

LECTURE TWO

INFORMATION LITERACY, LIBRARY AND INFORMATION SEARCH AND RETRIEVAL METHODS

1.1 Objectives

By the end of this lecture, you should be able to:

- a) Explain what information literacy is
- b) Explain what information sources are
- c) Search and retrieve information in a library and from online platforms.

1.2 Introduction

Not everyone is information literate. What might appear as a simple task to one may be difficult to others. Have you ever looked for a book in a sea of library books and wasted so much time before finding it? Are you aware that retrieving a book even in a humongous library need not take much time? Or have you tried conducting an internet search and got drowned by the wide sources of information the Internet has to offer? This lesson will introduce you to information literacy; information sources; how information is organized in libraries; and information search and retrieval methods.

1.3 What is Information Literacy?

The American Library Association (2020) defines information literacy as, 'a set of abilities requiring individuals to recognize when information is needed and have the ability to locate, evaluate, and use effectively the needed information.'

The above definition recognizes four abilities you need, to qualify to be called information literate:

1. The desire to seek information must come from you after you realize that you need information.
2. After you have recognized that you need information, you now need to know where to find it. For example, if you are dealing with issues of policy and want to interview an informant, then you don't interview a bank teller. Instead, locate a policy maker.
3. Once you have located your source of information, you must be able to evaluate that source. Is it relevant, current, credible, sufficient and so on. For instance, if you have found the policy maker above, evaluate him/her prior to the interview to determine if they will give you the desired information. Even after you have interviewed them, have they given you the information you wanted, or do you still need to interview another?
4. The final indicator of an information literate person is the ability to make use of that information. It's not just copy-pasting it into your paper. It's about integrating it into your work, synthesizing it and so on until you come to a coherent whole.

Philadelphia University (2020) defines information literacy this way:

- The ability to articulate one's information need
- The ability to identify, locate and access appropriate sources of information to meet the information need
- The ability to effectively use information resources, regardless of format
- The ability to critically and ethically apply the information; and
- The ability to determine if the need has been adequately met

1.3.1 The importance of information literacy

Anyone involved in the field of academics or the workplace must be information literate. Why?

Mutume provides the following uses:

- Information sources are increasing exponentially and, in all formats
- Not all information is created equal: some is authoritative, current, reliable, but some is biased, out of date, misleading, and false
- The amount of information available is going to keep increasing
- The types of technology used to access, manipulate, and create information will likewise expand.

Philadelphia University (2020) identifies the following reasons for information literacy:

- It goes beyond the classroom because it's a life skill one will need at the workplace and in life
- It leads to enlightenment of the citizen, which has the potential to impact many people around the world
- An individual can use information technologies effectively, find and manage information, and develop the ability to critically evaluate and ethically apply that information to solve a problem
- It can lead to a spirit of inquiry and perseverance to find out what is necessary to get the job done
- Today's employers are looking for people who understand and can adapt to the characteristics of the Information Age. Individuals develop strong analytical, critical thinking and problem-solving skills which are advantageous to the organization.

1.3.2 Differentiating information literacy and information technology literacy

There may be a tendency to confuse information literacy with information technology literacy. According to Wisconsin Department of Public Instruction (2017),

Information and technology literacy is the ability of an individual, working independently or with others, to use tools, resources, processes, and systems responsibly to access and evaluate information in any medium, and to use that information to solve problems, communicate clearly, make informed decisions, and construct new knowledge, products, or systems. (p.3).

Notice that the definition encompasses both information and technology literacy. Information technology literacy has more to do with learning how to use technologies like computers and so on. Mutume is of the opinion that information literacy deals with acknowledging need for information, searching for and making use of that information. On the other hand, information technology literacy involves acquiring skills that enable a user to use computers, hardware, software applications, databases and other technologies.

1.3.3 Information needs

Information need is defined as a state or process started when one perceives that there is a gap between the information and knowledge available to solve a problem and the actual solution of the problem (Miranda & Tarapanoff, 2008).

To put that into perspective, when your instructor assigns you a task where you are required to summarize the history of the French Revolution 1789-94 and its impact at the time, you will realize at once that you have an information need. You need to know what exactly happened in this revolution. How did it start? How did it progress? What was the impact on

the society and the world? You will realize that you may not have that information with you and that you need it.

1.4 Information Sources

Information sources are the various means by which information is recorded for use by an individual or an organization (Mutume). It is the means by which a person is informed about something, or knowledge is availed to someone, a group of people or an organization (Mutume). Information sources can be observations, people, speeches, documents, pictures, and organizations. Information sources can be in print, non-print and electronic media format (Mutume).

Hence the importance of the library. It is one location that gives access to most of the information sources mentioned above.

1.4.1 Types of information sources

Sometimes your instructor can give you an assignment that involves a search or research. You will look for sources depending on the assignment. For instance, if asked to interview an expert and report on a given variable, your source will be that expert's opinion or knowledge. Information can come from virtually anywhere. In addition, individuals generate information daily as they go about their work. There are generally three types of information sources: Primary, Secondary and Tertiary. Some scholars have differentiated these sources into primary, secondary, tertiary, scholarly and electronic.

1.4.2 Primary sources

The example above of expert opinion is an example of a primary source. Primary sources are immediate, original, first-hand accounts given by people who had a direct connection with the topic (Mutume). The material collected from a primary source is raw data yet to be analysed, interpreted, or commented upon. Mutume posits that primary sources are usually the first formal appearance of results in physical, print or electronic format. In his opinion, they represent original thinking, unedited, first-hand access to words, images, or objects by persons directly involved in an activity or event or speaking directly for a group.

Examples of primary sources

Physical sources which include interviews. There are several ways you can interview a source. One way is to conduct a face-to-face interview. If distance or access is a problem, you can opt for a phone interview. Still, you can choose to send an email and have the interviewee fill in the details and email back. In today's technological world, innovations such as *Zoom* and *Skype* are excellent tools to carry out an interview. Physical sources can also be artefacts like paintings, sculptures, coins, pictures, tools, fossils and so on.

Print sources include newspaper articles or reports (when written at that time), diaries, original documents like marriage certificates, birth certificates, letters, texts of law and journal articles. Others include datasets, survey data and so on.

Non-print or electronic sources may include computer and internet-related communications like list-serves, websites, YouTube videos, social media communication, audio recordings, video recordings (TV) among others.

1.4.3 Secondary sources

Mutume argues that secondary sources are accounts that have been written after the fact with the benefit of hindsight; they are interpretations and evaluations of primary sources written significantly after events by parties not directly involved but who have special expertise. They may provide historical context or critical perspectives (Mutume).

Examples of secondary sources

It should be noted that the line between these sources is very thin hence the same source can be primary and secondary (website) or secondary and tertiary (textbooks). Secondary sources include scholarly articles about a topic by people who were not directly involved. Examples include bibliographies (also considered tertiary), biographical works, commentaries (eg newspaper commentaries), opinions, criticisms, dictionaries, encyclopaedia (also considered tertiary).

1.4.4 Tertiary sources

Tertiary sources are distillations and collections of primary and secondary sources. Mutume suggests that they are twice removed from the original source and their main purpose is to list, summarise or simply repackage ideas or other information.

Examples of tertiary sources

Tertiary sources according to Mutume include an almanac (a yearly publication of events like weather forecast). Other examples are bibliographies (also considered secondary); dictionaries and encyclopaedias (also considered secondary); directories; guidebooks; indexes, abstracts, bibliographies used to locate primary and secondary sources; and manuals.

1.5 The Library

Libraries play the critical role of providing access to a broad spectrum of information on all subjects. At the point of entry into your current university, you must have been taken through an orientation session, which involved a library tour. The university library not only serves its students but also faculty, researchers and even outsiders who may have need.

Like any other career, library has professionals working there. Librarians are trained individuals who ensure libraries are properly developed and that the users make full use of it.

You will find the following services in a typical library:

- Information sources such as books, magazines, periodicals, newsletters etc
- Access to electronic databases the university has subscribed to
- Assistance to locate information sources and other needs
- Access to material from other universities through inter-library loan services
- Access to journal articles your university may not be subscribed to but which can be sourced via other sources
- Reprographic services such as scanning and photocopy
- Assistance on correct referencing
- Workshops organised by the library to continually inform and update students and faculty in information literacy
- Some libraries include board games to help those who spend long hours in the library to relax

1.5.1 Organization of information in libraries

It is the job of librarians to organise the collection such that users can easily retrieve it. The librarians are also fully informed about where the material is located and will assist you. However, you need to have some working knowledge on how the collection is arranged in a library because you will not keep asking for each item.

Libraries choose their own library classification scheme. A library classification scheme provides a structure of organising the mass of information into an orderly system by bringing materials on the same subject together so that they can easily be located and retrieved (Kavulya, 2007). The two most commonly used systems of classification are: Dewey Decimal Classification (DDC) and Library of Congress Classification (LCC). Each item is allocated a call number and placed on the shelves according to subjects. It is this call number which will be used to locate the material.

The Dewey Decimal Classification uses numerical values to allocate the main areas of knowledge. There are ten divisions of knowledge, each allocated a number. The following examples have been picked from Kavulya (2007):

000-099 General works

100-199 Philosophy and Psychology

200-299 Religion

300-399 Social Sciences

400-499 Philology

500-599 Science

600-699 Applied Science

700-799 Fine Arts

800-899 Literature

900-999 History and Geography

The above categories can further be divided into sub-categories, for example:

Social Sciences (300-399)

300-309: Social Sciences: General

310-319: Statistics

320-329: Political Science

330-339: Economics

340-349: Law

350-359: Public Administration

360-369: Social Problems and Services

370-379: Education

380-389: Commerce

390-399: Customs

This subdivision continues accordingly. For instance, Education books can further be split according to their subject areas such as planning, teaching methods, curriculum etc. Meanwhile, the Library of Congress assigns letters of the alphabet to 21 main classes. For example:

- A- General works
- B- Philosophy and Religion
- C- History and auxiliary sciences and so on

The classes also have further sub-divisions which are allocated two-three letters of the alphabet, for example:

Social Sciences (Class H)

HA- Statistics

HB- Economic theory

HC-Economics (History and conditions) and so on

Further subdivisions make use of both letters and numbers, for example, HD 1-HD 9999 which aids in narrowing the subject.

1.5.2 How to locate books in the library

You can locate a book using call numbers. The call number is labeled on the spine of the book. Consider the following example from Kavulya (2007):

Library of Congress

Z (Class number for bibliography and library science)

695 (Subdivision for processing of books)

.W94 (Book number derived from Cutter table)

2007 (Year of publication)

Note: Cutter is a method of representing words or names by using a decimal point followed first by a letter of the alphabet, then by one or more Arabic numerals.

1.5.3 Dewey Decimal Classification

948 (Class number for history of Norway and Sweden)

.M361 (Book number derived from cutter Table0)

2007 (Year of publication) (Kavulya, 2007)

There are also location symbols added to the call number to indicate which shelves are holding the books, for example, REF means you will find the book in the reference section (Kavulya, 2007).

Before you get the call number, you will need to go through a library catalogue. A library catalogue is a cumulative listing of books and other materials in the library with descriptive information about each of them: the author, title, edition, publisher, date of publication, physical appearance, subject matter and call number (Kavulya, 2007). There are also card catalogues. Card catalogues are composed of '3x5' cards which are typewritten on one side and filed in cabinets called catalogue trays. Each card represents the description of one book (entry) (Kavulya, 2007). Today, almost all libraries have computerized their catalogues and even moved online. The card catalogues have been replaced with an Online Public Catalogue (OPAC). In OPAC, all records are stored in a common database and retrieval is done through an electronic network or the Internet. The catalogue will assist you locate material through author, subject, title etc. It also lists a location symbol and call number.

1.6 Information Search and Retrieval Methods

You can search and retrieve your information manually or using online means. A manual search involves going through the card catalogue to retrieve your book. For example, if you know the title of your book, simply use the author/title catalogue. If you do not know the author or title, you can search through subject catalogue. You must search using key words and phrases. Bailey (2011) encourages you to search using general terms like 'skyscrapers', instead of specific terms like, 'New York skyscrapers,' because a general search will yield more data.

The Internet has made the search easier. In OPAC, you may search for a book by author, title, ISBN, call number, key word or subject. You only need to enter any of those, and the system will display your book if it is located there. However, there are refined ways of searching for books too. These search techniques are:

1.6.1 Boolean operators

Boolean operators combine keywords in library database searches by using the words AND, OR, and NOT. The effect is that Boolean operators broaden the search. Suppose you are undertaking research in Media and globalization. Depending on your research questions, you can look for your material in three ways:

Media AND Globalization (The search will generate material for both media and globalization-all the search words must appear in the record search thus narrowing your search)

Media OR Globalization (OR will broaden your search results since either of the two will be retrieved)

Media NOT Globalization (NOT will narrow your search results since the search will only yield material on Media and not Globalization)

1.6.2 Truncation phrases

Truncation phrases allow you to search for a word with multiple endings. Put an * at the point where the spelling of the word could change. For instance, Media and music* will get you material with the terms 'Media and music/musical/musician/musicians/musicality.' Truncation is useful in faster retrieval since you won't have to type each word for a different search.

1.7 Conclusion

This lecture dealt with information literacy, the library and how to retrieve and search for information. While there is plenty of information around, not everyone knows how to access and use it. The library is an important place where most of the information is stored in print and electronic sources. Knowing how sources are arranged in a library will help you locate information faster. There are also easier ways of retrieving information such as use of Boolean operators and Truncation phrases. All this knowledge assists in making your research process or academic writing easier.

1.8 Activities

1. Walk to the library and observe how sources are arranged. What system of arranging material is your library using?
2. Request the librarian for a further tutorial on locating material in a library and search and retrieval methods.
3. Make a list of books and other material you need in the library and try to access them without help.
4. Try and search for material using Boolean operators and truncation phrases.

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