanned and displayed in their original, officially published form, including any official signatures or stamps.

It is possible to search the text of scanned original documents saved as PDF files. Such files will be automatically indexed and searched by the library. One or more other documents in the library can be connected to an original document image. An actual scanned document could potentially be linked to a piece of legal literature that tackles comparable problems. At the bottom of each document listing are links to related documents in the library.

### **4.3.2 Legal Document**

A judicial decision, legislative record, administrative decision, financial or budgetary decision, executive order, regulation, or any other official document is referred to as a legal document. Official gazettes are usually the source of these legal papers. They can be published separately in the library and linked to the official gazette's scanned original document image. This allows for the classification and searchability of each document independently. Users of the library will be able to locate these documents more quickly as a result. A legal document is classed by jurisdiction and subject when it is uploaded to the library. The library record also includes the language of the document, the date the legislation or decision was published, the status of the law or decision, and additional details regarding the law or decision. Other legal documents may be linked to a legal document. The modifications to a law, for example, can be linked to the original law, and the original law can be linked to a scanned image of the original gazette in which it was published. A court judgement may also be linked to the law under consideration. A legal expert commentary could be added to the library's legal literature collection and connected to the law. There are also links to relevant documents in the library at the bottom of each document listing.

### **4.3.3 Legal Literature**

Legal literature refers to publications that deal with legal issues but do not have the force of law behind them. They feature legal comments written by legal specialists on the law. These documents are usually available in PDF format at the library. One or more legal documents or scanned original documents in the library may be linked to a piece of legal literature. At the bottom of each document listing are links to related documents in the library. You may get the linked document by clicking on these links. Secret, private, and public classifications are used to categorize documents. They're also known as a draft or a proof. The source of a document is referred to as the original when it is copied.

There are accepted standards for specific applications in various fields, such as:

#### 4.3.4 Academic: Thesis, paper, journal

- Business and Accounting: Invoice, Quote, Proposal, Contract, Packing slip, Manifest, Report detailed & summary, Spread sheet, MSDS, Waybill, Bill of Lading (BOL), Financial statement, Nondisclosure agreement (NDA) or sometimes referred to as; Mutual nondisclosure agreement (MNDA)
- Law and Politics: Summons, certificate, license, gazette
- Government and Industry: White paper, application forms, user-guide
- Media and Marketing: Brief, mock-up, script Such standard documents can be created based on a template.

#### 4.4 Printed and Non-printed Sources

Despite a serious assault from non-print media in the second half of the twentieth century, print media ruled supreme and unrivaled for about 500 years. Now, a major question facing the globe is whether print media will be able to survive the threat posed by non-print media and continue to operate as usual in the future, or will succumb to the strain and eventually fade away.

##### 4.4.1 Print Sources

A print source is a source of information that was first published on paper and made available to the public. Anything that was first made available to the public through an ink-on-paper media, such as books, periodicals, newspapers, encyclopaedias, journals, letters, and so on.

Despite the fact that more and more information resources are requested and delivered electronically, we still have a significant volume of material in print. This may be maps, photocopied papers and book chapters, theses and dissertations, as well as books and print journals. Printing involves a minimum of four different items:

- (i) manuscript, i.e. the piece of writing to be printed;
- (ii) composition of the matter either by hand or by machine;
- (iii) the physical medium, say, paper on which the matter is to be printed; and
- (iv) the ink with which the matter is to be printed. For illustrations, blocks, etc., are also required. Products of printing are many and varied.

## **Types of Print Media**

The physical formats, on which information is printed, such as paper, plastic, cloth, metal sheet, and so on, can be used to categorize print media. We are limiting ourselves to objects printed on paper in this writing, such as sheets, pamphlets, booklets, books, journals, and so on.

### **4.4.1.1 Printed Sheets**

A sheet is a piece of paper that comes in various sizes and is used to print written or typed material. Printed sheets are typically used for advertising, campaigning, and other similar activities. These sheets are sometimes posted on the walls to grab the public's attention. Students and teachers at colleges and universities, politicians at all levels, and many others who are involved in election campaigns use printed sheets as advertising. The sheets' printing is neither time demanding nor expensive. Furthermore, they can be disseminated by hand and glued on buildings, trees, and other surfaces with ease.

### **4.4.1.2 Leaflets**

A leaflet is a two- or four-page booklet made from a single sheet of paper folded once. The pages are arranged in the same order as in a book. It is not stapled or sewn. Serials can also be found in the form of leaflets. These booklets are often provided for free and contain product information, tourist information, road maps, and other information. While on a trip, a visitor can easily carry the leaflets and use them whenever necessary. There is no difficulty in transporting or utilizing this item. Many publishers send synopses of their books by post to prospective users. The strategy is tailored, low-cost, and effective, and it can reach even the most underdeveloped and isolated parts of a country.

### **4.4.1.3 Printed Cards**

Cards are made to send greetings and to invite people to weddings and other events. We buy greeting cards and send them to friends and family throughout the New Year, Christmas, and other holidays. These cards can be useful sources of information because they contain information such as the date of someone's wedding, the names of the bride and groom, their parents, and so on. If you look through a celebrity's archive for cards, you will be able to identify who he or she had contacts with during his or her lifetime.

#### **4.4.1.4 Pamphlets**

A pamphlet, according to UNESCO, is a non-periodic printed periodical of 5 to 48 pages (excluding cover pages). It has been stapled/stitched as well as sliced. Pamphlets are intended for a wide variety of users and usually contain information on a topic in easy language. Many pamphlets are used as textbooks in kindergarten and elementary schools, as well as for non-literates. They are frequently produced with bold typography and bright images.

#### **4.4.1.5 Books**

A book, according to the United Nations Educational, Scientific, and Cultural Organisation (UNESCO), is a non-periodic printed document of at least 49 pages, excluding cover pages. To form a volume, a book is normally stapled/stitched along one edge and placed into protective covers. In most libraries, books make up the majority of the collection. Books come in a variety of sizes. The Encyclopedic ed. of the New International Webster's Comprehensive Dictionary of the English Language is 28 x 21cm. Atlases are typically larger. In general, textbooks are of a medium size.

#### **4.4.1.6 Periodicals**

Serial publication is an effective means of disseminating information. Researchers from all across the world write papers in periodicals detailing their latest results. Secondary magazines compile data from primary publications and provide it in the form of abstracts, popular pieces, or reviews. A researcher, teacher, student, and others can keep oneself up to date by reading these journals, despite the language barrier. The information offered in periodicals is nearly always more up-to-date than that found in textbooks, treatises, or monographs.

#### **4.4.1.7 Newspapers**

Newspapers have been a major means of communication for the human population for ages. Newspapers are published in a variety of languages from practically every country on the planet.

#### **4.4.2 Non-print Sources**

Non-print sources are media that provide information in a non-traditional format. It could be audio, video, or a variety of microforms. Maps, atlases, globes, and other similar items are sometimes included. However, no proper definition exists to capture the phrase precisely, or providing a suitable and acceptable definition, therefore we would list the non-print media that normally include:



1. Photographs, film slides, transparencies;
2. Realia, mock-ups, models and specimens;
3. Phono-recordings, including discs;
4. Audio tapes, cassettes and cartridges;
5. Motion pictures, Video Tapes, Kinescopes;
6. Portfolio, Kits;
7. Maps, Atlases, Globes;
8. Microforms;
9. Magnetic Media; and
10. Optical Media

#### **4.5 Categories of Documentary Sources of Information**

- (i) **Primary Sources:** Primary sources are those in which the author provides evidence, reports a finding, makes or drives a new proposition, or presents new evidence concerning a previous proposition for the first time. It is often made by the persons being examined at or near the time being investigated. It's a foundational, authoritative document about a topic of investigation that's used to create a subsequent derivative work. Thus, primary sources of information are primary sources of new information that have not been filtered through any mechanism such as condensation, interpretation, or evaluation and are the author's original work.
- (ii) **Secondary Sources:** A secondary source of information is a document about a specific subject of inquiry that is derived from or based on the study and analysis of a main source of information. The original material is selected, changed, and organised in a suitable format for easy location by the user in a secondary source of information. As a result, secondary sources of information provide digested material as well as bibliographical keys to primary sources. Textbooks, reference books, literature reviews, and other secondary publications are examples.
- (iii) **Tertiary Information Sources:** Tertiary information sources are the last to arrive and usually lack subject understanding. It serves as a guide to primary and secondary sources of information by providing information. The major purpose of tertiary sources is to assist users in obtaining information from primary and secondary sources. Bibliographies of bibliographies, library guides, indexing and abstracting journals, lists of accession, lists of research in progress, directories, and other tertiary sources of information.

## **Primary, Secondary and Tertiary Sources**

Let us discuss the primary, secondary and tertiary sources in detail.

### **4.5.1 Primary Sources**

Primary sources of data are more recent and up-to-date than secondary sources of data. This is the most up-to-date information available. New knowledge or new infusions of old knowledge are primary sources. Much of the material found in original sources is never duplicated in secondary sources. These are also known as primary sources of information. The first published records of original research and development operations are known as primary sources. The researchers' findings are recorded and published in original sources such as journals. Researchers can utilise these resources to stay up to date on the most recent advancements in their field of study. This will also assist researchers in avoiding research duplication. The original documents, which are unfiltered, are referred to as primary sources. These are unique scientific communication mediums. Original thoughts, discoveries, and innovations are examples of primary sources. These materials are dispersed and disorganised. Other sources have not previously released information about the development. The information in primary sources is original in the sense that it has not been filtered or condensed in any way. These original sources feature fresh or unique ideas, as well as novel interpretations of previously documented facts.

### **Importance of Primary Sources**

Primary sources of information are critical for researchers. They keep them informed about current events in their fields. The amount of literature created in the form of primary literature determines the growth or development of a discipline. When independent primary sources are developed in a field, it becomes a discipline in its own right. The volume of literature published in a field determines the rate of growth of a discipline to a considerable extent. Primary sources are extremely beneficial to researchers. They help the researcher to:

- Keep themselves tip-to-date and well-informed in their field of research.
- Avoid duplication in research.
- Develop them further and generate much information.

### **Drawbacks of Primary Sources**

Some of the drawbacks of primary sources are as follows:

- They are unorganised sources and are difficult to consult. Searching for information is sometimes difficult.
- Information is scattered and widely dispersed in many sources.
- The information related to narrow fields or minute topics are not available in a single primary source,
- The user has to search in many primary sources.
- Primary sources do not possess any orderly presentation of information.

### **Characteristics of Primary Sources**

The following are the characteristics of primary sources:

- Primary sources are the original sources of information on which other research are based, such as surveys, interviews, fieldwork, original articles, etc.
- They present information in its' original form, not interpreted or condensed or evaluated by other writers. Primary sources contain raw, original and unevaluated information.
- They present the original reports on discoveries or share new information such as a report of scientific work.
- They come as first-hand information from the source or person.
- They are unfiltered through interpretation or evaluation.
- They are records of the first-hand observation of an event, original work of fiction.

### **Examples of Primary Sources**

The following are examples of primary sources:

- (a) Government documents
- (b) Patents
- (c) Standards
- (d) Journal articles
- (e) Autobiographies, diaries and memoirs
- (f) Speeches
- (g) Technical reports
- (h) Web internet: Website that publishes the author's findings or research, Internet communication via e-mail, etc.
- (i) Survey research
- (j) Proceedings of meetings, conferences and symposia
- (k) Dissertation/theses
- (l) Historical documents

- (m) Films, photographs, video recording (e.g. TV programmes)
- (n) Work of art, music, architecture, literature
- (o) Newspaper articles
- (p) Research reports, reporting results generated by experiments
- (q) Trade literature.

#### **4.5.2 Secondary Sources**

The sources that are compiled from main sources are known as secondary sources. They examine, interpret, and analyze data from primary sources. A secondary source's information is not original, but it has been analyzed or interpreted. Secondary sources do not provide new or original information; instead, they direct readers to primary sources. They arrange the primary materials in an easy-to-use format. Primary sources are vital sources of original knowledge, but they are often disorganised and difficult to consult. On the other hand, the dispersed information from primary sources is collected and organised in a systematic manner in secondary sources. Secondary sources typically provide information that has been edited, selected, or restructured to make it easier to understand. Secondary sources aid in the user's search for information. Primary sources are more difficult to get and less widely distributed than secondary sources. Directly obtaining information from primary sources is difficult. Secondary sources of information also function as bibliographical keys to original sources of data. A secondary source, in simple terms, writes or speaks about anything found in a primary source. If a person writes about an original work (research work), authors in secondary sources will analyze it further. The majority of secondary sources analyzes or reproduces the work of others. This material will be a secondary source if it is about research duplicated by others.

#### **Types of Secondary Sources**

The secondary sources may be of three types:

- (a) Those sources which index selected portions of primary literature and helps in finding out what has been published on a given subject.
- (b) Those sources which survey selected portions of the primary literature and thus help in acquiring comprehensive information on a given subject.
- (c) Those sources which themselves contain the desired information collected and selected from primary sources of information.

## Features of Secondary Sources

Some of the special features of secondary sources are as follows:

- (a) They do describe, interpret, analyse and evaluate primary sources.
- (b) They comment on and discuss the evidence provided by primary sources.
- (c) Information in secondary sources is systematically arranged and is easy to consult.
- (d) Either compiled from or referred to primary sources.
- (e) Information given in primary sources are made available in a more convenient form in secondary sources.
- (f) Generally, secondary sources do not contain original information.

They depend upon the primary sources for reporting and presenting original information.

- (g) In primary sources information is not arranged systematically whereas in secondary sources, especially in reference books, information is arranged in a systematic order (e.g., it may be alphabetical, classified).
- (h) Secondary sources, especially reference books, are exclusively designed to answer specific queries. They are a collection of millions of facts.
- (i) Reference books are used within the library and are meant for consultation only. Users are not allowed to borrow.
- (j) Secondary sources contain a list of documents (bibliographies) at the end of the text. By furnishing the list, they guide the researchers back to the original sources.

## Examples of Secondary Sources

Examples of secondary sources are:

- Reference books such as encyclopedias, dictionaries, etc.
- Textbooks
- Guide to literature
- Abstracting journals
- Indexes
- Review of literature
- Monographs
- Bibliographies
- Some of the non-print materials such as CD-ROMs.

### 4.5.3 Tertiary Sources

Secondary and sometimes primary sources of knowledge are compiled, analyzed, and digested by tertiary sources. In simple terms, tertiary sources are knowledge that has been distilled and gathered from primary and secondary sources. It is difficult for a single scholar to have access to all of the primary sources. A lot of secondary sources are produced in order to locate information from primary sources. Secondary sources serve as a key to primary sources in this way. However, because the quantity of primary and secondary sources is often too great to identify, tertiary sources are used to cite both primary and secondary sources. The major purpose of tertiary sources of information is to assist researchers in the utilization of primary and secondary sources of information. Primary and secondary sources rely on tertiary sources. The identification, selection, and acquisition of primary, secondary, and tertiary sources are becoming increasingly significant due to the proliferation of literature in diverse languages, countries, forms, places, and so on. The following are some of the reasons for the popularity of tertiary sources:

- (a) Due to increase in literature at a very fast pace, identification and location of the required documents are difficult. Tertiary sources are designed as a bibliographic control device to assist in selecting the primary and secondary sources.
- (b) Tertiary sources help promote the use of primary and secondary sources. They describe and comment upon the various types of publications.
- (c) Tertiary sources record the bibliographic information which is important for better utilisation of primary and secondary sources.

**Examples of tertiary sources are given below:**

- (a) **Directories:** Directories are tertiary reference sources which help the researcher in using primary and secondary sources.
- (b) **Almanacs:** According to ALA Glossary, an almanac is an annual publication containing a calendar, frequently accompanied by astronomical data and other information or an annual yearbook of statistics and other information sometimes in a particular field.
- (c) **Yearbooks:** According to ALA Glossary, a yearbook is an annual volume of current information in descriptive and/or statistical form, sometimes limited to a special field.
- (d) **Bibliography of bibliographies:** The lists of bibliographies direct readers to useful bibliographies through subject, individual, places, etc. The bibliographies referred to may be in the form of a

separately published book or part of the book or part of a periodical article or some other types of documents.

- (e) Union catalogues: It is a “catalogue listing in one sequence the holdings or part of the holding of two or more libraries.” A union catalogue is a combined catalogue, describing the collection (i.e. Books, periodicals) of a number of libraries. It consists of holdings of more than one repository such as archives and libraries. It contains records about materials in several collections or libraries.

#### **4.6 Categories of Non-documentary Sources of Information**

Non-documentary sources of information are real-time sources that are critical in the communication process. When a scientist working on an experiment requires information, he or she will frequently turn to a colleague in the same laboratory rather than a printed page. It's much easier to have a conversation with an expert than it is to use a bibliography, index, card catalog, or even a reference librarian. Non-documentary sources of information deliver information quickly and are simple to use. The fundamental disadvantage of non-documentary sources of knowledge is that they are expensive when people are separated by a large distance. It also necessitates the employment of extremely advanced technologies such as a computer system, video conference, and telephone, among others. Similarly, government agencies, departments, universities, technological institutions, data centers, information centers, referral centers, clearing houses, consultants, technological gatekeepers, and so on are non-documentary sources of information. Non-documentary sources of information include conversations with coworkers, visitors, seminar and conference attendees, and so on. The library through the referral service provides access to important non-documentary sources of information which may include the following types:

- (i) Research Association: Research association may establish cooperative information centres. In such cases there is a possibility of a firm to firm discussion and exchange of information between the members of an association.
- (ii) Learned Societies and Professional Institutions: Member of these bodies forms the core of a discipline or profession. The headquarters' staff helps the members personally on professional matters and sometimes they may direct queries to the expert member of the body.
- (iii) Industrial Liaison Officer: These officers provide particularly the preliminary information needed to put a firm on the right track and for information which needs to be given personally and supported by practical advice to be effective. They visit firms, explore their needs and problems and help them to find solutions, sometimes directly on the spot, more often by putting them in touch with

specialized sources of information and assisting or referring to some other specialists.

- (iv) **Mass Media:** Mass media is a means of communication of information through broadcasting and telecasting or a combination of these two for the masses, which is more effective than any documentary sources

#### **4.7 Summary**

This unit discussed what documentary source is all about and how the sources are used. If you remember, we defined:

- document
- sources of documents are used to get background information on a topic.
- format of document
- examples of the various sources of document.

#### **SELF-ASSESSMENT EXERCISE**

Now test your level of understanding by attempting the self-assessment exercise below.

- explain the three sources of information with examples
- explain non-documentary sources of information.

#### **4.8 Glossary**

1. A document is embodied idea that is a record of effort on paper that is suitable for physical handling, transportation across space, and long-term preservation.
2. Non-documentary sources of information are real-time sources that are critical in the communication process.
3. Tertiary sources are commentary on primary and secondary sources.
4. Secondary sources that are compiled from main sources.
5. Primary sources of data are more recent and up-to-date than secondary sources of data.



#### **4.9 References/Further Reading/Web Resources**

Crawford, J. (2000). *Evaluation of library and information services*. London: ASLIB.

Farmer, L.S.J.(2007). *The human side of reference and information services in academic libraries: adding value in the digital world*. Oxford: Chandos Publishing.

Fourie, D. & Dowell, D. (2002). *Libraries in the information age*. New York: Libraries Unlimited.

Katz, W. A. (1987). *Introduction to reference work: reference service and reference process*. New York: McGraw-Hill.

Krishan Kumar (1996). *Reference service*. New Delhi: Vikas Publishing.

**4.10 Possible answers to self-assessment exercise(s) within the context**

1. Secondary and sometimes primary sources of knowledge are compiled, analyzed, and digested by tertiary sources. Examples are yearbooks, Almanac.
2. Secondary sources that are compiled from main sources. Examples are textbooks, Indexes etc.
3. Primary sources of data are more recent and up-to-date than secondary sources of data. Examples are Journals, Patents, and Thesis etc.

## UNIT 5 REFERENCE RESOURCES

### Unit Structure

- 5.1 Introduction
- 5.2 Intended Learning Outcomes
- 5.3 Concept of Reference Resources
- 5.4 Usage of Reference Resources
  - 5.4.1 General purpose
  - 5.4.2 Specific purpose
- 5.5 Summary
- 5.6 Glossary
- 5.7 References/Further Reading/Web Resources
- 5.8 Possible answers to self-assessment exercise(s) within the context

### 5.1 Introduction

In your last unit, you studied document sources generally and the sources of information, what differentiates the sources of information and what makes them unique. This unit will introduce you to the lesson of today, "Reference sources and how they are used." Reference resources generally summarize topics or assists in finding secondary literature. These sources provide background information or help you to find other sources (Types of reference sources such as dictionaries, encyclopedia, almanacs, etc are discussed in module four).

### 5.2 Intended Learning Outcomes

By the end of this unit, you will be able to:

- explain what a reference source is
- discuss how reference sources are used.

### 5.3 Concept of Reference Sources

Reference sources are authoritative works that help you locate information about people, facts, and ideas. These sources can help you discover the date of an important event, major achievements of an individual or organisation, or a definition of a term or concept. These books are often used to find specific facts, rather than written to be read cover-to-cover, so they are often held in a special part of the library to be used for a short period rather than checked out to a user over days. Reference materials are dictionary, encyclopedia, almanacs, and directory among others. The different types of reference materials are discussed in detail in module four.

## 5.4 Usage of Reference Sources

Reference sources are typically used in two different ways:

**5.4.1 General purpose:** One use is to get background information on a topic that you are researching. E.g., if you use Encyclopedia to find out the general history of an event you will be writing about, you are using it as a reference source to determine the context of the topic you are researching.

**5.4.2 Specific purpose:** accessing specific facts to support a point being made in a paper. E.g. if you needed to find the percentage of ages 20-25 who have a college degree, you would need a reliable source, and a reference librarian could help you locate it and cite it. With these two approaches to reference sources, you will often find yourself in the reference section as you start a paper, looking for your topic's general context. At the very end of writing your paper, you look for specific details to strengthen your argument.

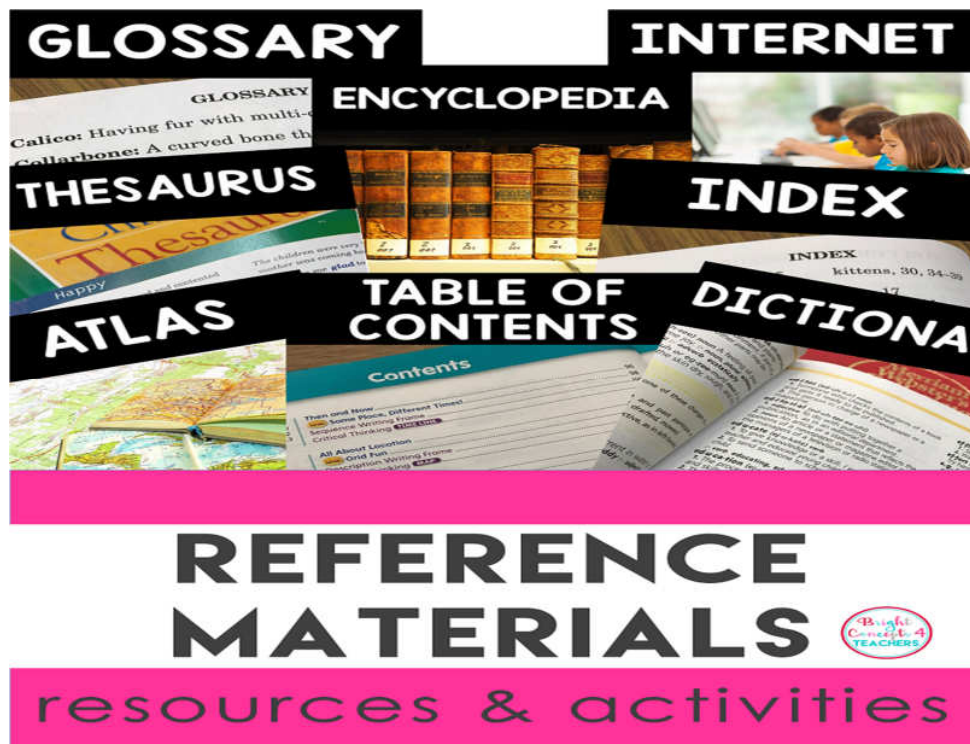


Fig 1: Reference Resources

Source: <https://www.pinterest.com>

## 5.5 Summary

This unit discussed what reference source is all about and how reference sources are used. If you remember, we defined:

- Reference sources are works that help you locate information about people, facts, ideas etc.
- Reference sources are used to get background information on a topic.
- They are equally used is to find specific facts to support a point being made in a paper.

### SELF-ASSESSMENT EXERCISE

Now test your level of understanding by attempting the self-assessment exercise below.

- What is a reference source?
- Discuss how reference sources are used

## 5.6 Glossary

1. Reference sources are authoritative works that help you locate information about people, facts, and ideas.

## 5.7 References/Further Reading/Web Resources

Hoq, K, M, G. (2014). Information overload: Causes, consequences and remedies: A study. *Philosophy and Progress*, 5068. DOI:<http://dx.doi.org/10.3329/pp.v55i1-2.26390>

Katz, W. A. (1992). *Introduction to Reference Work Volume I: Basic Information Sources*, 6th ed. New York: McGraw-Hill.

Maharjan, Palistha (2018). *Communication Patterns. Businessstopia*. Retrieved from: <https://www.businessstopia.net/communication/communication-patterns> (June 26, 2019).

Obaseki, T. (2010). Automated Indexing: The key to information retrieval in the 21st century. *Library Philosophy and Practice (e-journal)*, 1- 6.

**5.8 Possible answers to self-assessment exercise(s)**

- Reference sources are authoritative works that help you locate information about people, facts, and ideas.
- Reference sources can be used for general and specific purposes.

## **MODULE 2            COMMUNICATION PATTERNS**

Unit 1	Communication Patterns
Unit 2	Communication Flow Patterns and Network
Unit 3	Communication Process and Barriers

### **UNIT 1            COMMUNICATION PATTERNS**

#### **Unit Structure**

- 1.1 Introduction
- 1.2 Intended Learning Outcomes
- 1.3 Communication Pattern
- 1.4 Form of Communication Pattern
  - 1.4.1 Circle
  - 1.4.2 Chain
  - 1.4.3 Y
  - 1.4.4 Wheel
- 1.5 Summary
- 1.6 Glossary
- 1.7 References/Further Reading/Web Resources
- 1.9 Possible answers to self-assessment exercise(s) within the content

#### **1.1 Introduction**

This unit introduces you to communication and its various patterns. Your ability to communicate clearly and effectively depends greatly on your understanding of these patterns.

#### **1.2 Intended Learning Outcomes**

By the end of this unit, you will be able to:

- explain what communication pattern is
- discuss these patterns with examples:
  - Circle
  - Chain
  - Y
  - Wheel

#### **1.3 Communication Pattern**

Communication refers to the exchange of information from one place to another and includes intrapersonal, interpersonal, group, and mass communication. When it comes to group communication, there is a distinct pattern. Communication patterns are the frameworks via which

information travels in a workplace. According to organisational structures, they are the communication links in work teams. The patterns have to do with worker productivity and who is liable for whom or who communicates with whom.

## 1.4 Forms of Communication Patterns

Communication patterns may exist in the following forms:

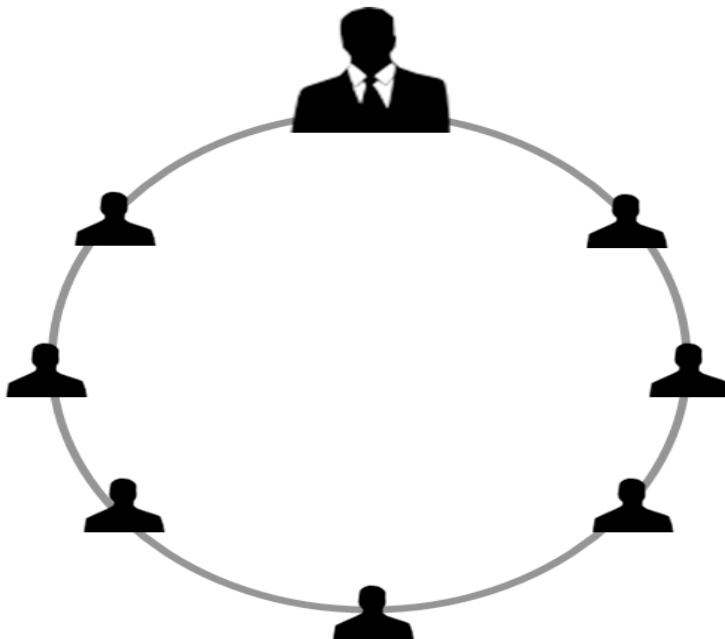
- Circle
- Chain
- Y
- Wheel



– Leader



– Group Members

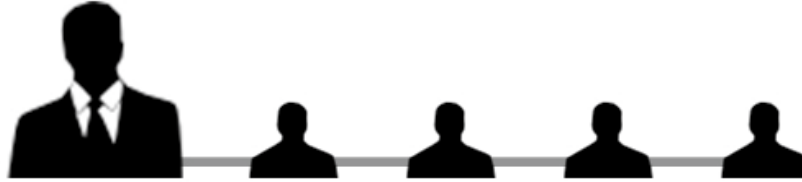


### A. Circle pattern

Fig. 1. Circle Pattern

**1.4.1** In the Circle pattern, the sender (Group Leader) can communicate with the receivers (group members) who is next to him/her. In this communication pattern, the sender messages travels all over the group through sharing by its members and often takes time to reach the sender again.

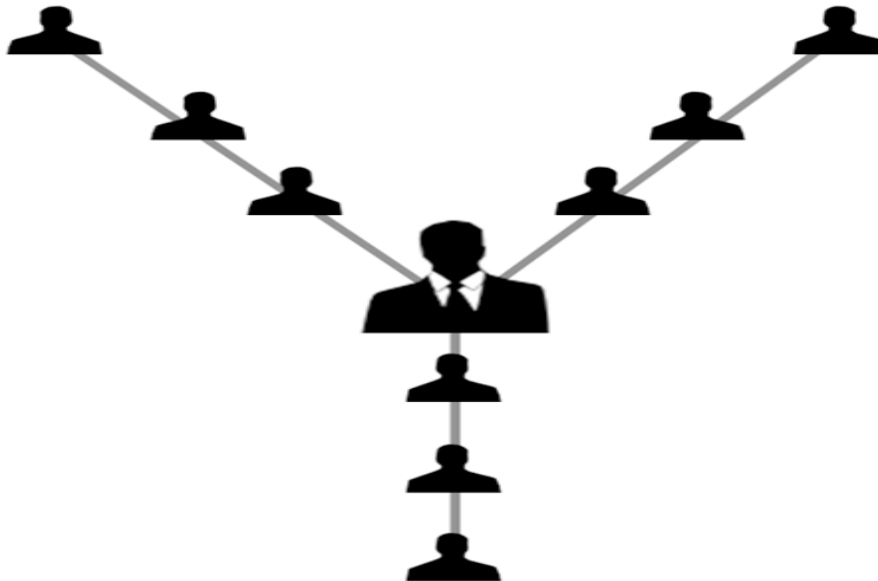




## B. Chain pattern

Fig. 2. Chain Pattern

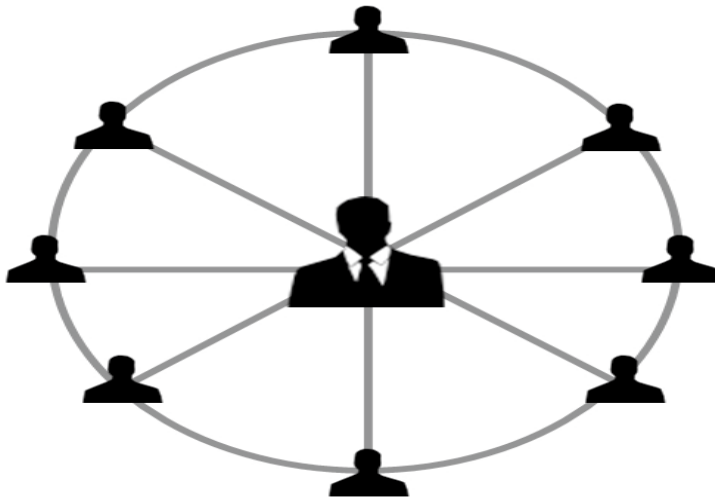
**1.4.2** The same issues appeared with the Chain pattern, which looked like a circle pattern. The worst element of the pattern is that the last member receives the leader's updated communications. Because there is no feedback to detect the message distortion, the leader is unable to determine whether the final member has received the correct information.



## C. "Y" pattern

Fig. 3. Y Pattern

**1.4.3** In both the circle and chain patterns, the Y pattern is the most difficult, and it has a communication problem. The group is divided into three sections, and members can only speak with one another through the leader.



#### D. Wheel pattern

Fig. 4. Wheel Pattern

Source: <https://www.zhantingwei.blogspot.com>

**1.4.4** In comparison to the other three patterns, the Wheel pattern is one of the best. There are no communication issues, time constraints, or negative comments from the group members because the leader has direct touch with all of them. However, none of the members of the group can connect.



<https://www.youtube.com/watch?v=Ed-UPZSCJ64>

## 1.5 Summary

This unit discussed what communication pattern is all about and the different dimensions to communication patterns. If you remember, we defined:

- Communication as a means of transferring message from one point to another

- All communication patterns have certain problems with each other. In circle, Chain and Y patterns, all group members can't directly communicate with the group leader. They can communicate to the leader only through group members. In Wheel, all the group members can communicate directly with the group leader

### **SELF-ASSESSMENT EXERCISE**

Now test your level of understanding by attempting the self-assessment exercise below.

- In your own words, how would you explain the term communication pattern?
- Discuss with examples;
- Circle pattern
- Chain pattern
- Y pattern
- Wheel pattern

### **1.6 Glossary**

- Communication refers to the exchange of information from one place to another and includes intrapersonal, interpersonal, group, and mass communication.

### **1.7 References/Further Reading/Web Resources**

Dennis, H.S. (1974). *A Theoretical and Empirical Study of Managerial Communication climate in Complex Organisations*, Ann Arbor, MI.:Purdue University.

Kumari, M. (2017). Information explosion, information anxiety and libraries: Strategies for intervention. *World Wide Journal of Multidisciplinary Research and Development*, 3(12), 166-169.[http://wwjmr.com/upload/information-explosion-information-anxiety-and-libraries-strategies-for-intervention\\_1513858871.pdf](http://wwjmr.com/upload/information-explosion-information-anxiety-and-libraries-strategies-for-intervention_1513858871.pdf)

Postmes, T. (2003). *A social identity approach to communication in organisations*, in Haslam, S.A., Van Knippenberg D., Platow M.J., Ellemers N. (Eds), *Social Identity at Work – Developing Theory for Organisational Practice*. New York: Psychology Press, pp. 81-98.

**1.8 Possible answers to self-assessment exercise(s)**

1. Communication patterns are the frameworks via which information travels in a workplace.
2. There are no communication issues, time constraints, or negative comments from the group members because the leader has direct touch with all of them in wheel communication.
3. In Y communication pattern the group is divided into three sections, and members can only speak with one another through the leader.

## **UNIT 2      COMMUNICATION FLOW PATTERNS AND NETWORK**

### **Unit Structure**

- 2.1 Introduction
- 2.2 Intended Learning Outcomes
- 2.3 Communication Flow
- 2.4 Formal Communication flow
  - 2.4.1 Downward Communication
  - 2.4.2 Upward Communication
  - 2.4.3 Horizontal Communication
- 2.5 Informal communication flow
  - 2.5.1 Grapevine Communication
- 2.6 Communication Network
- 2.7 Summary
- 2.8 Glossary
- 2.9 References/Further Reading/Web Resources
- 2.10 Possible Answers to Self-Assessment Exercise(s) within the content

### **2.1 Introduction**

Having learned about communication patterns and different communication patterns in unit 1, we will discuss communication flow and network.

### **2.2 Learning Outcomes**

By the end of this unit, you will be able to:

- explain communication flow
- give details on forms of communication flow pattern
- discuss what communication network is.

### **2.3 Communication flow**

Soola (1998) classified organisational communication flow patterns into formal and informal communication flow patterns. Formal communication flow is further sub-divided into downward, upward and subordinates. It radiates from the top-most point of organisational hierarchy to the next vertically. It can be oral, written or mediated.

## 2.4 Formal Communication Flow

### 2.4.1 Downward Communication

Downward Communication is the flow of messages from the superiors to subordinates using conversations, company bulletins, notice boards, and letters, by telephone, email, video conference etc. (Ikpe, 1990). Smith, Rchetto and Zima (1972) state that downward communication is the most frequently studied dimension of formal channels. Authority, tradition, and prestige are implemented through downward communication. Those at the top of the organisation are naturally concerned with their downward directed message's communication effectiveness.

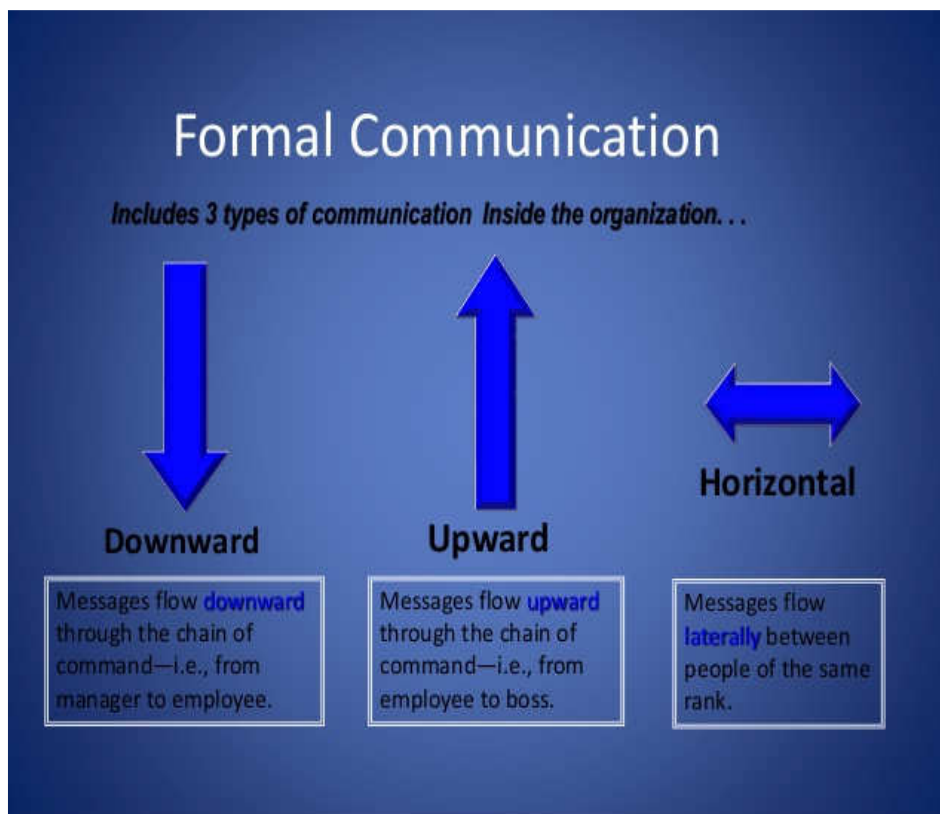


Fig 1 forms of communication flow  
<https://www.google.com.ng/passionthemoment.wordpress.com>

### 2.4.2 Upward Communication

Upward communication refers to messages which flow from subordinates to superiors. Usually, to ask questions, provide feedback and make suggestions. Upward directed messages are usually integrative and innovative. Upward communication serves as feedback to management, giving clues to the relative success of the given message. It can also stimulate employee participation in the formation of policies in various

units and departments. Upward communication is also valuable in the effective planning and motivation of subordinates. This is the key problem area that hinders or tends to promote institutional disharmony in many organisations; little if any upward communication exists apparently due to the prevailing tendency by organisational leaders to run a closed environment.

### **2.4.3 Horizontal communication**

Horizontal communication is a lateral exchange of messages among people in the same organisational environment. Messages likely to occur in this format usually relate to the task or human purposes. For example, messages about coordination, problem-solving, conflict resolution and information sharing are horizontal in nature. Horizontal communication can facilitate common understanding, resolve differences and develop supportive and productive relationships. The key problems usually associated with horizontal communication include rivalry, specialisation and lack of motivation. The rivalry may open up, especially in a competitive job environment where upward job mobility is tied to success in the competitive endeavour. It can create a more hostile competitive atmosphere, where employees want to outdo one another regarding specialisation. On the other hand, a lack of motivation may hinder frequent upward communication.

## **2.5 Informal Communication Flow**

Informal communication is the communication that does not flow through the scalar functional lines network in an organisation. Many writers use the word grapevine as a synonym for this type of message behaviour. The term grapevine applies to all informal communication. Thus, the grapevine is an unstructured and informal network founded on social relationships rather than an organisational chart or job descriptions. According to some estimates, 7-10% of employees typically receive news from the grapevine before hearing about it through formal channels (EPB, 1997).

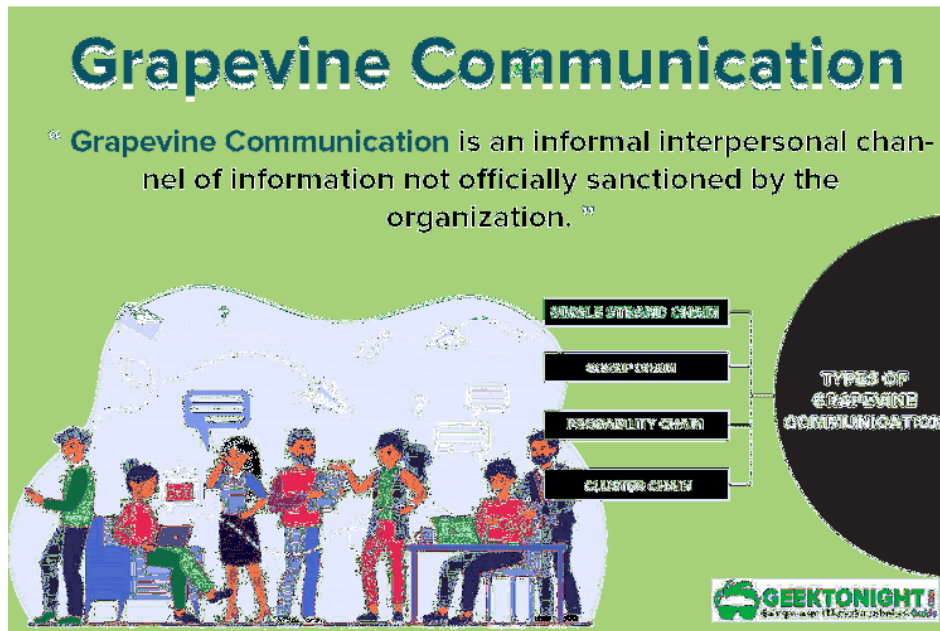


Fig 2 grapevine communication

<https://www.geektonight.com/grapevine-communication>

### 2.5.1 Grapevine Communication

#### Grapevine Characteristics

Early research identified by Kreps (1986) several unique features of the grapevine, namely:

1. Transmits information very rapidly in all directions throughout the organisation
2. The typical pattern is the chain whereby a few people actively transmit rumours to many others.
3. The grapevine works through the informal social network, so it is more active where employees have similar backgrounds and can communicate easily.
4. Many rumours seem to have at least a kernel of truth, possibly because rumours are transmitted through media-rich communication channels (e.g. face-to-face).
5. The grapevine distorts information by deleting fine details and exaggerating key points of the message.



### **Types of Grapevine network:**

- Single strand: In this network, each person communicates with the other in a sequence.
- Gossip network: In this type of network, each person communicates with all other persons on a non-selective basis.
- Probability network: In this network, the individual communicates randomly with other individuals.
- Cluster Network: In this network, the individual communicates with only those people whom he trusts. Out of these four types of networks, the Cluster network is the most popular in organisations.

## **2.6 Communication Network**

Contemporary organisational communication has expanded rapidly from face-to-face teams to real and virtual people across multiple locales organised for a common purpose. Communication Networks can be defined as groups of individuals who may be identified as sharing regular communication lines that have emerged as a primary mode of organising in the new economy. Networks are, as a rule, emergent, informal, and somewhat less interdependent than teams. Networks matter because of regular contact between identifiable groups of people. Whether they be scientists or political action groups, they can play an important role in establishing access to information and the quality and direction of decision-making.

## **2.7 Summary**

This unit discussed what communication flow and networks are all about and the different types of communication networks. If you remember, we defined:

Formal communication flow is sub-divided into downward, upward and horizontal.

- While informal Communication flows applies to all informal communication.

### **SELF-ASSESSMENT EXERCISE**

Now test your level of understanding by attempting the self-assessment exercise below.

- Distinguish between formal and informal communication flow patterns.
- Enumerate the forms of communication flow.
- Explain what a communication network is.

## 2.8 Glossary

- Formal communication radiates from the top-most point of organisational hierarchy to the next vertically.
- Informal communication is the communication that does not flow through the scalar functional lines network in an organisation.
- Communication Networks can be defined as groups of individuals who may be identified as sharing regular communication lines that have emerged as a primary mode of organising in the new economy.

## 2.9 References/Further Reading/Web Resources/Web Sources

Aina, L.O., Mutula, S.M. and Tihamiyu M.A. (2008). *Information and Knowledge Management in the Digital Age: Concepts, Technologies and African Perspectives*. Ibadan: Third World Information Services Limited. 36-42.

Bhasin, H. (2018). *Five Types of Communication*. <https://www.marketing91.com/five-types-of-communication>.

New World Encyclopedia (2017). *Information explosion*. [https://www.newworldencyclopedia.org/entry/Information explosion](https://www.newworldencyclopedia.org/entry/Information_explosion)

North, Marjorie (2018). *How to Communicate More Effectively in the Workplace*. Harvard University Professional Development: Harvard Extension School. <https://www.extension.harvard.edu/professional-development/blog/how-communicate-more-effectively-workplace>

Redding, W.C. (1973). *Communication within the Organisation*. New York: Industrial Communication Council/Purdue Research Foundation, NY/Lafayette.

Smidts, A., Pruyn A.T.H., Van Riel C.B.M. (2001). The impact of employee communication and perceived external prestige on organisational identification. *Academy of Management Journal*, 49(5), pp. 1051-1062.

Rimland, E. (2011). Ranganathan's relevant rules. *Reference & User Service Quarterly*, 46(4), 24-26. <https://www.journals.ala.org/index.php/rusq/article/viewFile/4090/>

**2.10 Possible Answers to Self-Assessment Exercise(s) within the content**

- Horizontal communication
- downward communication
- upward communication
- Communication Networks can be defined as groups of individuals who may be identified as sharing regular communication lines that have emerged as a primary mode of organising in the new economy.
- Informal communication is the communication that does not flow through the scalar functional lines network in an organisation while formal communication does.

## **UNIT 3      COMMUNICATION PROCESS AND BARRIERS**

### **Unit Structure**

- 3.1 Introduction
- 3.2 Intended Learning Outcomes
- 3.3 Communication Elements
  - 3.3.1 Sender
  - 3.3.2 Message
  - 3.3.3 Encoding
  - 3.3.4 Media
  - 3.3.5 Decoding
  - 3.3.6 Receiver
  - 3.3.7 Feedback
  - 3.3.8 Noise
- 3.4 Importance of Communication Process
  - 3.4.1 The Basis of Coordination
  - 3.4.2 Fluent Working
  - 3.4.3 The Basis of Decision Making
  - 3.4.4 Increases Managerial Efficiency
  - 3.4.5 Increases Cooperation and Organisational Peace
  - 3.4.6 Boosts Morale of the Employees
- 3.5 Communication Barriers
  - 3.5.1 Semantic Barriers
  - 3.5.2 Psychological Barriers
  - 3.5.3 Organisational Structure
  - 3.5.4 Personal Barriers
- 3.6 Summary
- 3.7 Glossary
- 3.8 References/Further Reading/Web Resources
- 3.9 Possible Answers to Self-Assessment Exercise(s)

### **3.1 Introduction**

In your last unit, you generally studied how information is transmitted in an organised setting, and what differentiates each network and makes them unique. This will introduce you to today's lesson on communication process and possible barriers.

### **3.2 Intended Learning Outcomes**

By the end of this unit, you will be able to:

- explain what communication process is
- discuss the importance of communication
- explain the barriers to communication

### **3.3 Communication Elements**

Communication is a continuous process that mainly involves three elements, viz. sender, message, and receiver. The elements involved in the communication process are explained below in detail:

#### **3.3.1 Sender**

The sender or the communicator generates the message and conveys it to the receiver. He is the source and the one who starts the Communication

#### **3.3.2 Message**

It is the idea, information, view, fact, feeling, etc., that is generated by the sender and is then intended to be communicated further.

#### **3.3.3 Encoding**

The message generated by the sender is encoded symbolically, such as words, pictures, gestures, etc., before it is being conveyed.

#### **3.3.4 Media**

It is how the encoded message is transmitted. The message may be transmitted orally or in writing. The medium of communication includes telephone, Internet, post, fax, email, etc. The sender decides the choice of medium.

#### **3.3.5 Decoding**

It is the process of converting the symbols encoded by the sender. After decoding, the message is received by the receiver.

#### **3.3.6 Receiver**

He is the last person in the chain and for whom the sender sent the message. Once the receiver receives the message and understands it properly, and acts according to the message, only then can communication be successful.

### 3.3.7 Feedback

Once the receiver confirms to the sender that he has received the message and understood it, communication is complete.

### 3.3.8 Noise

It refers to any obstruction that the sender, message, or receiver causes during the process of communication. For example, bad telephone connection, faulty encoding, faulty decoding, inattentive receiver, poor understanding of message due to prejudice or inappropriate gestures, etc.

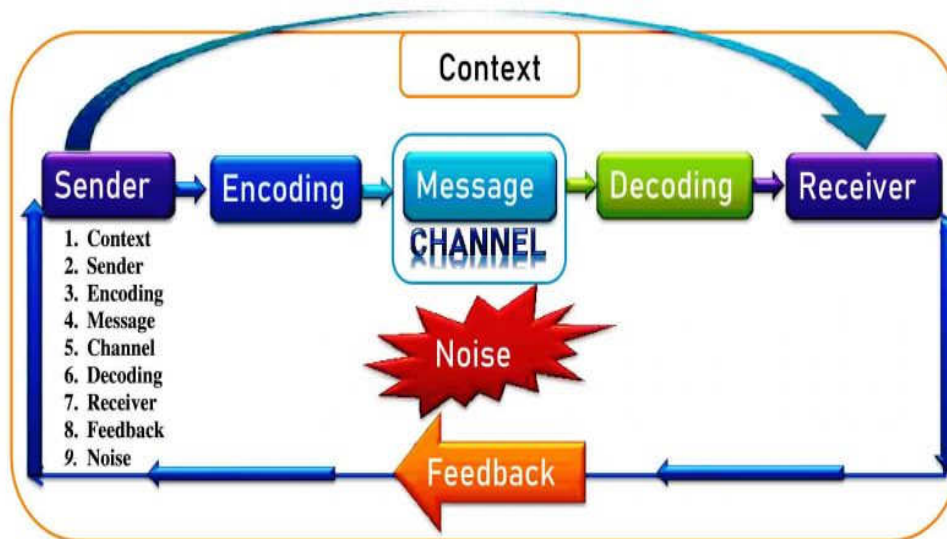


Fig 1 communication process

<https://www.google.com.ng/newsmoor.com>

## 3.4 Importance of Communication

### 3.4.1 The Basis of Coordination

The manager explains the organisation's goals, how they will be achieved, and how they will interact with one another to the personnel. This allows multiple personnel and departments to work together. As a result, communications serve as a foundation for organisational coordination.

### **3.4.2 Fluent Working**

To keep an organisation running smoothly and efficiently, a leader coordinates the human and physical factors. This coordination is impossible to achieve without effective communication.

### **3.4.3 The Basis of Decision Making**

Effective communication gives a leader with information that may be used to make decisions. In the lack of information, no decisions can be made. As a result, effective communication is essential for making good decisions.

### **3.4.4 Increases Managerial Efficiency**

The manager communicates the goals and directions to his or her subordinates, as well as assigning work to them. Communication plays a role in all of these factors. As a result, communication is critical to the managers' and the organisation's ability to perform quickly and effectively.

### **3.4.5 Increases Cooperation and Organisational Peace**

The two-way communication approach encourages workers to cooperate and communicate with one other as well as with management. As a result, there is reduced friction in the plant, which leads to improved productivity and efficiency.

### **3.4.6 Boosts Morale of the Employees**

Workers can adjust to the physical and social components of their jobs more easily with good communication. It also improves the industry's human relations. Management can use an effective communication system to encourage, influence, and please subordinates, raising morale and keeping them motivated.



<https://www.youtube.com/watch?v=JyLez4xZ16Q>

## **3.5 Barriers to communication**

Communication barriers can obstruct communication or provide the wrong message, resulting in misunderstanding. As a result, a manager must recognize such impediments and take appropriate steps to overcome them. The barriers to communication in organisations can be broadly grouped as follows:

### **3.5.1 Semantic Barriers**

These are the issues and roadblocks that arise while encoding and decoding a message into words or impressions. Typically, such hurdles arise as a result of misspoken words, erroneous translations, differing interpretations, and so on. A manager, for example, may have to communicate with employees who do not speak English. Language is a barrier to communication in this case, as the management may not be able to communicate effectively with the workforce.

### **3.5.2 Psychological Barriers**

Communication might also be hampered by emotional or psychological issues. Communication reflects the state of mind of both the sender and the recipient. A frightened individual is unable to communicate effectively, while an angry recipient is unable to comprehend the message. As a result, both the sender and the recipient must be psychologically sound at the time of communication. They should also have faith in one another. They won't be able to interpret each other's message in its original sense if they don't trust each other.

### **3.5.3 Organisational Structure**

Organisational structure, rules and laws, authority relationships, and other variables can occasionally act as roadblocks to successful communication. People may not be encouraged to communicate freely in an organisation with a highly centralised structure. Rigid rules and regulations, as well as lengthy procedures, may create a barrier to communication.

### **3.5.4 Personal Barriers**

Both the sender and the receiver's personal characteristics may operate as roadblocks to efficient communication. If a supervisor believes that a certain communication would jeopardize his authority, he may conceal it. Superiors may refuse to seek counsel from subordinates if they have doubts about their competence. In the absence of any compensation or praise for a good idea, subordinates may be hesitant to make valuable suggestions.





Fig 1 Communication barriers  
<https://www.google.com.ng/www.hrishiblogbuddhi.com>

On the one hand, communication barriers are technically referred to as NOISE, but a few pervasive problems discussed are perceptions, filtering, and language (Mcshane & Glinow, 2003).

**Perceptions:** The perceptual process governs the messages we choose to pay attention to or ignore, as well as how the chosen formation is organised and processed. If the transmitter and receiver have distinct perceptual frames and mental blocks, these processes can be a significant source of noise in the communication process.

**Filtering:** organisational structure filtered information along the communication channel. Filtering might include eliminating or delaying unfavorable information, as well as employing softer language to make events sound more positive. Employees and managers frequently filter communication in order to present a positive image to their superiors. Filtering is most popular when an organisation rewards individuals who only provide good information and when employees have strong career mobility goals (Glauser, 1984).

Language: words and gestures have no intrinsic meaning, the sender must ensure that the receiver comprehends them. In actuality, one of the most common causes of misleading signals is a lack of mutual understanding.

### 3.6 Summary

In this unit, we have discussed communication process, barriers to communication, and the importance of communication. If you remember, we defined

- Communication as a continuous process that mainly involves three elements; sender, message, and receiver.
- Medium of Communication includes telephone, Internet, post, fax, email, etc. Communication barriers as NOISE
- They may equally include perceptions, filtering, and language
- Semantic, Psychological, Organisational and Personal are others

### SELF-ASSESSMENT EXERCISE

Now test your level of understanding by attempting the self-assessment exercise below.

- What are the elements in communication process?
- Discuss the importance of communication.
- What are the barriers to communication?

### 3.7 Glossary

1. Semantic barriers are the issues and roadblocks that arise while encoding and decoding a message into words or impressions.
2. Communication barrier due the emotion and psychological state of either the sender or receiver.

### 3.8 References/Further Reading/Web Resources

Fiugo, F.D. (2012). Top 10 Barriers to Effective Communication. <http://delfiugoconsulting.com/top-10-barriers-to-effective-communication/>

Riccio, H. M. (2001). The virtual library – past, present and future. <http://lawlibrary.uvdavis.edu/LAW/feb93/006.html>. Retrieved September 15 2014.

Umezor, S. N. (2017). Information overload: A case for developing countries. *Information & Knowledge Management*, 7(12),

3539. <https://www.iiste.org/Journals/index.php/IKM/article/viewFile>

Fourie, D. K. and Dowell, D. R. (2002). *Libraries in the information age: An Introduction and career exploration*. Colorado: Libraries Unlimited.

Siegmán, A.W. (1985). *Multichannel Integrations of Nonverbal Behavior*. Hillsdale, NJ: L. Erlbaum Associates.

Tiwari, P. (2013). *Librarianship in Twenty-First Century*. New Delhi: APH publishing corporation.

**3.9 Possible Answers to Self-Assessment Exercise(s) within the content**

1. Sender, Receiver, Media.
2. Semantic, Psychological, Organisational barriers.
3. Boosts Morale of the Employees and increased in managerial efficiency.

**MODULE 3            BIBLIOGRAPHIC ORGANISATION**

Unit 1	Bibliography
Unit 2	Types of Bibliographies
Unit 3	Enumerative Bibliography

**UNIT 1            BIBLIOGRAPHY****Unit Structure**

- 1.1 Introduction
- 1.2 Intended Learning Outcomes
- 1.3 Bibliographies
- 1.4 Summary
- 1.5 Glossary
- 1.6 References/Further Reading/Web Resources
- 1.7 Possible Answers to Self-Assessment Exercise(s)

**1.0 Introduction**

This unit introduces you to the bibliography and what information it should contain. Your ability to clearly and effectively write a good bibliography depends largely on this understanding.

**1.2 Intended Learning Outcomes**

By the end of this unit, you will be able to:

- explain what a bibliography is
- discuss what information a bibliography should contain.

**1.3 Bibliographies**

A bibliography (not to be confused with the works cited) generally entails the listing of books, articles, journals, cultural objects and other study materials used to compose a piece of academic writing or literary work. It is essentially a list of sources used (referenced in-text and otherwise) in writing a research paper.





<https://www.youtube.com/watch?v=jgIg30VuLBE&t=35s>

## 1.4 Summary

This unit discussed what a bibliography is all about and what information a bibliography should contain. If you remember, we define.

- The bibliography lists books, articles, journals, cultural objects and other study materials used to compose a piece of academic writing or literary work.
- A bibliography should include the author, title, publication date and publisher of the source.

### SELF-ASSESSMENT EXERCISE

Now test your level of understanding by attempting the self-assessment exercise below.

- In your own words, explain what a bibliography is?
- What are the elements of bibliography?

## 1.5 Glossary

A bibliography entails the listing of books, articles, journals, cultural objects and other study materials used to compose a piece of academic writing or literary work.

## 1.6 References/Further Reading/Web Resources

Beghtol, C. (2004). Exploring new approaches to the organisation of knowledge: The subject classification of James Duff Brown. *Library Trend*, 52(4), 702 – 718. <http://hdl.handle.net/2142/1694>.

Gardener, Richard K. 1981. *Library Collections: Their Origin, Selection, and Development*. New York: McGraw-Hill.

Katz, William A. 1992. *Introduction to Reference Work Volume I: Basic Information Sources*, 6<sup>th</sup> ed. New York: McGraw-Hill.

Merriam-Webster Dictionary. (2009). <https://www.merriamwebster.com/dictionary/> communication

**1.7 Possible answers to self-assessment exercise(s) within the context**

- A bibliography entails the listing of books, articles, journals, cultural objects and other study materials used to compose a piece of academic writing or literary work.
- Author's name, title, place of publisher.



## UNIT 2      TYPES OF BIBLIOGRAPHIES

### Unit Structure

- 2.1 Introduction
- 2.2 Intended Learning Outcomes
- 2.3 Analytical Bibliography
- 2.4 Annotated Bibliography
- 2.5 Enumerative Bibliography
- 2.6 Summary
- 2.7 Glossary
- 2.8 References/Further Reading/Web Resources
- 2.9 Possible answers to self-assessment exercise(s)

### 2.1 Introduction

Most bibliographies are subject bibliographies, but there cannot be effective subject bibliographies unless there are wide-ranging and efficient general bibliographies. Besides the subject bibliographies, the national bibliographies also referred to as current bibliographies, are very popular to search current and retrospective information. The other types of general bibliographies are the trade bibliographies and the universal bibliographies. Current and retrospective bibliographic, primary and secondary bibliographies and bibliographies of bibliographies are other categories. For example, a list of periodical articles is an index. Similarly, we have concordances, calendars, wiscographies, pictographies, directories and so on.

There are three main types of bibliographies:

- Analytical:
- Annotated:
- Enumerative:

### 2.2 Intended Learning Outcomes

By the end of this unit, you will be able to:

- differentiate between analytical, annotated and enumerative bibliographies
- give details of general and special bibliographies.

### **2.3 Analytical Bibliography**

Analytical bibliographies are used by authors to critically examine books. It covers any new information or discoveries made as the book or research paper proceeds. Information on printers and booksellers, descriptions of paper and binding, and discussions of issues that arose as the book progressed from a manuscript to a published book may be included in an analytical bibliography.

Three types of analytical bibliographies include descriptive, historical, and textual.

- A descriptive bibliography closely examines the physical nature of the book.
- A historical bibliography discusses the Context in which the book was produced.
- A textual bibliography compares the published work to the author's original manuscript.

### **2.4 Annotated Bibliography**

A writer creates an alphabetical list of sources in this form of bibliography. An annotated bibliography's describes the different types of study that have been done on a specific topic. The author adds annotations or notes to the sources. As a result, the writer comments on the research sources in addition to providing information about them. The writer has the option of summarizing. This means that it provides details about each reference's content.

### **2.5 Enumerative Bibliography**

The author of an enumerative bibliography arranges the references in a certain order. This is the most common type of bibliography used by students doing research papers. Enumerative bibliographies are organised by author, subject, date, or some other scheme by these academic writers. They have a similar theme in the items they include, such as topic, language, or time period. The bibliographer provides sufficient information about the source to direct readers to it. In an enumerative bibliography, the writer would not add descriptive information, such as physical characteristics of the book. Enumerative bibliographies include card catalogs, a list of references in a research paper, and books listed in the back of a history book.

## 2.6 Summary

In this unit, we have discussed types of bibliographies and different branches of bibliographies. If you remember

- There are three main types of bibliographies:
- Analytical
- Annotated
- Enumerative
- While the branches of bibliographies are general and special.

### SELF-ASSESSMENT EXERCISE

- ----- are used by authors to critically examine books.
- ----- describes the different types of study that have been done on a specific topic.
- ----- are organised by author, subject, date, or some other scheme by these academic writers.

## 2.7 Glossary

- Enumerative bibliography arranges the references in a defined order.
- An annotated bibliography's describes the different types of study that have been done on a specific topic.
- Analytical bibliographies are used by authors to critically examine books.

## 2.8 References/Further Reading/Web Resources

Gardener, Richard K. 1981. *Library Collections: Their Origin, Selection, and Development*. New York: McGraw-Hill.

Katz, William A. 1992. *Introduction to Reference Work Volume I: Basic Information Sources*, 6<sup>th</sup> ed. New York: McGraw-Hill.

Miksa, S.D. (2017). "The relationship between classification research and information retrieval research, 1952 to 1970", *Journal of Documentation*, Vol. 73 No. 6, pp. 13431379. <https://doi.org/10.1108/JD-02-2017-0025>

National Planning on Technology Enhanced Learning (NPTEL). (2019). *Introduction to Effective Communication*. Retrieved from:

<https://nptel.ac.in/courses/109104030/Module1/Lecture1.pdf> (May 5, 2022).

**2.9 Possible answers to self-assessment exercise(s) within the content**

- Analytical
- Annotated
- Enumerative

## **UNIT 3      ENUMERATIVE BIBLIOGRAPHY**

### **Unit Structure**

- 3.1 Introduction
- 3.2 Intended Learning Outcomes
- 3.3 Subject bibliographies
  - 3.3.1 Reference bibliographies
  - 3.3.2 Reading lists
  - 3.3.3 Subject indexes and abstracting services
  - 3.3.4 Bibliographic reviews
- 3.4 Summary
- 3.5 Glossary
- 3.6 References/Further Reading/Web Resources
- 3.7 Possible Answers to self-assessment exercise(s)

### **3.1 Introduction**

In unit 2, we discussed three main types of bibliographies (Analytical, Annotated and Enumerative) and branches of bibliographies (general and special). In this unit, we will discuss another bibliography called subject. We will discuss the subject bibliography extensively.

### **2.1 Intended Learning Outcomes**

By the end of this unit, you will be able to:

- discuss what subject bibliography is
- discuss types of subject bibliography.

### **3.3 Subject bibliographies**

Subject bibliographies list primary and secondary sources relevant to the study, and research a specific topic or event. Subject bibliographies are probably the most common type of enumerative bibliography, and finding a subject bibliography on your topic can save you lots of time in your research.

It is defined as the one that deals with the materials about a single given subject, which may be a place (Lere), a person (Aliyu), a broad subject (Library and Information Science) or a minute branch of any subject (organic chemistry ), a thing ( Computers). Ranganathan defined a subject bibliography as the one that is a document bibliography confined to a specific subject field, instead of covering the entire universe of subjects;

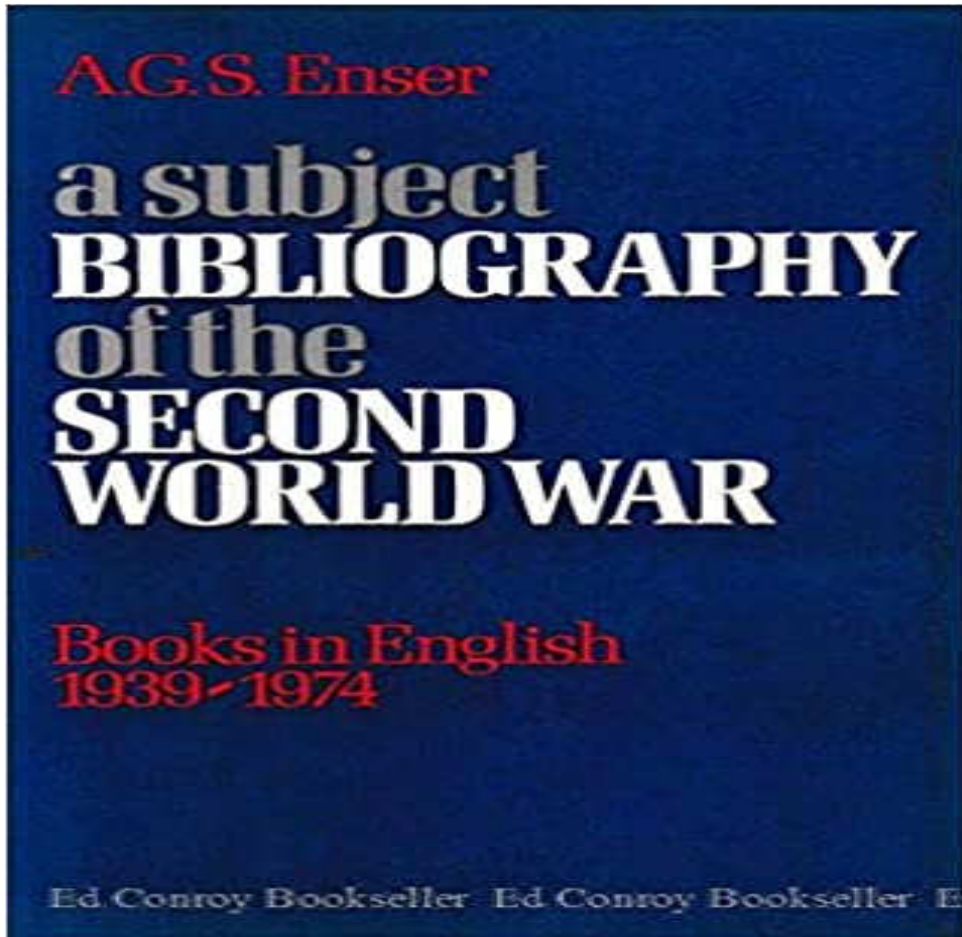


Fig 1 bibliography

<https://www.google.com.ng/www.amazon.com>

Subject bibliographies are lists of materials that relate to a particular discipline or subject scope. Subject bibliographies are a good place to start when collecting in a specific area. They give a valuable overview of a discipline and are very useful in collection development. These tools are important when building retrospectively and allow the librarian to see what has been considered historically worthwhile in a field. Once a subject is chosen, the divisions' common to national bibliographies may be employed time, form, origin, and others. However, unlike most national bibliographies, a subject work may use all the divisions (Katz, 1980).

However, subject bibliographies also have inherent problems that fundamentally reduce their usefulness in certain fields of study, fields that need cutting edge materials. Subject bibliographies are out of date when published and sometimes contain books that currently have little value, replaced by newer and better titles (Gardner, 1981). It is easy to see how textbooks on genetic engineering or computer technology can be quickly superseded by the latest information resources available. The compiling

of some subjects is better suited than others for collection development using this tool.

The subject bibliographies may occur as independent publications or parts of documents. They will have limited scope concerning the form of material, period, sources of origin and language. They are usually either selective or comprehensive and may be current or retrospective. Depending on the contents of subject bibliographies, they can be divided into several categories, a few of which are given below:

### **3.3.1 Reference bibliographies**

The subject bibliographies which are mostly used for reference fall into this category. These bibliographies are considered to be exhaustive bibliographies. It is often quite impossible to compile exhaustive bibliographies, recording every single published document on any subject because so much of published material escapes advertisement, legal deposit, and the scattering of publications to books and journals is a problem that escapes the bibliographers' vigilance. Therefore, these publications only aim to be exhaustive within chosen limits, which the bibliographers should clarify. Material published in foreign languages is also a major limitation.

### **3.3.2 Reading lists**

Large-sized subject bibliographies are important, especially when they have wide coverage. But they are not enough as anyone wishing to study a particular subject, at whatever level, needs a carefully prepared select bibliography of it. Such a bibliography must be appropriate in scale and cautious in its inclusion of out-of-print publications. It must be helpfully arranged and annotated, and reasonably up to date. The more proper, the more usual name for this kind of bibliography is 'reading list'. The reading lists are common and produced by people who know or should know the literature they recommend. Teachers often prepare the reading lists for distribution to students. At the end of textbooks, under the heading 'Further Reading' is a common sight. This is also a type of reading list, although; these may not be of good quality. ‘

A bibliography or a reading list supporting a research article or a review article is usually very valuable for reference purpose as a lot of effort goes into preparing such lists.

# Reading Lists



Fig 2 reading list

<https://www.google.com.ng/www.memphislibrary.org>

### 3.3.3 Subject indexes and abstracting services

Searching documents on a particular subject can be a very time-consuming effort if many scattered references are gathered together. A helpful scanning of literature can be carried out by searching the indexes of books and periodicals. There are also serials available, called indexing services, which include all details of the published documents in a helpful sequence. In some cases, the entries also include summaries of the texts. These are known as abstracting services. Most reference value periodicals usually have their indexes (when the record of all the articles that appear in a periodical and are usually appended to a full volume of a periodical). Presently, computerised indexes on microfiche are also available. The indexing and abstracting services have great importance for users searching documents for current and retrospective literature searches. The indexing services are usually an author-subject index of books, pamphlets, periodical articles, theses or any other media on any given subject.

On the other hand, the abstracting services have some classified or subject arrangement. The subjects' entries are arranged author-wise with all the bibliographic details and an abstract of the original text. The classified part is supported by author, title and subject indexes for searching.





Fig 3 subject indexes  
<https://www.uppinghamcollege.org.uk>

### 3.3.4 Bibliographic reviews

Bibliographic reviews perform a combined function of providing information and judgments about title items reviewed and, therefore, serve as useful bibliographic contributions made to a particular field. These can be in the form of current advances, annual reviews or state-of-the-art on a subject area. The selective bibliographies list selected items that are arranged systematically, usually according to the subject. They are more useful for retrospective material, meant especially for medium and small size libraries.

Personal bibliography is “a list of writings by and on a person”. In the field of literature, personal bibliographies are extremely important. It can be of two kinds:

- a) An author bibliography, a complete list of all documents by an author. It is purely a ‘by’ kind of author bibliography. This would cover all the literature written by the author.
- b) A list of writings on a person is a personal bibliography called a subject bibliography. In such a case, the person as an entity becomes the subject of the study.



<https://www.youtube.com/watch?v=jftyvEuGztg>

### 3.4 Summary

This unit discussed what subject bibliography is all about and the different types of subject bibliographies. If you remember, we defined.

- Subject bibliography as confined to a specific subject field, instead of covering the entire universe of subjects
- The subject bibliographies form the largest group of enumerative bibliographies.

### SELF-ASSESSMENT EXERCISE

Now test your level of understanding by attempting the self-assessment exercise below.

- What is subject bibliography
- Enumerate four types of subject bibliographies.

### 3.5 Glossary

- Subject bibliographies are lists of materials that relate to a particular discipline or subject scope.

### 3.6 References/Further Reading/Web Resources

Evans, G. E. (1987). *Developing Library and Information Center Collections*, 2<sup>nd</sup> ed.

Englewood Cliffs, CO.: Libraries Unlimited.  
Gardener, R. K. (1981). *Library Collections: Their Origin, Selection, and Development*. New York: McGraw-Hill.

Katz, W. A. (1992). *Introduction to Reference Work Volume I: Basic Information Sources*, 6<sup>th</sup> ed. New York: McGraw-Hill.

Kumar, K. (1979). *Theory of Classification*. New Delhi: Vikas Publishing House.

Ojomo, O. (2004). *Communication: Theory and Practice*. In *Language, Communication and Study Skills* by Efurosibina Adegbija. Lagos: Covenant University, pp. 77-95.

**3.7 Possible answers to self-assessment exercise(s)**

- Subject bibliographies list primary and secondary sources relevant to the study, and research a specific topic or event. Subject bibliographies are probably the most common type of enumerative bibliography, and finding a subject bibliography on your topic can save you lots of time in your research.
- Reading list, indexes, bibliographic review, etc.

## **MODULE 4      INFORMATION RESOURCES AND REFERENCE SERVICES IN SUBJECT AREAS**

### **Introduction**

This module has five units that aim to teach you information resources and reference services by subject disciplines: Humanities, Social Sciences, Pure and Applied Sciences have been selected because they illustrate different information use patterns and a variety of different types of information resources. Module one, unit three has already introduced you to the understanding of information resources generally.

Unit 1	Humanities
Unit 2	Social Sciences
Unit 3	Pure and Applied Sciences
Unit 4	Reference Services
Unit 5	Types of Reference Sources

## **UNIT 1      HUMANITIES**

### **Unit Structure**

- 1.1 Introduction
- 1.2 Intended Learning Outcomes
- 1.3 Information Resources in Humanities
  - 1.3.1 Manuscripts
  - 1.3.2 An Aural or Visual Record
  - 1.3.3 Hardback books
  - 1.3.4 Paperback books
  - 1.3.5 Annotated texts
  - 1.3.6 Collections and anthologies
  - 1.3.7 Popular magazines and newspapers
  - 1.3.8 Literary journals
  - 1.3.9 Series
  - 1.3.10 Literary Forms
  - 1.3.11 Prose
  - 1.3.12 Novel
- 1.4 Summary
- 1.5 Glossary
- 1.6 References/Further Reading/Web Resources
- 1.7 Possible answers to self-assessment exercise(s)

## 1.1 Introduction

This unit introduces you to information resources in the humanities. Therefore, information resources include all forms of information carriers that can be used to promote and encourage effective teaching, learning, research activities, and projects.

## 1.2 Intended Learning Outcomes

By the end of this unit, you will be able to:

- discuss information resources in humanities;

## 1.3 Information Resources in Humanities

Libraries have always been closely identified with the provision of information resources for these categories of users. The library is the storehouse for all literature. Information resources in literature exhibit many of the characteristics of information resources in the humanities. For example, they do not go out of date or become superseded, like much scientific writing, and they are usually written in expressive rather than technical language. Much literary criticism is subjective. There are no 'right answers. Handbooks and companions to literature can be used to answer various questions relating to authors, literary works, characters, plots, literary themes and allusions, etc. Much of this information could be found in general encyclopedias, but there are specialised resources relating to the literature.

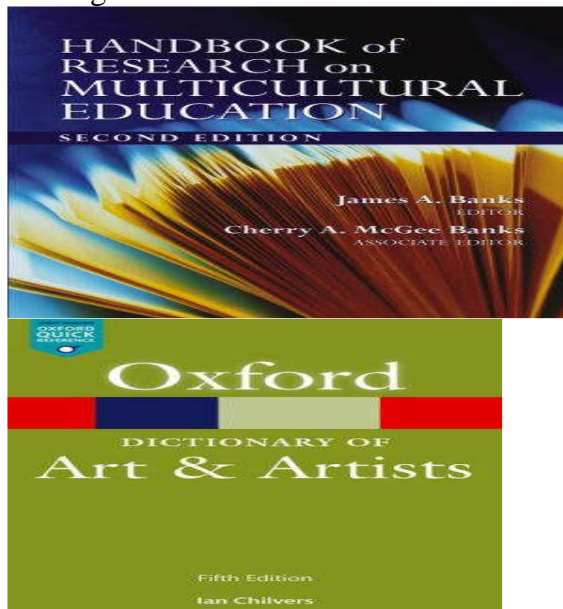


Fig. 1: Handbook of Research on Multicultural Education Fig 2 The Oxford dictionary of art and artists  
Source by James A. Banks; Cherry A. McGee Banks; Ian Chilvers

Information about authors and their work can be found in general encyclopedias and biographical sources or literary handbooks. There are also specialised biographical and critical resources for literature; for example, Lists of references can be found in many of the resource types we have discussed. There are also many literary bibliographies, general and specialised.

Below are some of the more common formats in which original literary works and works about literature may be found.

**1.3.1 Manuscripts**, e.g. author's original draft. For works written before the invention of printing, original Publication was in manuscript form.

**1.3.2 An Aural or Visual Record** e.g. plays novels or tape, cassette or disc, either video or audio or film of a theatrical performance filming a novel for cinema or television, often leads to the reissue of the book. 'Novelization' the production of the 'book of the film' after the film - is becoming common.

**1.3.3 Hardback books:** The original publication format for most works of literature and books about Literature.

**1.3.4 Paperback books:** More popular poems, plays and novels may be published in this format, often alter-hardback editions appear. More ephemeral novels are often published only in paperback. New poetry and plays may be published only in paperback because of the financial problems of publishing in this special market.

**1.3.5 Annotated texts.** Particularly for early works and the classics, texts may include introductory material, footnotes, glossary etc. Level ranges from elementary school texts to those intended for academic researchers, e.g. Arden edition of Shakespeare's works, editions published by the Early English Text Society.

**1.3.6 Collections and anthologies.** Essays, poems, plays or short stories may be collected by author or by theme, e.g. collected works of T.S. Eliot, The Oxford Book of English verse, a collection of critical essays on Jane Austen. Material -in collections and anthologies has often been previously published elsewhere.

**1.3.7 Popular magazines and newspapers.** Poems and short stories may receive their first or only publication in magazines and newspapers, e.g. Playboy, Saturday edition of the Sydney Morning Herald, New Yorker, and Woman's weekly. Novels may be serialized in magazines.

**1.3.8 Literary journals:** These may publish original literary works, or articles about literature, or both. Some poetry, plays and short stories are published only in this format, e.g. new poetry, Mean in quarterly, Southerly, Times literary-supplement.

**1.3.9 Series:** Some publishers produce texts of literary works or works about literature in standard formats. E.g. Australian poets, Penguin new writers, Twayne's world author's series, Australian writers and their work

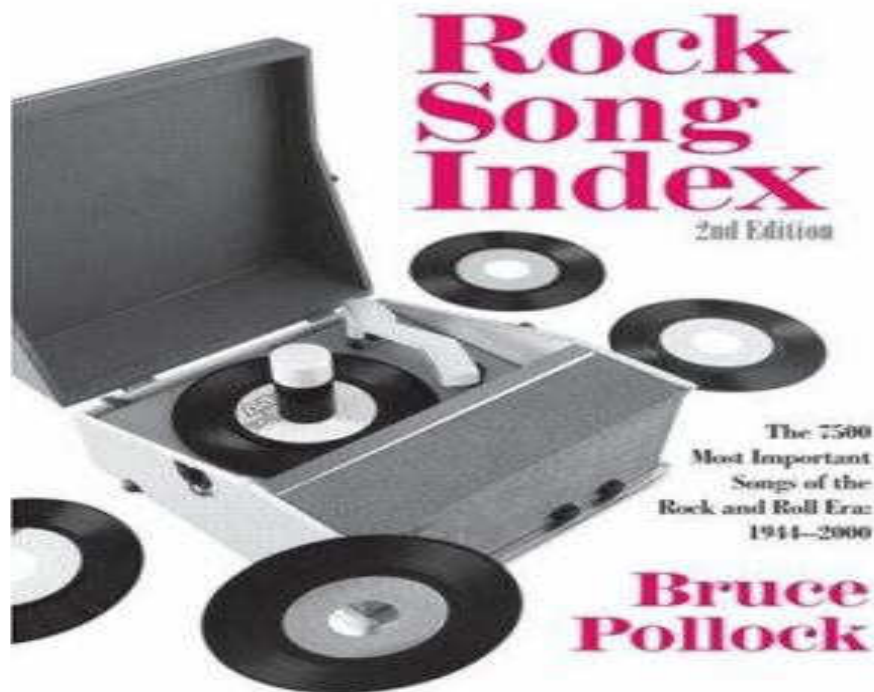


Fig. 3: Rock Song Index by Bruce Pollock

### 1.3.10 Literary Forms

One of the common ways of categorizing literature is by literary form. We will consider some characteristics of three forms, prose, poetry and drama, and some information resources which deal exclusively with one literary form.

#### 1.3.11 Prose

Various prose literature forms - novels, short stories, essays, diaries, letters, humour and satire. For most people, the novel is the most significant.

### 1.3.12 Novel

Some people distinguish between novels that have lasting literary value and those that have not. In public libraries, novels of the latter kind are often called fiction and may be found shelved separately from literature

### Indexing and Abstracting Services for Literature

In literature, indexing services are used mainly to locate criticisms of literary works and writers. However, you should note that some of them can also be used to locate original literary works, particularly when they are published in journals. Some general indexing services are useful in literature, for example, Arts and Humanities 'citation index

Galleries, museums, specialist associations and art dealers are important information resources in the visual arts. They may give specialist advice, opinions about the authenticity of works, and valuations. They organise exhibitions and publish catalogues which are in important information resources.



<https://www.youtube.com/watch?v=HPvjsOdcyBI>

## 1.4 Summary

This unit discussed what humanities information resources are all about and what information sources are available to them. If you remember, we defined.

- Humanities information resources as all forms of information carriers can promote and encourage effective teaching, learning, research activities, and humanities projects.

### SELF-ASSESSMENT EXERCISE

Now test your level of understanding by attempting the self-assessment exercise below.

- Explain humanities information sources?
- List three examples of information sources in humanities.

## 1.5 Glossary

- Manuscripts is author's original draft. For works written before the invention of printing, original Publication was in manuscript form.



## 1.6 References/Further Reading/Web Resources

Gardener, R. K. (1981). *Library Collections: Their Origin, Selection, and Development*. New York: McGraw-Hill.

Kumbhar, R. M. (2003). Construction of Vocabulary Control Tool Thesaurus for Library and Information Science. <http://hdl.handle.net/10603/150911>

Katz, W. A. (1992). *Introduction to Reference Work Volume I: Basic Information Sources*, 6<sup>th</sup> ed. New York: McGraw-Hill.

Schmitz, A. (2013). A Primer on Communication Studies. <https://courses.lumenlearning.com/atd-hostos-interpersonalrelations1/chapter/introduction-to-communication>.

**1.7 Possible answers to self-assessment exercise(s)**

- Information resources which contained and possess art and humanity features are referred to as humanities information sources.
- Collections and anthologies, manuscript, magazine, visual record etc.

## **UNIT 2      SOCIAL SCIENCES**

### **Unit Structure**

- 2.1 Introduction
- 2.2 Intended Learning Outcomes
- 2.3 Social Science Information Resources
- 2.4 Types of Social Science Information Resources
  - 2.4.1 General and National Encyclopedias
  - 2.4.2 Yearbook
  - 2.4.3 Directory
  - 2.4.4 Curriculum Materials
  - 2.4.5 Bibliographies
- 2.5 Summary
- 2.6 Glossary
- 2.7 References/Further Reading/Web Resources
- 2.8 Possible answers to self-assessment exercise(s)

### **2.1 Introduction**

Having learned about humanities information sources in unit 1, we will discuss Social Sciences' information resources.

### **2.2 Intended Learning Outcomes**

By the end of this unit, you will be able to:

- discuss information resources in Social Sciences.

### **2.3 Social Science Information Resources**

It is not easy to define social sciences information resources because almost any resource can provide a learning experience, whether its producers intended it to be educative. To clarify the question of what a social science information resource is, it may be useful to consider the different types of resources used in each of the three main roles identified in the education process: learner, teacher, and theorist-researcher. There are also several other groups of people involved in education, for example, parents, professional associations, unions, and government departments, all of whom may have different information needs.

The inexactness of terminology is often a problem in education, as it is in all the social sciences. Moreover, the educational systems of different countries and the terminology used to describe them.

## 2.4 Types of Social Science Information Resources;

**2.4.1 General and national encyclopedias** are often useful in education, particularly in answering questions relating to education history or its organisation and administration in various countries. Specialist encyclopedias in related areas, such as the International encyclopedia of the social sciences, may also be useful.

**2.4.2 Yearbook;** Various yearbooks summarise the important happenings of the past year, for example, the Education yearbook. New York, Macmillan. Statistical information is important in education, for example, in studying national trends and international comparisons. Such information is often published in yearbooks: UNESCO, Statistical yearbook. Paris,

**2.4.3 Directory;** this type of information resources are particularly important within education since questions relating to people, places, organisations and services within education often need to be answered. Many questions asked in libraries relate to educational opportunities, courses admission requirements, fees and scholarships, etc.

**2.4.4 Curriculum materials, e.g. textbooks, films, and slides** used in particular courses, are-important information resources in social sciences.

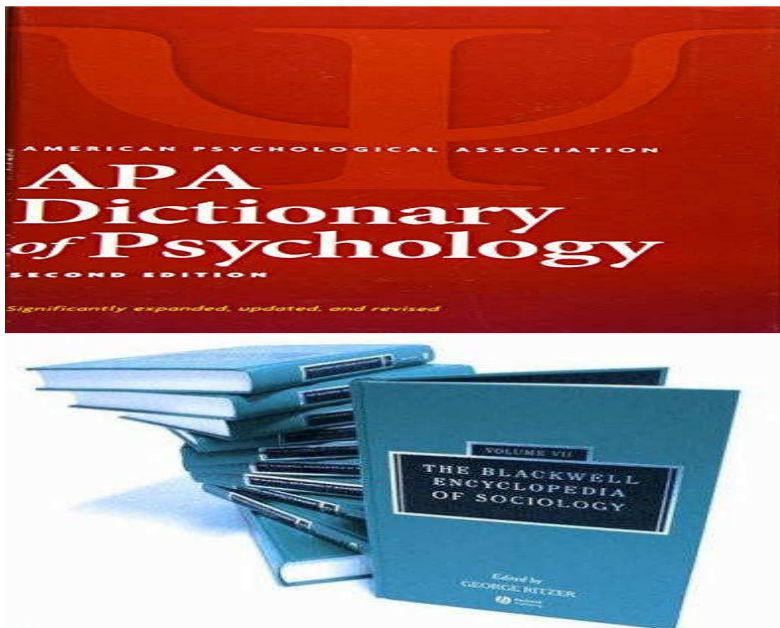


Fig 1: APA Dictionary of Psychology Fig 2  
Source by Gary R.

**2.4.5 Bibliographies** can be found in many of the resources discussed, e.g. in encyclopedias, guides to the literature, standard histories, and yearbooks.

## 2.5 Summary

In this unit, we have discussed types of social sciences information resources. If you remember, we said, different categories of people used information resources for different purposes. Similarly, we mentioned bibliographies, curriculum materials, and directories etc. as social science information resources.

## SELF-ASSESSMENT EXERCISE

Now test your level of understanding by attempting the self-assessment exercise below.

- Enumerate three types of social science information resources.

## 2.6 Glossary

- Social science information resources are the type of information resources which contained and possessed social science features and information.

## 2.7 References/Further Reading/Web Resources

Gardener, R. K. (1981). *Library Collections: Their Origin, Selection, and Development*. New York: McGraw-Hill.

Katz, W. A. (1992). *Introduction to Reference Work Volume I: Basic Information Sources*, 6<sup>th</sup> ed. New York: McGraw-Hill.

Ranganathan, S. R. (1967). *Prolegomena to Library Classification* (3rd ed.). , Bombay: Asia Publishing House.

The Entrepreneur Handbook. (2019). What is Communication? <https://entrepreneurhandbook.co.uk/what-is-communication/>.

## **2.8 Possible Answers to Self-Assessment**

### **EXERCISE(S) WITHIN THE CONTENT**

- Curriculum materials, directory, encyclopedia, yearbook, etc.

## **UNIT 3      PURE AND APPLIED SCIENCES**

### **UNIT STRUCTURE**

- 3.1 Introduction
- 3.2 Intended Learning Outcomes
- 3.3 Pure and applied sciences information resources
  - 3.3.1 Ask someone
  - 3.3.2 Consult the literature
  - 3.3.3 Conduct an experiment
  - 3.3.4 Guides to the literature
- 3.4 Sources reporting original work, and aids to finding them
  - 3.4.1 Periodicals
  - 3.4.2 Patents
  - 3.4.3 Dissertations or Theses
  - 3.4.4 Bibliographic Sources
  - 3.4.5 Reviews
  - 3.4.6 Annual Reports on the Progress in Chemistry Monographs
  - 3.4.7 Data Books, Manuals, Handbooks, Formulae
- 3.5 Summary
- 3.6 Glossary
- 3.7 References/Further Reading/Web Resources
- 3.8 Possible answers to self-assessment exercise(s) within the content

### **3.1 Introduction**

In unit 2, we discussed three main types of social sciences information resources (Teacher resources, Theorist-researcher resources, and Learner resources). In this unit, we will discuss information resources for Pure and Applied Sciences.

### **3.2 Intended Learning Outcomes**

By the end of this unit, you will be able to:

- discuss what pure and applied sciences information resources are
- discuss types of science resources.

### **3.3 Pure and Applied Sciences Information Resources**

Pure and applied scientists need constant access to information. They need to know what other scientists have discovered, and they do this in two ways:

### 3.3.1 Ask someone

This informal means of information gathering is enormously important to the scientist. Sometimes known as the "invisible college", communication via letters, personal discussions, attendance at conferences and "over the workbench" enables scientists to enrich their knowledge of their own and related fields.

### 3.3.2 Consult the literature

A scientist consults the scientific literature for some reasons:

- ✓ to keep/ up to date with current and proposed research in the scientist's own and related fields;
  - ✓ to obtain fast, reliable access to specific information necessary in daily work;
  - ✓ to discover all that has already been achieved in a given area.
- If scientists cannot find any reference to existing research which reports the information they need, they use a third method of finding out:

### 3.3.3 Conduct an experiment

This is often the only way of obtaining needed information but unnecessary and wasteful if that work has already become part of the established, recorded body of scientific literature. In experimenting, the scientists will use the methods of gaining information already discussed by asking someone or consulting the literature as a basis for experimentation.

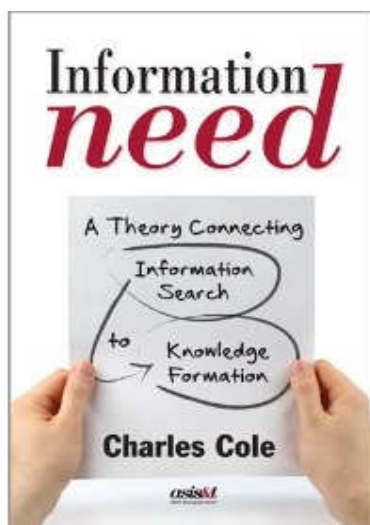


Fig 1: <https://www.myotonicdystrophy.com>



### 3.3.4 Guides to the literature

If you know nothing about science's information resources, the best place to start is a "guide to the literature". There are general guides to information resources, such as **SHEEHY and WALFORD**, and guides to science literature, such as **MALINOWSKI and CHEN**. There are also more specialised ones for chemistry, such as:

## 3.4 Sources reporting original work, and aids to finding them

A significant part of the scientific literature is concerned with disseminating new research results or new interpretations of established knowledge. While work results are communicated through letters, conference papers and conversations, it is a basic principle of scientific investigation that a piece of research is not regarded as complete until the results have been written up and in sufficient detail to be reproducible. Sources that assist the communication of research results include periodicals, patents, reports and theses.

### 3.4.1 Periodicals

Often published by learned or scientific societies, periodicals contain major articles which report investigations and experiments. Some periodicals promote the rapid dissemination of information through brief communications or letters, rather than lengthy articles, e.g. Chemical and engineering news.

### 3.4.2 Patents

A patent is a contract between an inventor and the community by which the inventor retains the exclusive right to exploit his invention for a limited period in return for making that invention public. (Most patents are owned by companies rather than by individuals.) When an application is made to patent an invention, a patent specification is drawn up, containing a detailed description of the invention. Patent specifications are very important information resources for applied chemists (and for engineers generally) for several reasons:

- ✓ They are often the only source of information on an idea or invention.
- ✓ They are a clue to what competitors are doing
- ✓ They can prevent needless duplication of research.
- ✓ They can stimulate ideas for new research, new products, and new solutions to problems
- ✓ They often summarize the existing knowledge on the topic.

Because of patents' importance to chemical engineers, many of the abstracting and indexing services in chemistry include patents **Chemical Abstracts** entries for patents.

**3.4.3 Dissertations or Theses** are the reports of research done or postgraduate degrees at universities or colleges. They are a significant source of information about new research. Dissertations often contain extensive bibliographies and reviews of the literature.

#### **3.4.4 Bibliographic Sources**

Bibliographic sources enable you to find out what has been published in the field. Chemistry is an extremely well-documented discipline with excellent bibliographic resources. While Chemical Abstracts is the most significant abstracting and indexing service for chemistry, it is not the only one. More specialised services exist in particular branches of chemistry, Encyclopedias and dictionaries.

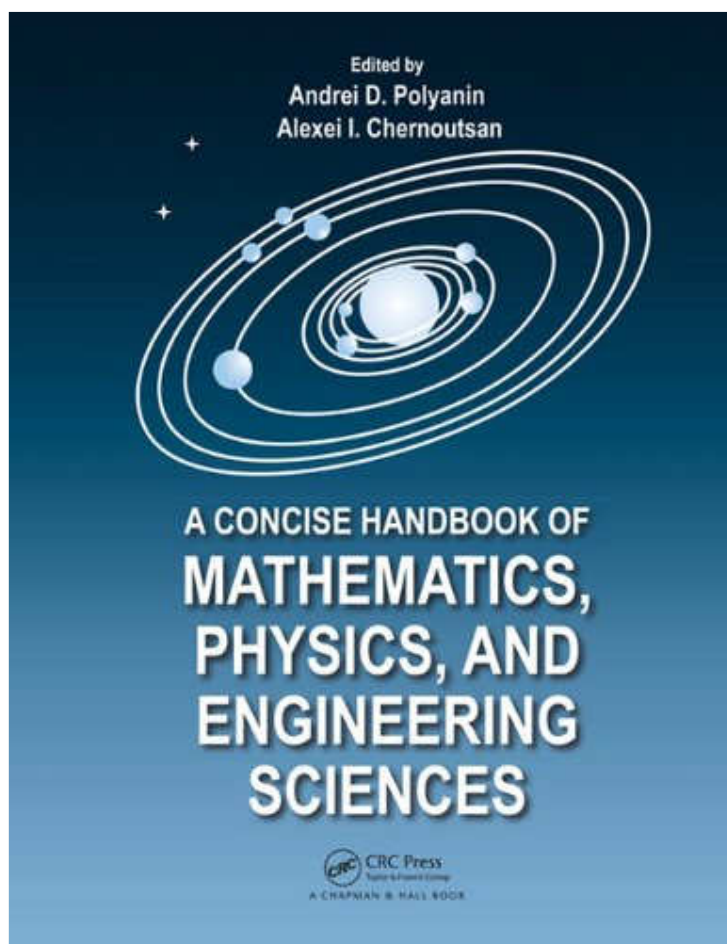


Fig. 2: **A Concise Handbook of Mathematics, Physics, and Engineering Sciences** by Andrei D. Polyaniin; Alexei I. Chemoutsan

**3.4.5 Reviews** summarise and comment on recent developments in a subject. Often publishes by the chemical societies, they are extremely important for offering state-of-the-art overviews of various aspects of chemistry. Some are general, including reviews on all topics within chemistry.

**3.4.6 Annual Reports on the Progress in Chemistry Monographs** cover a single topic in some depth. While they may not contain the latest information available in journal articles, they have the advantage of offering complete information on the topic. Monographs published by firms which specialise in chemistry - for example, Pergamum, McGraw-Hill - are likely to be well-respected and authoritative'.

**3.4.7 Data Books, Manuals, Handbooks, Formulae**, and data banks Chemists use various kinds of data. For example, they may need to know the chemical properties of an element or substance (molecular weight, solubility, etc.) to make particular substances. Standard methods of analyzing and testing, etc.



<https://www.youtube.com/watch?v=T0deHtfwXaY>

### 3.5 Summary

This unit discussed what pure and applied sciences information resources are and different types of science resources. If you remember, we stated that:-

- all pure and applied scientists need constant access to information.
- they need to know what other scientists have discovered.
- they do this by asking someone, consulting the literature and conducting an experiment.

### SELF-ASSESSMENT EXERCISE

Now test your level of understanding by attempting the self-assessment exercise below.

- Enumerate three ways a scientists access information.
- Enumerate three sources of information to scientist.

### 3.6 Glossary

- Reviews summarise and comment on recent developments in a subject.

- Annual reports on the progress in chemistry Monographs cover a single topic in some depth.
- A patent is a contract between an inventor and the community by which the inventor retains the exclusive right to exploit his invention for a limited period in return for making that invention public.

### **3.7 References/Further Reading/Web Resources**

Evans, G. E. (1987). *Developing Library and Information Center Collections*, 2<sup>nd</sup> ed. Englewood Cliffs, CO.: Libraries Unlimited.

Gardener, R. K. (1981). *Library Collections: Their Origin, Selection, and Development*. New York: McGraw-Hill.

Katz, W. A. (1992). *Introduction to Reference Work Volume I: Basic Information Sources*, 6<sup>th</sup> ed. New York: McGraw-Hill.

Thomas, J. (2017). Theory: its nature, practical application and relation to a world view in business research. *International Journal of Business Research and Management*, 12 (9) 231 -240.

**3.8 Possible answers to self-assessment exercise(s) within the content**

- Patent, periodicals, report, patents etc

## **UNIT 4 REFERENCE SERVICES**

### **Unit Structure**

- 4.1 Introduction
- 4.2 Intended Learning Outcomes
- 4.3 Reference Services
  - 4.3.1 Short range
  - 4.3.2 Long range
- 4.4 Referral Service
- 4.5 Summary
- 4.6 Glossary
- 4.7 References/Further Reading/Web Resources
- 4.8 Possible answers to self-assessment exercise(s) within the content

### **4.1 Introduction**

The function of libraries is three-fold. Libraries acquire information, organise that information to be retrieved, and disseminate the library's information. Reference services fulfil this last function. This unit introduces you to reference services in humanities, social sciences and pure and applied sciences.

### **4.2 Intended Learning Outcome**

By the end of this unit, you will be able to:

- discuss reference services in humanities, social sciences and pure and applied sciences.

### **4.3 Reference Services**

Reference services may vary from library to library, but most libraries have an information or Reference Desk where assistance from a librarian is available. Almost all libraries provide reference services via the telephone, and many libraries offer email, text, or chat services with a reference librarian.

There are three main types of reference services:

- Assistance or instruction using the library, including locating materials, using the catalogue, using computers to access information, and using basic reference sources.
- Assistance in identifying library materials needed to answer a question.

- It provided brief, factual answers to questions, such as addresses, statistics, phone numbers, etc., that can be quickly located.

## Types of Reference Services

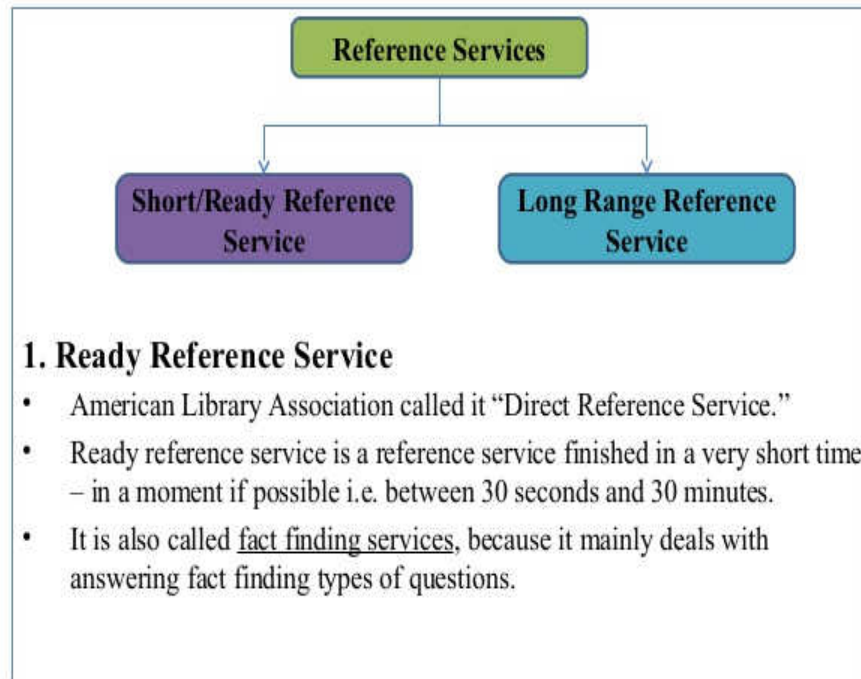


Fig 1 Reference Services

<https://www.google.com.ng/www.slideshare.net>

**4.3.1 Short range** reference queries need reference sources like Dictionary, year-book, handbook and encyclopedia and usually for very short period. The question sought for are usually short and simple.

**4.3.2 Long range** reference queries need information sources like bibliographies, indexes, abstracts, and bibliography of bibliographies and involve much time. Long range reference service often times are detailed and involved more than one reference source.

### 4.4 Referral Service

Referral services are type of reference services that guide information seekers in locating needed information resources. Through referral service a user can also be guided to sources other than libraries. These sources may be some organisations, individuals, specialists, databases, internet resources.

## 4.5 Summary

We have discussed reference services in humanities, social sciences and pure and applied sciences and quick reference sources in this unit. If you remember, we stated that.

- Almost all libraries provide reference services via the telephone, and many libraries offer email, text, or chat services.
- The two major categories of reference materials are general and subject

## SELF-ASSESSMENT EXERCISE

Now test your level of understanding by attempting the self-assessment exercise below.

- Explain three major reference services?

## 4.6 Glossary

- Referral services are type of reference services that guide information seekers in locating needed information resources.

## 4.7 References/Further Reading/Web Resources

Ekere, F. C. & Mole, J. C. (2014). *Theory and Practice of Cataloguing and Classification*. Enugu: Praise house of publishers, 231.

Devito, J.A. (2013). *Essentials of Human Communication*. New York: Pearson College Division.

Gardener, R. K. (1981). *Library Collections: Their Origin, Selection, and Development*. New York: McGraw-Hill.

Katz, W. A. (1992). *Introduction to Reference Work Volume I: Basic Information Sources*, 6<sup>th</sup> ed. New York: McGraw-Hill.

Udo-Akang, D. (2012). Theoretical constructs concepts and applications. *American International Journal of Contemporary Research*, 2(9), 36.



**4.8 Possible answers to self-assessment exercise(s) within the content**

- Assistance or instruction using the library, including locating materials, using the catalogue, using computers to access information, and using basic reference sources.
- Assistance in identifying library materials needed to answer a question.
- It provided brief, factual answers to questions, such as addresses, statistics, phone numbers, etc., that can be quickly located.

## UNIT 5 TYPES OF REFERENCE SOURCES

### Unit Structure

- 5.1 Introduction
- 5.2 Intended Learning Outcomes
- 5.3 Reference Sources
- 5.4 Types of Reference Sources
  - 5.4.1 Dictionaries
  - 5.4.2 Encyclopedias
  - 5.4.3 Directories
  - 5.4.4 Biographical Dictionaries
  - 5.4.5 Gazetteers or Atlases
  - 5.4.6 Almanacks
  - 5.4.7 Handbooks/Manuals
  - 5.4.8 Review and Criticism Sources
  - 5.4.9 Historical Tables, Chronologies, Historical Yearbooks
  - 5.4.10 Indexes and Abstracts
- 5.5 Summary
- 5.6 Glossary
- 5.7 References/Further Reading/Web Resources
- 5.8 Possible answers to self-assessment exercise(s) within the content

### 5.1 Introduction

Having learnt about reference services in unit 4, in this unit, we will discuss types of humanities, social sciences and pure and applied sciences reference sources.

### 5.2 Intended Learning Outcomes

By the end of this unit, you will be able to:

- give details of general and subject reference sources for the humanities, social sciences and pure and applied sciences

### 5.3 Reference Sources

A reference collection is a group of non-circulating, highly used materials such as dictionaries, thesauri, encyclopedias, bibliographies and bibliographical guides, directories, almanacs, etc. These sources often represent the most current information the library owns in a bound format.

Reference sources such as dictionaries, encyclopedias, almanacs, atlases, etc., are research tools that can help you with your paper or project.

Reference sources provide answers to specific questions, such as brief facts, statistics, and technical instructions; provide background information or direct you to additional information sources. Reference sources are not scholarly (peer-reviewed). In most libraries, reference sources do not circulate and are located in a separate reference collection. This practice makes reference sources readily available and easily accessible.

Reference sources are designed to be consulted rather than read through. Reference materials can be arranged alphabetically, topically, or chronologically. Many will contain cross-listed information and more than one index. If it is not obvious how a reference source is organised, take a moment to look through the explanatory or how-to-use information, which is usually presented at the beginning of the book or in Help screens for online products.

#### 5.4 Types of Reference Tools

Two major categories of reference materials are general and subject. General reference sources include all subjects and present overviews of topics. Subjects' specific reference sources provide in-depth coverage of specialised topics.

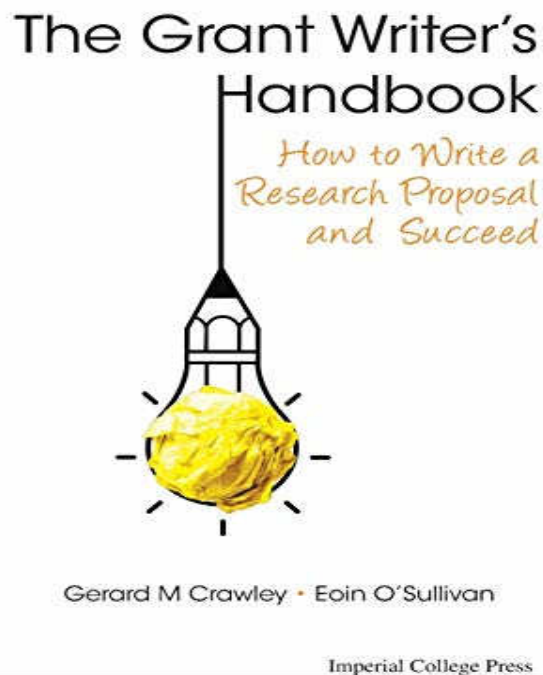


Fig. 2: How to write a research proposal and succeed by Gerard M. Crawley, Eoin O'Sullivan

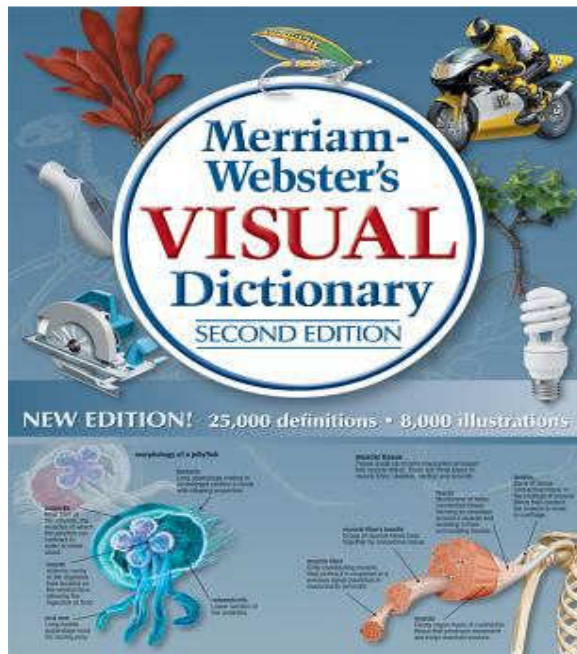


Fig. 3: Merriam Webster's Visual Dictionary 2<sup>nd</sup> edition

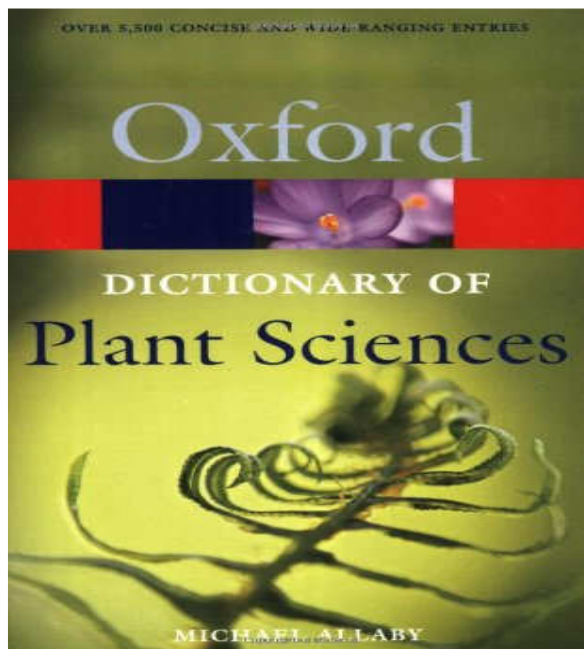


Fig 4 Oxford dictionary of plant sciences

Source by James A. Banks; Cherry A. McGee Banks; Ian Chilvers  
 There are thousands of reference sources available that cover practically every subject. Although the term reference "book" is frequently used, reference sources can be books, serials, online databases or information found on the Internet. A large part of using reference sources well is choosing the right one for your needs.

Despite the wide variety available, reference sources can be categorized into a handful of groups. Think about the kind of information you need and how you will use it. If you are unsure which reference tool is best suited to your information need, a reference librarian will assist you.

**Quick guide for selecting the right type of reference source (Collins, 151)**

For information about...	Choose...
Words	Dictionaries
General Information/Overview of topic	Encyclopedias
Names & addresses of people, organisations, institutions, companies	Directories
Profiles of people	Biographical Dictionaries
Places/Maps	Gazetteers or Atlases
Facts and Statistics	Almanacs
Formula, Tables, How-To-Do-It	Handbooks and Manuals
A person's work	Reviews or Criticisms
Dates, outlines, historical timelines	Historical tables, Chronologies, Historical yearbooks
Periodical Articles	Indexes or Abstracts
Books and other sources	Bibliographies or Guides to Literature...

For the most part, reference materials provide background information. These sources answer who, what, where, when and why questions and are more useful for identification purposes than for in-depth research. The reference section is an excellent “first place to look” when conducting research. Reference sources can be a great place to start your research because they provide quick, authoritative introductions to a topic. They offer summarized, factual information in a clear and organised way.

One unique feature of reference sources is that they are not meant to be read from cover to cover; in fact, they are written for easy discovery of exactly the facts and figures you want to know. Reference sources often include an index by topic, and online reference sources are easy to search using keywords.



[https://www.youtube.com/watch?v=hK\\_PeDE8Yx8](https://www.youtube.com/watch?v=hK_PeDE8Yx8)

## Other Reference Tools

### 5.4.1 Dictionaries

Dictionaries provide information about words.

- General dictionaries are the most familiar to us. You may even own one. This group includes Webster's International Dictionary, the Random House Dictionary of the English Language, and the Merriam-Webster Collegiate Dictionary. These sources generally provide definitions, pronunciations, syllabication, and usage.
- Historical dictionaries provide the history of a word from its introduction into the language to the present. The Oxford English Dictionary is an excellent example of this type of dictionary.
- Etymological dictionaries are dictionaries that emphasize the analysis of components of words and their cognates in other languages. These dictionaries emphasize the linguistic and grammatical history of the word usage. The Oxford Dictionary of English Etymology is an example of an etymological dictionary.
- Period or specialised scholarly dictionaries focus on a particular place or period. For example, try the Dictionary of Alaskan English if you would like to know when the word "cheechako" was first used.
- Foreign language dictionaries are fairly self-explanatory. We've all looked up words in French or Spanish or other Western European languages. Don't forget other wonderful dictionaries, such as the Yup'ik Eskimo Dictionary or the Inupiat Eskimo dictionary.
- Subject dictionaries focus on word definitions in a subject area, such as finance, law, botany, electronics, physics, etc.
- Other dictionaries include dictionaries of slang, abbreviations, synonyms, antonyms, abbreviations acronyms, reversals, rhyming, idioms, phrases, and guides to correct usage. Dictionary of Acronyms and Abbreviations, The Macmillan Dictionary of Historical Slang, Roget's II: The New Thesaurus, The American Language, Strunk's Elements of Style.



Fig 1 Dictionary

[www.alamy.com/stock-photo/oxford-english-dictionary.html](http://www.alamy.com/stock-photo/oxford-english-dictionary.html)

### 5.4.2 Encyclopedias

Encyclopedias provide general background information; they are a good place to research a topic that you know little about. Large subject areas or disciplines are covered in broad articles that explain basic concepts. These overview articles often contain references to more specific aspects of the larger topic and may include a bibliography that leads you to more in-depth sources. Encyclopedias may be general or subject-specific.\

- General encyclopedias usually arrange articles alphabetically by topic. Look for an accompanying index that may list cross-references to other articles. Included in this category are Encyclopedias Britannica, The Cambridge Encyclopedia, Encyclopedia Americana, and the Columbia Encyclopedia. General encyclopedia LC call numbers begin with AE.
- Subject encyclopedias are available for almost every academic discipline. They provide more in-depth and technical information than general encyclopedias. Subject encyclopedias generally assume some prior knowledge of the subject. There is no general rule for how these tools are arranged. Look for an index. A few examples of subject encyclopedias include the McGraw-Hill Encyclopedia of Science and Technology, the International Encyclopedia of the Social Sciences, Encyclopedia of World Art, Encyclopedia of Philosophy, and the Encyclopedia of Archaeology. Subject encyclopedias will have subject-specific call numbers.

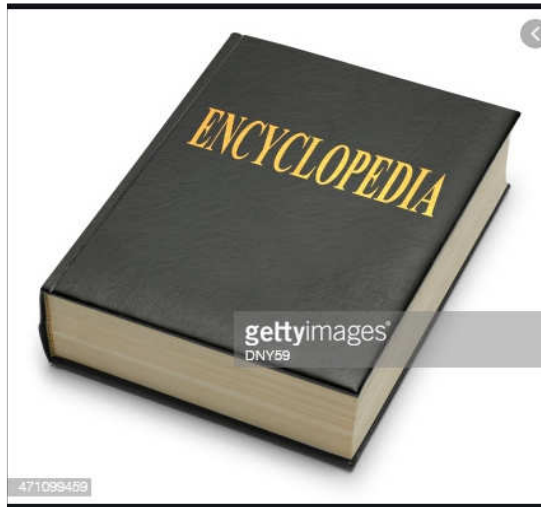


Fig. 2: Encyclopedia  
www.gettyimages.com

### 5.4.3 Directories

Directories provide names, addresses, affiliations, etc., of people, organisations, or institutions. They can be used to verify addresses, name spellings and provide contact information. As in other reference sources, directories may be general or focused on a particular subject.

- General directories: Zip Code and Post Office Directory, Encyclopedia of Associations
- Subject directories: Fairbanks Phone Directory, Museums of the World, A Directory of Eskimo Artists in Sculpture and Prints, A-Z Index of U.S. Government Departments and Agencies, Directory of Multinationals, Thomas Register of American Manufacturers.

### 5.4.4 Biographical Dictionaries

Biographical dictionaries contain short articles about people's lives. Biography resources have call numbers that begin with CT.

- General biographical dictionaries include Current Biography, Dictionary of American Biography, Who's Who, Encyclopedia of World Biography, etc.
- Subject biographical dictionaries may focus on a subject area or group. These sources include Dictionary of Scientific Biography, Contemporary Authors, Biographical Dictionary of Psychology, New Grove Dictionary of Music and Musicians, Women of Science, etc.



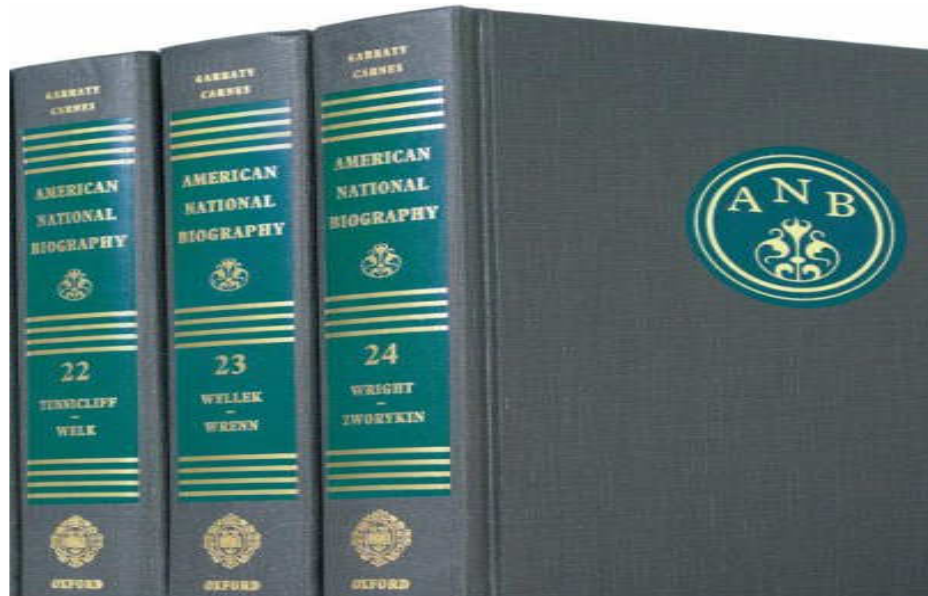


Fig. 3: Biography  
American National Biography

#### 5.4.5 Gazetteers or Atlases

Geographic information is located in gazetteers, atlases and maps.

- Atlases contain collections of maps. They provide information on geographical/political changes. There are the world, national, and thematic atlases, and these may be current or historical.
    - World atlases include the National Geographic Atlas of the World.
    - National atlases: National Atlas of the United States, Atlas of the American Revolution.
    - Thematic atlases focus on a specific subject area, such as astronomy or agriculture. Examples include The Oxford Economic Atlas of the World and the Environmental Atlas of Alaska.
  - Gazetteers are sometimes referred to as geographical dictionaries and provide descriptions of places but no maps.
    - General gazetteers include Webster's New Geographical Dictionary, The Columbia Lippincott Gazetteer of the World, Gazetteer of Undersea Features, etc.
    - Regional gazetteers, such as the Dictionary of Alaska Place Names, by D. Orth, focus on a specific geographical region and are good places to look if you want to know the location of a town, its population, or where its name came from.
- Sometimes atlases and gazetteers are combined, as in the Alaska Atlas and Gazetteer, by DeLorme Mapping, which publishes similar products for the other states.

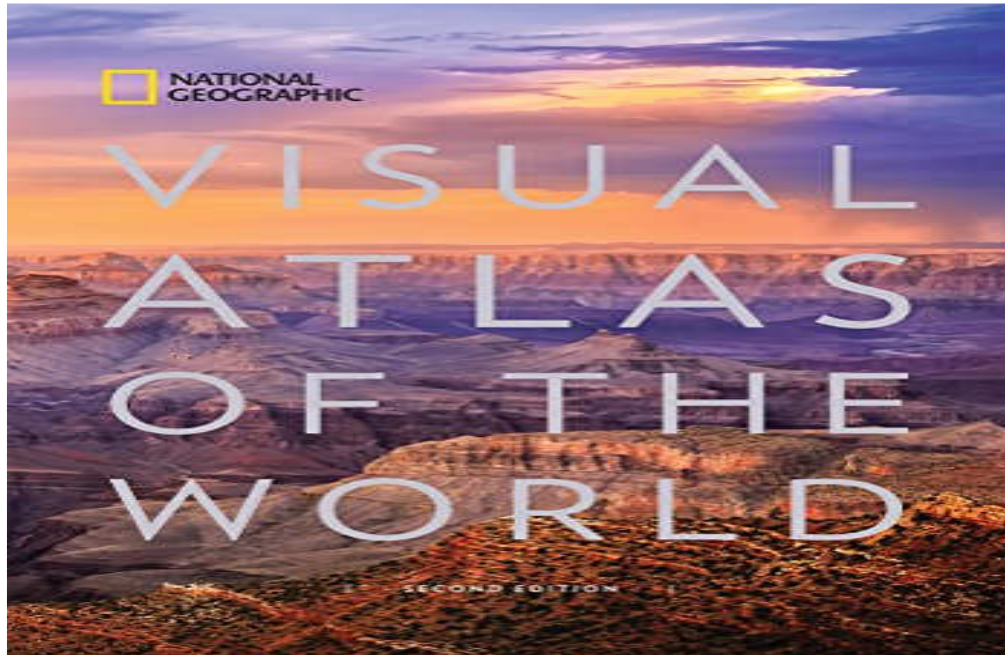


Fig. 4: Atlas  
National Geographic Visual Atlas of the World

#### 5.4.6 Almanacks

Almanacks contain statistics and facts about countries, events, personalities, or subjects.

- General almanacs include; The Statistical Abstract of the United States, The New York Public Library Desk Reference, World Almanac (an American focus), Information Please Almanac (printed. called Time Almanac), and Whitaker's Almanac (United Kingdom focus).
- Subject almanacs include; The Weather Almanac, The Almanac of Renewable Energy, Political Reference Almanac, Alaska Almanac, and more.

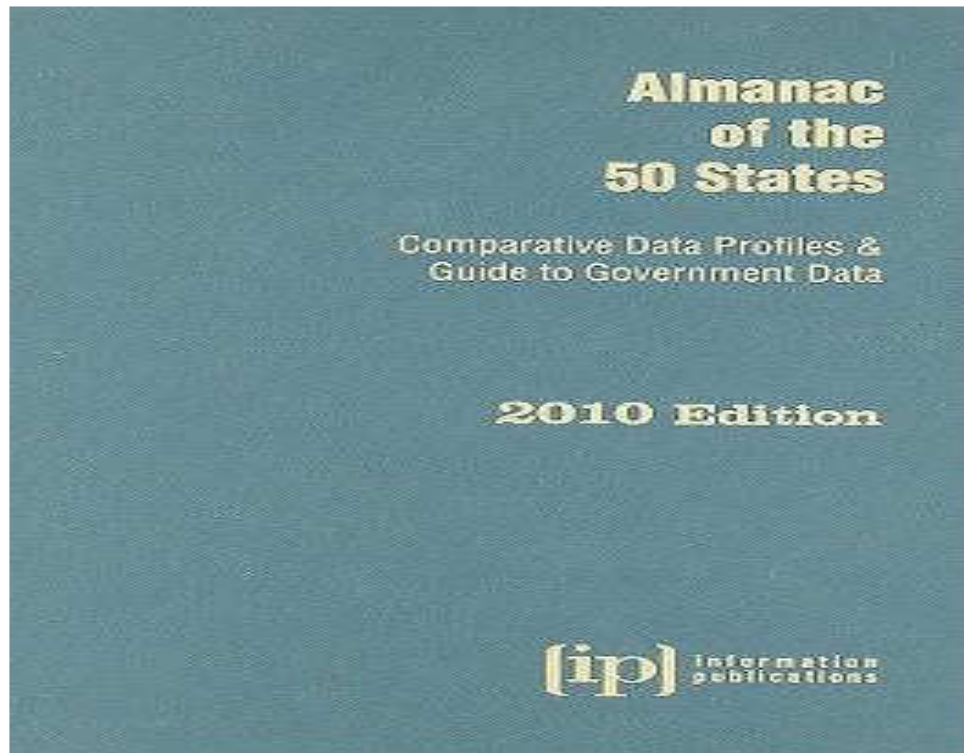


Fig. 5: Almanac

Almanac of the 50 States 2010

#### **5.4.7 Handbooks/Manuals**

Handbooks and manuals are subject area tools. Handbooks provide facts, terms, concepts, movements, etc., about a topic. Manuals provide detailed instructions on a particular subject, such as doing something or how something works.

- Handbooks: Handbook of North American Indians, Guide to Alaska Trees, Words and Ideas: A Handbook for College Writing, Handbook of Mathematical Formulas, MLA Handbook For Writers of Research Papers.
- Manuals: Manual of Photography, Manual for Environmental Impact Evaluation, Alaska Craftsman Home Building Manual, United States Government Manual.

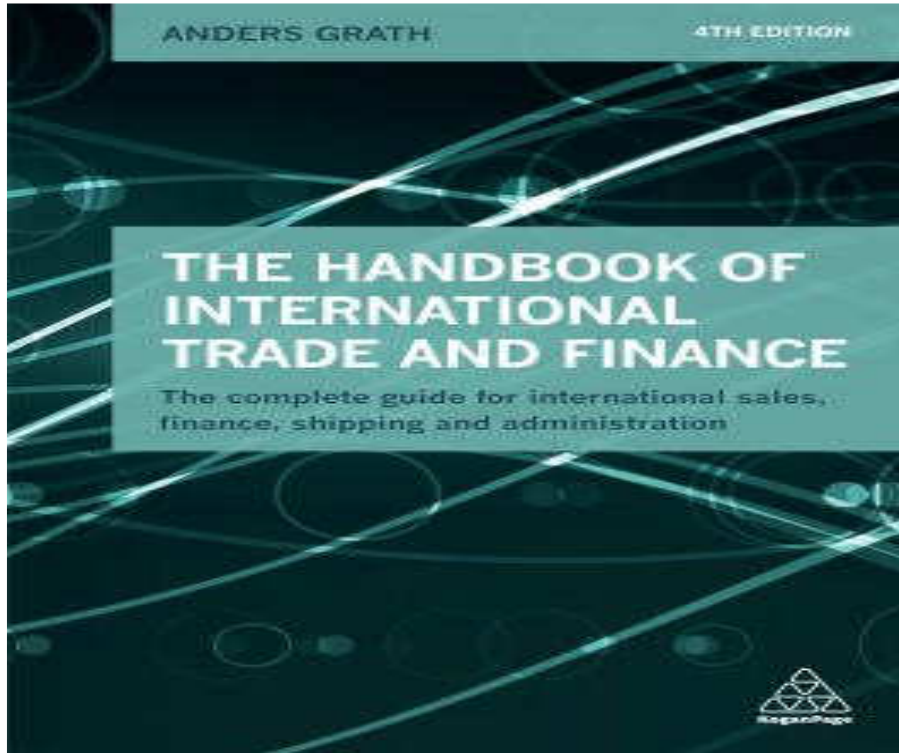


Fig. 6: Handbook

The Handbook of International Trade and Finance by Anders Grath

#### 5.4.8 Review and Criticism Sources

These tools provide reviews or critiques of a person's work.

- General: Book Review Digest, MLA, New York Times Book Review, Contemporary Literary Criticism.
- Subject: Children's Literature Review, Popular Music Record Reviews.

#### 5.4.9 Historical Tables, Chronologies, Historical Yearbooks

Historical tables and chronologies present historical facts in different formats. Historical tables provide facts chronologically in columns, with each column representing another geographical area or another major area, such as history, economics, and religions. Etc. Chronologies use the narrative form to present facts. Historical tables and chronologies may span long or very short periods. Historical yearbooks provide facts and statistics for a single year and may be published annually.

- Historical Tables: The Timetables of History, Historical Tables, 58 BC-AD 1985.

- Chronologies: Chronology of World History, The New York Public Library Book of Chronologies, Chronology of the Expanding World, 1492-1762, A Chronology of the People's Republic of China from October 1, 1949, Annals of European Civilization, 1501-1900.
- Historical Yearbooks: The Statesman's Year-Book.

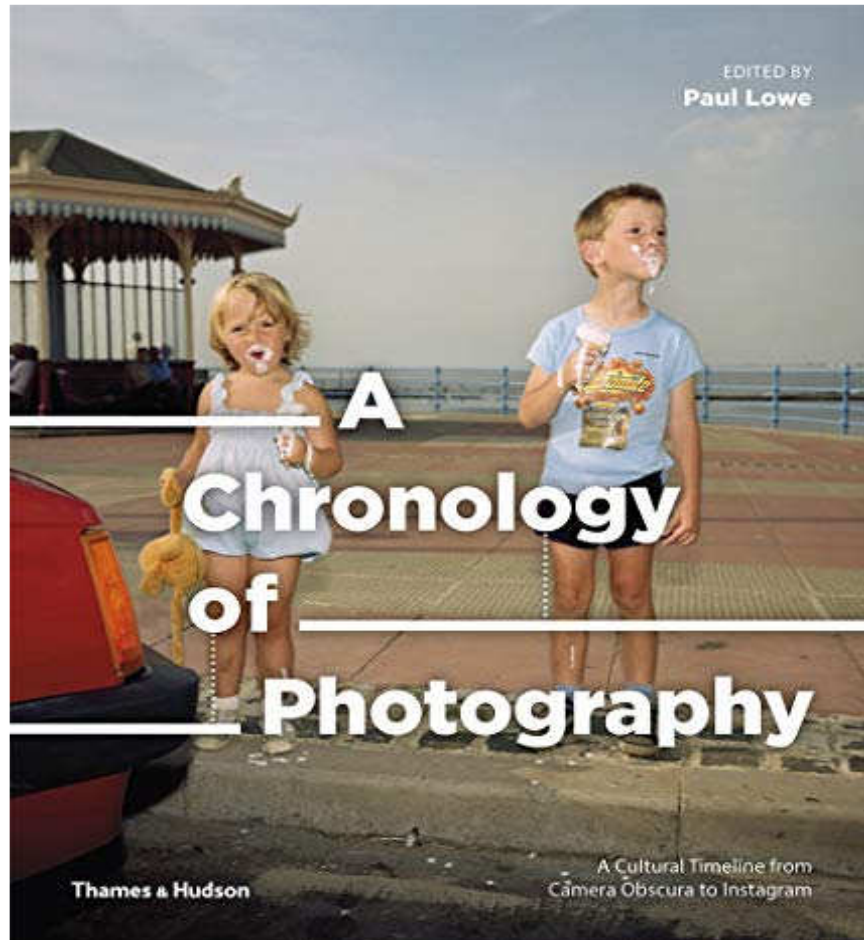


Fig. 6: Chronology

A chronology of photography: a cultural timeline from camera obscura to Instagram by Paul Lowe

#### 5.4.10 Indexes and Abstracts

Indexes and abstracts lead to additional sources of periodical articles. Indexes only provide author, title, and subject information. Abstracts tend to be more descriptive. Some online index databases also include the full text of the article.

- General: Reader's Guide to Periodic Index, Book Review Index, Periodicals Abstracts.

- Subject: Art Abstracts, New York Times Index, Biography Index, Chemical Abstracts.



<https://www.youtube.com/watch?v=agEhtVS05g8>

## 5.5 Summary

In this unit, we have discussed the types of reference sources and different branches of sources for the humanities, social sciences and pure and applied sciences. If you remember

- There are many reference sources, including dictionaries, encyclopedias, thesauri, directories, and almanacs. More broadly, reference sources can also include bibliographies, manuals, handbooks, atlases, and gazetteers. You can find these resources print and online.
- While the branches are general and subject reference sources.

## SELF-ASSESSMENT EXERCISE

Now test your level of understanding by attempting the self-assessment exercise below.

- Describe reference sources?
- Mention two reference tool?

## 5.6 Glossary

- A reference collection is a group of non-circulating, highly used materials.
- Almanacks contain statistics and facts about countries, events, personalities, or subjects.
- Directories provide names, addresses, affiliations, etc., of people, organisations, or institutions.

## 5.7 References/Further Reading/Web Resources

Aytac, S., KippM. E. I. & Neal, D. (2011). Emerging Trends in Knowledge Organisation and Information Organisation Course Curriculum.<https://asistdl.onlinelibrary.wiley.com/doi/pdf/10.1002/meet.2011.145048019>

Clarke, S. O. (1999). *Fundamentals of Library Science*. Lagos: Functional Publishing Company.

Ekere, F. C. & Mole, J. C. (2014). *Theory and Practice of Cataloguing and Classification*. Enugu: Praise house of publishers, p. 231.

Gardener, R. K. (1981). *Library Collections: Their Origin, Selection, and Development*. New York: McGraw-Hill.

Katz, W. A. (1992). *Introduction to Reference Work Volume I: Basic Information Sources*, 6<sup>th</sup> ed. New York: McGraw-Hill.

### **5.8 Possible answers to self-assessment exercise(s)**

- A reference source is a group of non-circulating, highly used materials such as dictionaries, thesauri, encyclopedias, bibliographies and bibliographical guides, directories, almanacs, etc.
- Dictionary, handbook, atlases, almanac, etc.



## **MODULE 5      USE OF DATABASES RELATED TO THE FIELDS**

### **Introduction**

The database system is an organised set of data. It is consist of records, identically defined and described. Module one, unit five, has already introduced you to the understanding of basic library databases and forms of the database based on different subject fields. This module has two units: library database and their types and will advance to teach you the databases in the related fields.

Unit 1	Library Database
Unit 2	Types of Library Database

### **UNIT 1      LIBRARY DATABASE**

#### **Unit Structure**

- 1.1 Introduction
- 1.2 Intended Learning Outcomes
- 1.3 Library Database
  - 1.3.1 Field-Specific Databases
  - 1.3.2 General Databases
    - 1.3.2.1 Bibliographic Database
    - 1.3.2.2 Citation Database
    - 1.3.2.3 Full-Text Databases
- 1.4 Summary
- 1.5 Glossary
- 1.6 References/Further Reading/Web Resources
- 1.7 Possible answers to self-assessment exercise(s) within the content

#### **1.1 Introduction**

Databases provide easy access to relevant information for professionals and students, either for their work or research. Whether it is a full-text or abstract form, every serious editorial has its place in the databases. In this unit, we will discuss the library database.

#### **1.2 Intended Learning Outcomes**

By the end of this unit, you will be able to:

- explain what the library database is all about
- discuss the dimensions of library databases

### 1.3 Library Database

A library database is a searchable electronic index of published and reliable resources. Databases provide access to a wealth of useful research materials from academic journals, newspapers, and magazines. Some databases also include e-books, relevant Web resources, and various multimedia. Databases can contain information about the author (including bibliographic data and abstract) and the original work. The data set determines the type of base. The databases are processed best professional journals and publications, and the reliability and quality of information guarantees producers of databases. The most important databases are located in famous university/academic centres.

**1.3.1 Field-Specific Databases** focus on a single academic discipline or a group of related disciplines. While they cover more specific topics within their subject area, they do not include the broad range of topics common to general databases. Some examples of subject-specific databases are:

- ✓ Lexis Nexis (Law)
- ✓ Hinari (Medical Sciences)
- ✓ Agora (Agricultural Sciences)

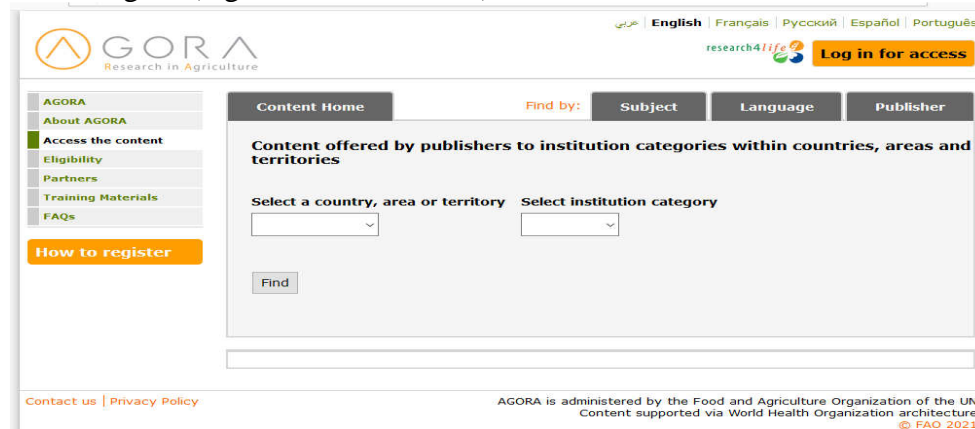


Fig 1 Agora <http://agora-journals.fao.org/content/>

**1.3.2 General Databases** usually include a wide range of topics and types of documents. Use available databases for background, overview, and state-of-the-art information about your topic. A general database is also a good way to begin your research. Some examples of general databases are:

- ✓ Academic Search Complete
- ✓ JSTOR
- ✓ eGranary

Generally, we can divide databases into three categories:

### **1.3.2.1 Bibliographic Database**

Contents bibliographic database refers to papers published in various journals and publications. They contain information such as author, title, source, abstract, year of publication, the institution from which the author comes, publication type, the original language of bibliographic databases, etc. The bibliographic database can vary depending on the area; the scope and structure of bibliographic records that enable a description of the works are very detailed and uniform. These databases are linked with other databases and the original version of published works.

### **1.3.2.2 Citation Database**

The citation database is also a bibliographic databases. Since bibliographic databases differ in addition to the work themselves, processed and used references, the author's above quote, at the end of work. We learn how the works are quoted and used to assess the cited work's quality and estimated the impact of individual works by specifying the number of citations.

### **1.3.2.3 Full-Text Databases**

These are mainly collections of journals in electronic form, one or more publishers. Contains bibliographic information (as well as bibliographic databases) and numerous other data. It should be alert to the difference between databases with full text to the bibliographic, which have only indicated a connection (link) with the full-text bases. Full-text databases are usually offered in HTML and PDF format.

Another dimension of grouping databases is whether access is free or restricted;

### **Subscription/ Licenses Databases**

- Subscription databases consist of published journals, magazines, reports, documents, newspapers, books, image collections, and more. Most of these databases are available via the Internet, and a few are available within the library on DVD or CD-ROM. Subscription databases are not freely available to the public.

### **Non-subscription/Free Databases**

- African Journals Online (AJOL) promotes access to African research.

- Directory of Open Access Journals (DOAJ) provides access to peer reviewed articles in full text from a variety of disciplines

## 1.4 Summary

This unit has discussed what library databases are all about and the different dimensions/categorisation of the databases. If you remember, we define.

- Library database as a searchable electronic index of published and reliable resources.
- Some databases also include e-books, relevant Web resources, and various multimedia.
- The most important databases are located in famous university/academic centres.

## SELF-ASSESSMENT EXERCISE

Now test your level of understanding by attempting the self-assessment exercise below.

- In your own words, how would you describe library databases?

## 1.5 Glossary

- A library database is a searchable electronic index of published and reliable resources.
- Contents bibliographic database refers to papers published in various journals and publications.

## 1.6 References/Further Reading/Web Resources

Etebu, A. T. (2010). Communication in the Library for Effective Administration. <https://digitalcommons.unl.edu/cgi/viewcontent.cgi?referer>

Masic I. (2011). How to Search, Write, Prepare and Publish the Scientific Papers in the Biomedical Journals. *Acta Inform Med.* 19(2), 68-79.

Masic I. (2011) Sixty-five Years of the Journal Medical Archives. *Med Arch.* 65(4), 196- 198.

Mehrad J, Arastoopoor, S. (2012). Islamic World Citation Center (ISC): Evaluating Scholarly Journals Based on Citation Analysis. *Acta Inform Med*, 20(1), 132-138.

### **1.7 Possible answers to self-assessment exercise(s) within the content**

- A library database is a searchable electronic index of published and reliable resources. Databases provide access to a wealth of useful research materials from academic journals, newspapers, and magazines. Some databases also include e-books, relevant Web resources, and various multimedia. Databases can contain information about the author and the original work. The data set determines the type of base.

## **UNIT 2      TYPES OF LIBRARY DATABASE**

### **Unit Structure**

- 2.1 Introduction
- 2.2 Intended Learning Outcomes
- 2.3 Literature Search and Database Services
- 2.4 Need for Literature Search
  - 2.4.1 Manual Searching
  - 2.4.2 Searching using Information Technology (IT) Tools and Techniques
- 2.5 Recording of References or Information
- 2.6 Presentation of Results
- 2.7 Database Services
  - 2.7.1 JSTOR
  - 2.7.2 EBSCOhost/Academic Search Complete
  - 2.7.3 Biomedical Reference Collection
  - 2.7.4 Arxiv.org
  - 2.7.5 Complete Dictionary of Scientific Biography
  - 2.7.6 ERIC
  - 2.7.7 GreenFILE
  - 2.7.8 HeinOnline
  - 2.7.9 Criminal Justice Abstracts with Full Text
  - 2.7.10 Gale Primary Sources
- 2.8 Summary
- 2.9 Glossary
- 2.10 References/Further Reading/Web Resources
- 2.11 Possible answers to self-assessment exercise(s)

### **1.1 Introduction**

Having learned about library databases and their categorization in unit 1, we discussed library database as a vital resource in the development of higher education. The increasing growth of the Internet and the web has engendered education in a learning environment based on instant communication and exploring an extensive range of resources. Consequently, different disciplines and subject areas showed significant divergence in the types and uses of databases.

## **2.2 Intended Learning Outcomes**

By the end of this unit, you will be able to:

- discuss types of databases
- give details of their use in the related fields

## **2.3 Literature Search and Database Services**

As indicated earlier, there is galore of information available on every conceivable aspect. One needs to sieve this information to get sum and substance from the information that is required by the user at a given point in time. The ultimate objective of any documentation or information activity is to provide a user with the information he requires, to the extent he requires, within a reasonable time and cost. Here we shall try to examine all these elements involved in information retrieval. The nature or characteristics of a user could be varied. The user could be a layman who needs information to satisfy his curiosity. A student who needs more details than provided by the textbook, a technical worker who needs the information to perform a certain task, a research worker embarking on a new area of research, a project manager contemplating a new product line, or an administrator who has to give his decision on a new project report or formulate a new strategy. Obviously, the nature of information, extent of information and depth of information required by each of them are different. Besides the urgency for getting the information may also vary, not only for the different types of users, but for the same type of user under different circumstances. While some of the needs of most of the users could be satisfied by the routine reference service provided by a good library, the needs of others especially research workers and project managers can be satisfied only by extensive literature search entailing all the resources of a modern information centre and ingenuity of the information scientists.

## **2.4 Need for Literature Search**

As indicated earlier, the scientific and technical literature has been growing exponentially, while the amount of time that any user has for reading this literature remains more or less the same. Surely and certainly no research worker can keep a track of the latest developments in his field unaided. The advantage of the overabundance of information is hampered by the inadequacy of facilities for handling, disseminating and retrieving this vast amount of documented knowledge. Literature search is the means to bridge this gap between the vast store of documented information and its potential user. The main function of an information service is to bring documents or data to the attention of the user community through searches of the literature conducted generally

on-demand to meet the problem solving or decision-making needs of the member.

### **Ways of Conducting Literature Search**

There are broadly two ways of literature searching that is in vogue these days. We shall briefly touch upon these two aspects. These ways are:

**2.4.1 Manual Searching:** This involves manually searching paper documents or references sources that could be primary, secondary or tertiary as discussed earlier. The identification of references from these sources is then compiled, organised and passed on to the concerned user. This practice was in vogue when IT tools and techniques were not readily available. But with developments in information and communication technology, this method is generally not preferred as it is laborious and time-consuming. The user wants information instantaneously, while checking sources manually involves a lot of time. Secondly, the source may not be available locally; therefore the bibliography compiler or librarian needs to visit libraries where such sources are available.

**2.4.2 Searching using Information Technology (IT) Tools and Techniques:** With the advent of IT, distances have been bridged. The availability of information is no more limited to developed countries. Access to information has become not only a global phenomenon, but also barriers associated with time and place no longer exist. The INTERNET facilitates everyone who has access to it to search and retrieve information. There is a plethora of information available on the INTERNET. There are thousands of databases available on the Net. Besides a lot of databases are also available in CD-ROM format. To put it in simple words, Librarians can easily search and access literature and make it available to the end-user in the shortest possible time using electronic or digital resources. These resources could be tapped either online; or using CD-ROM, etc. This type of literature search is in vogue these days, as conducting literature search using such tools and techniques facilitates the following:

- Easy Access to the literature
- Access to varied resources
- Effective and efficient way of searching
- No time or location barriers (one can make a search whenever one wants, as one does not have to ensure the working timings of other libraries if the source is not available locally, distances to be covered for travelling are also obviated)
- Timeliness of providing the service
- Currency of the data (the information in online mode is updated more or less frequently, hence the current nature of the



information is ensured, which is not the case with printed documents.

- Above all, user satisfaction is another important aspect. (Since the time lag is minimum; accuracy and currency of the data is high; communication is fast).

### **Steps Involved**

Intricacies in the steps involved in literature search may vary from person to person depending upon the searchers' skill and expertise; however, the general steps followed are more or less the same as we shall be discussing here. There are many points to consider in making an effective literature search.

- **Ascertain the Purpose, Scope, Depth and Precise Field of Enquiry:** This may entail a dialogue between the user and the information specialist. A quick assessment of the nature and extent of the enquiry will show whether the search is for specific factual information or a few select references, or a comprehensive bibliographical search, usually the requirement of a research worker. After the parameters of a query are fully understood, the second step would follow.
- **Formulate a Proper Search Strategy:** Haphazard searching of literature will lead not only to unnecessary wastage of time, but also to the risk of missing a number of important documents.
- **Choose Appropriate Sources:** Much of the expertise in literature searching lies in choosing the most appropriate sources to consult in each case and the best order in which to consult them. Since the selection of sources is very critical for obtaining representative and highly relevant literature from the literature search, therefore it may be appropriate to discuss this aspect in detail.

### **Selection of Sources**

One very good approach to literature search is looking up appropriate selection of articles in a bibliography, an encyclopaedia or a review publication. This will provide a background of technical knowledge and also some useful references. Once this is done, searches should be carried out with secondary publications like abstracting and indexing services. Depending upon the topic, any one of the following conditions may crop up:

1. Availability/Non-Availability of Secondary periodicals on the subject.
2. Availability/Non-Availability of Secondary periodicals on the subject as well as on broader subjects.

### **Searching**

Let us discuss searching:

1. **Secondary Sources:** If secondary periodicals are available on the subject as well as on broader subjects, a search must first begin with the secondary periodical on the subject proper, supplemented by references collected from the periodicals covering the broader subject.
2. **Other Sources:** No search will be complete without a look at other sources of information like conference proceedings, research reports, theses, patents, standards and specifications, trade literature and in some cases monographs and treatises. There may be cases where information will be available from non-documentary sources, like institutions and experts. It is important to have knowledge of the main characteristics of all types and familiarity with these sources is needed. Much of the expertise in searching for information lies in choosing the appropriate sources to consult.

### **2.5 Recording of References or Information**

Every literature searcher develops a style of taking notes of references. While every effort should be made to optimize the time and efficiency of a search, it is important to note that a few extra seconds spent in making proper preliminary records may save frustrating hours later. The first principle in saving search time is to use a single operation to serve multiple purposes. For example, references recorded on sheets of paper can serve only one purpose - providing a list of references without any order. Records on cards or slips, with one reference per card or slip, on the other hand, can serve several purposes as abstracts.

### **2.6 Presentation of Results**

To be most effective, the presentation of search results, require as much skill and care as correctly defining the subject and parameters of a search. A search on behalf of a researcher will need exhaustive treatment, and may need slanted abstracts confirming to the users need. Choice of arrangements also depends on what the user needs. An indication should be given as to how authoritative and how complete the bibliography is. The sources should be stated giving the exact references.

## Skills Needed

Expertise in literature search can be gained only by experience. Some attitudes or traits conducive to a good literature search are:

- imagination
- flexibility
- thoroughness of sources and subject (subject thoroughness means, the searcher should completely understand the query pertaining to which literature is to be provided)
- persistency
- judgment in resolving contradictory information
- accuracy in recording. A basic knowledge in the field of search comes in handy.


## 2.7 Database Services

### 2.7.1 JSTOR

This database contains the back-files of core journals in many academic disciplines. Journal coverage usually begins with the first volume published and continues until the last three or five years or until the journal ceased or changed its title. All of the articles are full text and appear exactly as they did in print.

Have library access? [Log in through your library](#)

---



[Log in](#) [Register](#)

---

Search
Browse
Tools

[About](#) [Support](#)

---

### Log in through your institution

Visit our [support page](#) for help logging in to JSTOR.

Search for your institution



Institution Results

Alternate access options

Log in or register for a personal JSTOR account and read up to 100 articles/month free.

Fig. 1: journal storage

### 2.7.2 EBSCOhost/Academic Search Complete

A comprehensive academic index and full-text database provide full text for over 8,000 journals covering the social sciences, humanities, general science, multi-cultural studies, education, and many other academic disciplines.

### **2.7.3 Biomedical Reference Collection**

Designed for doctors, research scientists, students and clinical specialists, this medical database provides over 100 full-text journals, including full text for many peer-reviewed publications. Access to this database is provided through INSPIRE

### **2.7.4 arxiv.org**

Open access to e-prints in Physics, Mathematics, Computer Science, Quantitative Biology, Quantitative Finance and Statistics

### **2.7.5 Complete Dictionary of Scientific Biography**

This 26 volume reference source contains mathematicians and natural scientists from all countries and all historical periods. It presents an accurate and reliable narrative of the development of science, not as a mere accumulation of technical information but as the collective accomplishment that has ordered our understanding of nature.

### **2.7.6 ERIC**

This is the most comprehensive database of journal articles and documents dealing with the field of education. Most of the documents are full text from 1966 to the present, and many of the cited journals are linked full text through the EBSCO suite of interconnected databases

### **2.7.7 GreenFILE**

GreenFILE offers well-researched information covering all aspects of human impact on the environment. Its collection of scholarly, government and general-interest titles includes content on the environmental effects of individuals, corporations and local/national governments and what can be done at each level to minimize these effects. Multidisciplinary by nature, GreenFILE draws on the connections between the environment and a variety of disciplines such as agriculture, education, law, health and technology. Topics covered include global climate change, green building, pollution, sustainable agriculture, renewable energy, recycling, and more. The database provides indexing and abstracts for approximately 384,000 records and Open Access full text for more than 4,700 records.

### 2.7.8 HeinOnline

HeinOnline is an online legal database containing historical and government documents, law reviews, the *Congressional Record*, *Federal Register*, and *Code of Federal Regulations*, treaties, international constitutions, world trials and much more.

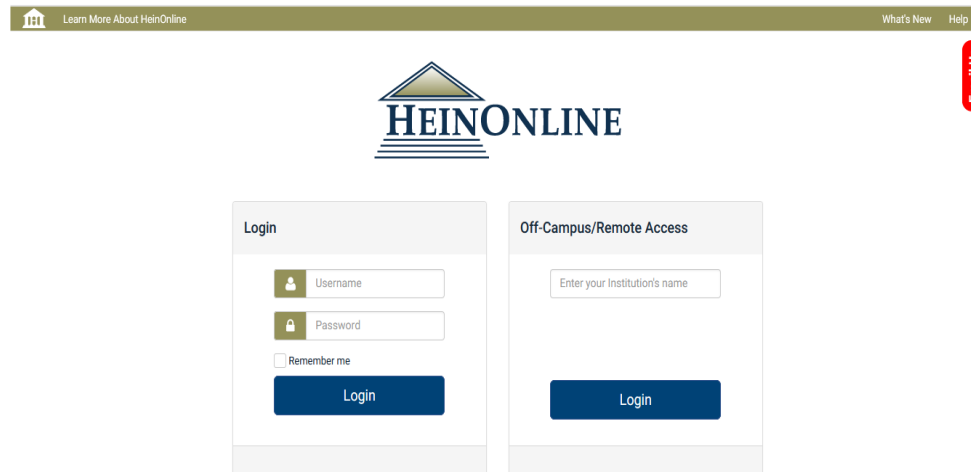


Fig. 2: HeinOnline  
www.heinonline .org

### 2.7.9 Criminal Justice Abstracts with Full Text

This resource includes bibliographic records and full text covering essential areas related to criminal justice and criminology. The increasing globalization of criminology is reflected in Criminal Justice Abstracts with Full Text's coverage of hundreds of journals worldwide. *Criminal Justice Abstracts with Full Text* contain more than 300,000 records selected from the discipline's most important sources. This resource includes full text for more than 200 magazines and journals and full-text books & monographs.

### 2.7.10 Gale Primary Sources

An integrated research experience, Gale Primary Sources unifies extensive digital archives and enables researchers to make never-before-possible research connections and combines dozens of historical archives covering hundreds of years of history. In this exhaustive resource, you will find monographs, manuscripts, newspapers, maps, and photographs. WUR Library Search, Scopus and Web of Science are

databases that cover all sciences. CAB Abstracts (agriculture), SciFinder (chemistry) and ABI/Inform (management studies) are examples of subject-specific databases.



<https://www.youtube.com/watch?v=Anv0PKYwoPI>

## 2.8 Summary

In this unit, we have discussed what a database is, different types of databases and their use in humanities, social sciences and pure and applied sciences. If you remember

- Library database has become a vital resource in the development of higher education.
- Different disciplines and subject areas show significant divergence in the types and uses of databases.

## SELF-ASSESSMENT EXERCISE

Now test your level of understanding by attempting the self-assessment exercise below.

- Describe the steps for literature search.
- Describe three databases for literature searching.
- List some of the skills needed for effective literature search.

## 2.9 Glossary

- Literature search is the step by step approach in accessing information.

## 2.10 References/Further Reading/Web Resources

Masic I. (2011). How to Search, Write, Prepare and Publish the Scientific Papers in the Biomedical Journals. *Acta Inform Med.* 19(2), 68-79.

Masic I. (2011). Sixty-five Years of the Journal Medical Archives. *Med Arch.*, 65(4): 196- 198.

Mehrad, J., & Arastoopoor S. (2012). Islamic World Citation Center (ISC): Evaluating Scholarly Journals Based on Citation Analysis. *Acta Inform Med.* 20(1):.

- Qiao, T. (2011). Definition and Essence of Information. *Triple C*, 9(2): 342-46. <http://www.triple-c>.
- Ríos-Ortega, J. (2013). The Concept of information in Library Science, Sociology and Cognitive Science. <http://www.scielo.org.mx/pdf/ib/v28n62/0187-358X-ib-28-6200143-en.pdf>
- Cheney, F. N. & Williams W. J. (2000). *Fundamental reference sources*. Ed.3. Chicago: ALA.
- Crawford, J. (2000). *Evaluation of library and information services*. London: ASLIB.
- Farmer, L.S.J. (2007). *The human side of reference and information services in academic libraries: adding value in the digital world*. Oxford: Chandos Publishing.
- Fourie, D. & Dowell, D. (2002). *Libraries in the information age*. New York: Libraries Unlimited.
- Katz, W. A. (1987). *Introduction to reference work: reference service and reference process*. New York: McGraw-Hill.
- Krishan, K. (1996). *Reference service*. New Delhi: Vikas Publishing.

**2.11 Possible answers to self-assessment exercise(s) within the content**

- Ascertain the Purpose, Scope, Depth and Precise Field of Enquiry; Formulate a Proper Search Strategy; and Choose Appropriate Sources.
- Databases; ERIC; EBCOHOST; Biomedical Reference Collection.
- Skills needed for searching; Imagination; flexibility; thoroughness of sources and subject; and persistence.