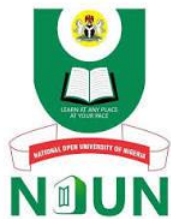**LIS 203
REFERENCE AND INFORMATION SERVICES**

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INTRODUCTION

Welcome to LIS 203: Reference and Information Services. LIS 203 is a two credit-unit course that has minimum duration of one semester. It is suitable and relevant for 200 Level undergraduate students of Library and Information Science. This course consists of 13 units and 5 modules.

It discusses the concept of Reference and Information Services and its practices in libraries and information centres. It also coverdiverse topics such as understanding the basic concepts of reference service, information, theories of reference and information services, types of reference and information services, ICT application in reference and Information services, use of social media in reference and information services, scope and models of reference and information services and criteria and techniques for reference and information resources evaluation.

The course guide tells you briefly what the course is all about, what you are expected to learn in each unit, what course materials you need to use and how you can work your way through these materials. The course guide also emphasises the necessity for tutor-marked assignments.

COURSE OBJECTIVES

There are several objectives that can be outlined from this course. In addition, each unit has specific objectives. The unit objectives can be found at the beginning of a unit. You may wish to refer to them during your study of a particular unit to check on the progress you are making. You should always look at the unit objectives after completing a unit. In this way, you can be sure that you have covered what is required of you in that unit.

At the end of this course, you should be able to:
- Explain the concept of reference and information services
- Identify the theories of reference and information services
- Discuss the theories of reference and information services
- Enumerate the objectives of reference and Information services
- Define the term Information
- Identify the basic attributes of a good information
- Explain the term Information services
- Define the term Reference Interview.
- Identify the basic guidelines for reference interview
- Explain the guidelines for reference interview

- Determine the scope of reference and information services
- Explain the factors that determine the scope of reference and information services
- Discuss the functions of reference and information service
- Explain the roles of the reference librarian
- Demonstrate the importance of reference and information services to library users
- Identify the type of models used to provide reference and information services
- Discuss how they aid reference and information services delivery in the Library
- Explain the nature of reference and information services
- Account for the changes in reference and information service provision
- Define direct reference and information services
- Itemize and discuss the various direct reference and information services
- Define indirect reference and information service
- Identify and discuss the various types of indirect reference and information services
- State the meaning of reference sources and resources
- Highlight the characteristics of reference sources and resources
- Identify the various types of reference sources and resources
- Discuss the types of reference sources and resources
- Evaluate reference sources and resources
- Identify the variety of criteria used for information resources evaluation
- Explain the techniques of information resources evaluation
- Define information and Communication technology (ICT)
- Identify the types of ICT used for reference and Information services
- Enumerate the benefits of ICT use in reference and information services
- Explain the concept of Online reference and information services
- Highlight the various types of Online reference and information services
- Discuss the ethical issues in online reference service
- Discuss the ICT tools used in reference and information services
- Identify the various social media use in reference and information services
- Demonstrate how various social media are used for reference and information services

WORKING THROUGH THIS COURSE

To complete this course, you are advised to read the study units, read recommended books and other materials provided by NOUN. Always participate in the online facilitation and facilitation going on in your study centre. Each unit of study has an introduction, objectives you should achieve at the end of the study, and there are conclusion and summary informing you in a nutshell what you studied in the unit. Above all, there is the Tutor-Marked Assignments (TMAs) to evaluate what you have learnt. You can download the courseware into your device so that you can study it whenever you are offline. At some points in the course you are required to submit assignments for assessment purposes. At the end of the course, there is a final examination. The course is expected to last for one semester. You need to allocate your time in order to complete the course successfully and on time.

COURSE MATERIALS

The major components of the course are:

- Course Guide
- Study units
- Textbooks and References
- Assignment File
- Presentation Schedule

ASSESSMENT

There are two main forms of assessments namely; formative and the summative. The formative assessments at the end of every unit of study will enable you to evaluate your learning output. The university uses the summative assessments to evaluate your academic performance in the courseware you studied. The summative assessment which is a Computer-Based Test (CBT) is made up of objective and sub-objective questions. There are 3 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.

STUDY UNITS

There are 15 study units in this course, divided into 5 modules. The modules and units are presented as follows:

Module 1   Understanding the Basic Concepts

Unit 1   Concept of Information
Unit 2   Concept of Reference and Information Service
Unit 3   Reference Interview

Module 2   Scope and Function of Reference and Information Services

Unit 1   Scope and Functions of Reference and Information Services
Unit 2   Models of Reference and Information Services
Unit 3   Nature of Reference and Information Services

Module 3   Types of Reference and Information Services

Unit 1   Direct Reference and Information Services
Unit 2   Indirect Reference and Information Services

Module 4   Reference and Information Source/Resources

Unit 1   Concept and types of Reference Sources/Resources
Unit 2   Criteria and Techniques of Reference Information Resources Evaluation

Module 5   ICT Application and Reference and Information Services

Unit 1   Information and Communication Technology and Reference and Information Services
Unit 2   Online Reference and Information Services
Unit 3   Application of ICT in Reference and Information Services

HOW TO GET THE MOST FROM THIS COURSE

In distance learning, the study units replace the university lecture. This is one of the great advantages and opportunities of distance learning; you can read and work through specially designed study materials at your own pace, and at a time and place that best suits you. Think of it as reading the lecture instead of listening to the lecturer. In the same way a lecturer might give you some reading to do, the study units tell you when to read, and which are your text materials or reference books. You are provided exercises to do at appropriate points, just as a lecturer might give you an in-class exercise. Each of the study unit follows a common format. The first item is an introduction to the subject matter of the unit, and how a

particular unit is integrated with the other units and the course as a whole. Next to this is a set of intended learning outcomes. These objectives allow you to know what you should be able to do by the time you have completed the unit. These learning objectives are essentially meant to guide your study. The moment a unit is finished, you must go back and check whether you have achieved the objectives. If this is made a habit, then you will significantly improve your chances of passing the course. The main body of the unit guides you through the required reading from other sources. This will usually be either from the reference books or from a reading section.

The following is a practical strategy for working through the course. If you run into any trouble, telephone your tutor. Remember that your tutor's job is to help you. When you need assistance, do not hesitate to call and ask your tutor to provide it.

Each unit contains a number of self-assessment exercises. In general, these self-tests question you on the materials you have just covered or require you to apply it in some way and, thereby, assist you measure your progress as well as reinforce your understanding of the material. Together with tutor-marked assignments, these exercises will assist you in achieving the stated learning objectives of the individual units and of the course.

PRESENTATION SCHEDULE

The presentation schedule which is included in your course material gives you the important dates for the completion of tutor-marked assignments and for attendance of tutorials. Remember, you are required to submit all your assignments on due dates. You should guard against falling behind in your work.

ASSIGNMENT FILE

There are two parts to the assessment of this course. In this file, you will find all the details of the work you must submit to your tutor for marking. The marks you obtain for these assignments will count towards the final marks you obtain for this course. Further information on assignment will be found in the assignment file itself, and later in this course guide in the section on assessment. There are many assignments for this course, with each unit having at least one assignment. These assignments are basically meant to assist you to understand the course.

TUTOR-MARKED ASSIGNMENTS (TMAS)

There are 41 tutor-marked assignments in this course. You only need to submit some of the assignment. The best four (i.e. the highest four of what you submit) will be counted. Each assignment counts for 20 marks but on the average when the five assignments are put together, the score will count 30% towards your total course mark. The Assignments for the units in this course are contained in the Assignment File.

You will be able to complete your assignments from the information and materials contained in the reference books, reading and study units. However, it is always desirable at this level of your education to research more widely, and demonstrate that you have a very broad and in-depth knowledge of the subject matter. When each assignment is completed, send it together with a TMA form to your tutor. You have to ensure that each assignment reaches your tutor on or before the deadline given in the Assignment File. If, for any reason you cannot complete your work on time, contact your tutor before the assignment is due to discuss the possibility of an extension. Extensions will not be granted after the due date unless there are exceptional circumstances warranting such.

FINAL EXAMINATION AND GRADING

The final examination for LIS 203: Reference and Information Services will be of two hours and has a value of 70% of the total course grade. The examination will consist of questions, which reflect the practice exercises and tutor-marked assignments you have previously encountered. All areas of the course will be assessed. Use your time between the completion of the last unit and sitting for the examination to revise the entire course. You may find it useful to review your tutor-marked assignments and comment on them before the examination. The final examination covers information from all aspects of the course. Therefore, you should;

1.   Read this Course Guide thoroughly, it is your first assignment.
2.   Organise a Study Schedule. Design a 'Course Overview' to guide you through the Course. Note the time you are expected to spend on each unit and how the assignments relate to the units. Important information, e.g. details of your tutorials, and the date of the first day of the Semester is available from the NOUN web site. You need to gather all the information into one place, such as your diary or a wall calendar. Whatever method you choose to use, you should decide on and write in your own dates and schedule of work for each unit.
3.   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 get help.

4.   Turn to Unit 1, and read the introduction and the objectives for the unit.

5.   Assemble the study materials. You will need your set books and the unit you are studying at any point in time. Work through the unit. As you work through the unit, you will know what sources to consult for further information.

6.   Up-to-date course information will be continuously posted there.

7.   Well before the relevant due dates (about 4 weeks before due dates), access the Assignment File on the NOUN web site and download 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.

8.   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.

9.   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 pace your study so that you keep yourself on schedule.

10.   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.

11.   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).

SUMMARY

You should try your best to attend all the tutorials. This is the only chance to have face-to-face contact with your tutor and ask questions which are answered instantly. You can raise any problem encountered in the course of your study. To gain the maximum benefits from course tutorials, prepare a question list before attending them. You will learn quite a lot from participating in the discussions.

CONTENTS

MODULE 1   UNDERSTANDING THE BASIC CONCEPT OF REFERENCE AND INFORMATION SERVICE

Unit 1   Concept of Information
Unit 2   Concept of Reference and Information Service
Unit 3   Reference Interview

UNIT 1   CONCEPT OF INFORMATION

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        3.2   Types of Information
        3.3   Attributes of Information
4.0   Conclusion
5.0   Summary
6.0   Tutor Marked Assignment
7.0   References/Further Reading

1.0   INTRODUCTION

This unit provides the foundational background of understanding the concept of reference service and the underlining theories of reference and information service provision in our library and information centres. This will eventually expose you to the preliminary knowledge of reference and information services in Libraries.

2.0   INTENDED LEARNING OUTCOMES (ILOS)

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

• define the term Information.
• identify the basic attributes of information.
• explain the types of information.

3.0   MAIN CONTENT

3.1   The meaning of Information

Information is defined as knowledge communicated or received concerning a particular fact or circumstance or news concerning a crime. It is knowledge gained through study, communication, research, instruction, factual data etc. Hence, information is used interchangeably as news, fact, data and knowledge. It is an idea that is communicated.

Information has also been broadly defined as an occurrence or a set of occurrences which carries messages and which when perceived by the recipient through any of the senses, increases his state of knowledge. Information is conveyed either as the content of a message or through direct or indirect observation of something. That which is perceived can be construed as a message in its own right, and in that sense, information is always conveyed as the content of a message. Information can be encoded into various forms for transmission and interpretation. For example, information may be encoded into signs, and transmitted via signals.

Buckland (1991) has discussed the ambiguities of information when he characterised it as:

a.   Information - as – process
b.   Information – as – Knowledge
c.   Information – as – thing

Information is a process when it is performing the function of informing which involves transmitting information from a source to a recipient. It is knowledge when it is performing the role of imparting knowledge to an individual, where it reduces uncertainty under both circumstances, information is intangible. It becomes tangible when it is a thing or physical objects such as data or documents.

Although there is no exact definition of information, apparently there is a connection between data, information and knowledge. Aina (2004) quoting Rubin (1998) has provided a relationship between data, information, knowledge and wisdom as follows: data are raw and unprocessed; information is a processed data from which meaning arises and it is communicated, and knowledge is further processed information that is organised and interrelated and more broadly understood and applied. Wisdom is knowledge applied to the benefit of humanity. It is a continuum, and it is also hierarchical. However, the important point is that information is very crucial in the continuum. It is therefore not surprising

that a wide range of people are involved in information activities and these are called information professionals.

Information-as-a-thing is a physical object which is represented as data and documents. It is information that is recorded and may be in form of written documents, printed materials or digitised materials. They appear in different formats such as books, periodicals, newspaper, diaries, letters, manuscripts, tapes, compact disk, databases, artefact, microforms, etc. Thus, any activity that is concerned with the handling of information such as creation, searching, acquisition, organisation analysis, storage, retrieval, dissemination, etc., will be grouped together as information profession.

Stair (2016) defined information as a collection of data organised and processed so that it has additional value beyond the value of the individual fact. Ruben (1988) defined information as a consistent collection of data or messages organised that have meaning or may be use by a human system.

McCredie and Rice review concepts of information as:
- **Information as a representation of knowledge**
  Information is a stored knowledge. Traditionally the storage medium has books, but increasingly electronic media are becoming important.
- **Information as a data in the environment**
  Information can be obtained from a range of environmental stimuli and phenomena; not all of which are intended to convey a message, but which can be informative when appropriately interpreted.

- **Information as part of the communication process**
  Meanings are in people rather than in words or data. Timing and social factors play significant role in the processing and interpretation of information.

- **Information as a resource or commodity**
  Information is transmitted in a message from sender to receiver. The receiver interprets the message as intended by the sender. There may be added value as the information is disseminated or exchanged.

3.2   Types of Information

There are different types of information according to J. H. Shera. The following are the six types of information;

- Conceptual information
- Empirical information
- Procedural information
- Stimulatory information
- Policy information
- Directive information.

3.2.1 Conceptual information

This refers to information which is based on ideas, concepts, theories, and hypotheses that show the relationship that exist among variables in a particular area of study.

3.2.2 Empirical Information

These are information obtained by means of observation, experimentation, and literature search. It is usually based on scientific background.

3.2.3 Procedural Information

This refers to the method that allows the researchers or investigators to work better. Procedural information enables the collection, manipulation, testing, and analyses of data.

3.2.4 Stimulatory Information

This refers to information that motivates people and this information emanates from people and the environment.

3.2.5 Policy Information

This refers to information that is use for decision making process. It involves the pictorial, diagram description of objectives, goals, responsibilities and functions.

3.2.6. Directive/Descriptive Information

This information involves providing direction. For example, description of job responsibilities, and roles in an organisation.

3.3   The Attributes of Information

To contribute to research, information as a variable must possess and display some attributes. These attributes or characteristics include:

3.3.1Relevance

Information should be important to the matter at hand. The ability (as of an information retrieval system) to retrieve material that satisfy the needs of the user.

3.3.2Verifiability

Information must be capable of being verified to ascertain the truth or correctness as by examination, research, or comparison.

3.3.3 Completeness

Information must have all the details needed by the user in order to help the user make good decisions. The state of being complete means having everything that is needed.

3.3.4. Conciseness

Information should express much meaning in few words, clear, succinct, and unambiguous.

3.3.5. Timeliness

Information must be provided on time to allow the user use it for the actual purpose. Delay in providing the right information may affect the user in making good decision. When information is delayed, it may not be useful or relevant to the user. The quality or habit of being ready on time and be provided when needed.

3.3.6. Availability

Information must be suitable and ready for use.

3.3.7. Accessibility

Available information must be easily accessed and obtained by users.

3.3.8. Understandable

Information must be capable of being understood by the user.

3.3.9. Adaptability

Information must have the quality of being adjustable by users.

3.3.10. Accuracy

It means that information is clear and conveys the actual meaning and it should be free from mistakes and errors.

3.3.11. Adequacy

This means that information must be sufficient in quantity. Adequate information is necessary for the processes of decision-making.

These attributes confer on information its instrumental value. Instrumental value means the extent to which particular information contributes to the resolution of conflict or problem situation, clarification of doubt, the enhancement of decision making, accuracy or support of theory, a position or research result. For example, the amendment of a law does not completely invalidate an existing one. But the specific aspects that have been amended are vital to the process of updating the existing law. If the amended law is available but not accessible to a researcher, it means the instrumental value of accessibility is lacking and needs to come to play for the amended law to be fully appreciated.

4.0   CONCLUSION

The importance of access to information in our personal, community and national lives cannot be overemphasised. It is a basic ingredient for individual, community and national growth and development. It has therefore become critical for librarians to provide timely access to relevant information through the instrument of reference and information services to their numerous stakeholders.

5.0   SUMMARY

In this unit, you have learnt that information is a necessary element that must be professionally managed by librarians. You have been exposed to the various conceptions of information and its essential attributes such as relevance; timeliness; verifiability; conciseness etc. You are also exposed to the different types of information.

6.0   TUTOR-MARKED ASSIGNMENT

1.   Define the term Information?
2.   Identify the basic attributes of good information.
3.   What are the different types of information?

7.0   REFERENCES/FURTHER READING

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UNIT 2   CONCEPT   OF   REFERENCE   AND INFORMATION SERVICE

CONTENTS

1.0   Introduction
2.0   Intended Learning Outcomes (ILOs)
3.0   Main Content
       3.1   The meaning of Reference and Information Service
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4.0   Conclusion
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6.0   Tutor Marked Assignment
7.0   References/Further Reading

1.0   INTRODUCTION

This unit provides the foundational background of understanding the concept of reference service and the underlining theories of reference and information service provision in our library and information centres. This will eventually expose you to the preliminary knowledge of reference and information services in Libraries.

2.0   INTENDED LEARNING OUTCOMES (ILOS)

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

• explain the concept of reference and information services.
• identify the theories of reference and information services.
• discuss the theories of reference and information services.
• enumerate the objectives of reference and Information service.

3.0   MAIN CONTENT

3.1   Concept of Reference Service

Reference services are the culmination of all library activities aimed at facilitating the use of the library and its resources. It is perhaps the most demanding aspect of librarianship and its performance can either make or mar the image of the library (Adebayo, 2009). Reference service is one of the library's primary practices beside acquisition, classification, cataloguing and physical planning.

The term reference service or sometimes referred to as reference and information service can be defined as personal assistance provided by trained personnel to library users seeking information. Such personal assistance is the essence of reference services and is the fundamental role of the reference librarian. The goal of the reference librarian is to meet the information needs of the users. How and to what extent this is done varies from library to library and depends on the type of library, technologies and services available.

Reference services can be divided into three broad categories namely; information services that involve either finding the required information on behalf of the users, or assisting users in finding information; instruction in the use of library resources and services (broadly defined as information literacy skills); user guidance, in which users are guided in selecting the most appropriate information sources and services (Dollah & Singh, 2005).

3.1.1 Types of Reference Service

Ranganathan opined that reference service is based on two main aspects namely;

i.   Ready or Short Reference Service
ii.   Long Range Reference Service

3.1.1.1 Ready or Short Reference Service

The ready reference service is dependent on the duration of time. The reference librarian answers inquiry or questions from users in a limited time duration and most times immediately or instantly (Kumar, 1982). In ready reference service, reference librarian answer questions such as;

i.   Where is highest mountain in the world?
ii.   What is the date of birth Goodluck Jonathan?
iii.   What is the meaning of science?
iv.   What does IFLA Stands for? IFLA stands for (International Federation of Library Associations and Institutions)
v.   What does ALA stands for?
vi.   What is the population of Nigeria?

Ready reference service involves more of fact finding and the reference librarian uses reference resources in answering most inquiries. These reference resources include encyclopaedias, dictionaries, bibliographies, etc. In other cases, reference librarian provides answers to questions from library users using his/her own personal knowledge. Bringing the necessary resources that meets the needs of library users is not enough;

rather the reference librarian is expected to provide the precise information needed by users. Ready or short reference service involves three processes and they include;

i.   Preparation
ii.   Service
iii. Assimilation.

i.   **Preparation**: This process takes place behind the scene. The reference librarian prepares by familiarizing himself with the reference collections and other activities in the department. Knowledge of reference sources and maintaining the reference materials such as newspaper clippings, magazine clippings, prospectus, and pamphlets etc,. The reference librarian also prepares by organising and arranging the reference sources in order to deliver effective service.

ii.   **Service**: After preparing, the librarian analyses the reader's query, guide and train users on how to independently find information, and consult reference sources. The users are also trained through orientation programmes on the various services offered by the reference department.

iii. **Assimilation**: This is an important part of ready reference service that involves learning from experience. Once information is located and considered suitable, the reference librarian can share this information or his views with his colleagues in the reference department.

3.1.1.2 Long Range Reference Service

This type of reference service requires extended searches that last for hours, or days, and sometimes, over a long period of time. Long range reference service is based on the time involve, sources of information, and the nature of information sought.

i.   **Time Involved**: Most often, long-range reference service takes half an hour, a whole day and weeks or months. This is because sometimes long-range reference questions take longer time.

ii.   **Sources of Information**: In the long range reference service, the search for information starts with ready reference sources such as books, periodicals, newspapers, and other non-book materials such as electronic resources. In case information is not located in the library, the reference librarian may search for these resources in other libraries.

iii.   **Nature of Information**: Long range reference unlike ready reference service, deals with discussion of problem from a specific point of view. For example, "Research methodology in library science", "Information seeking behavior of farmers in Nigeria".

3.2   Theories of Reference and Information Service

Reference services cover a wider range of activities than merely answering enquiries. The term reference service cannot be properly described without examining some theoretical concepts. One of such theory is Fosket's theory. In his theory, Fosket (1967) cited in Ifidon and Ifidon (2008) regards reference service as an information system concerned with the retrieval and transfer of information required by the library user. This involves translating a request into terms that can be met by a given reference source. Another concept is the Rostein's theory which holds the view that, there are three concepts of reference services – the minimum, the middling and the maximum (Ifidon & Ifidon, 2008).

The minimum concept emphasises the self-help and self-education of the user with guidance from the librarian. Ready reference service is to provide only actual information where users are expected to find their sources and do their own research. The teaching function of the library is stressed. According to Adebayo (2009), most libraries lean toward this concept expecting users to find their way after initial help from librarians. The maximum concept aids the teaching function to the delivery of information. It emphasises the delivery of direct information rather than books or journals to the users; the expert knowledge of and a differentiation between categories of users and degree of services to people in each category, which is, not giving the same type of service to all users. The middling concept lies between the two extremes using elements from both. Many libraries use some elements of all the concepts as far as their staffing situation, book stock and finances permit. Das, Gurey and Saha (2009) outlined three reference service theories:

1.   **Conservative Theory**: Conservative theory focuses on education and guidance instead of boundless help. This theory states that reference work is limited to the use of ready reference sources to help the users.

2.   **Liberal Theory**: Liberal theory focuses on maximum help. According to this theory, reference librarians must apply all approaches available to retrieve the information that users need.

3.   **Moderate Theory:** The combination of conservative theory and liberal theory is moderate theory which most of the reference librarians prefer.

3.3   Concept of Information Services

Information service is an act of providing data, knowledge or information to the relevant clients in an institution or organisation. Information services can be defined as any services intended to provide information for a client or user, or assist a client or user in finding information.

Although, the concept of information services could encompass different segments of library activities, in literature it is usually related to the reference services. American library association gives the following description of information service:

- The goal of information service is to provide the information sought by the user.
- Information services should anticipate as well as meet user needs.
- It should encourage user awareness of the potential of information resources and fulfill individual information needs.

According to this definition, information services should be offered in regards to a user's needs. Furthermore, information services could be divided into two main categories: assurance of information needed by users and awareness of users about available information resources, and ability to find the information appropriate to given needs by themselves. Information services are usually overlapping with teaching and learning service because librarians often educate users while offering information service to them. Information services encompass services through which librarians directly supply users with information but also interface created by librarians through which users could independently find needed information. According to this statement, an information service is divided into three main categories and they include reference services, browsing and search services.

3.4   Specific Objectives of Reference and Information Service

The following are some specific objectives of reference and information services;

1.   It is important that the policy of the library takes into consideration each library user's information query based on equal merit irrespective of the age, gender, ethnicity, disability, sexual preference or English language proficiency of the library user. The Library's intention is to give equal attention and effort to each inquiry even though the time spent by staff on a question may vary in response to the perceived needs of the patron, the information

resources (both staff and collections) available, and the method of receipt of the inquiry.

2. To maintain an up-to-date, relevant and readily accessible working collection of reference materials (electronic and paper) relating mainly to the University's programmes. The reference collection includes general and research-oriented dictionaries, encyclopaedias, biographies, bibliographies, indexes, directories, almanacs, handbooks, and statistical sources.

3. To give appropriate reference assistance to the library's user in real-time (i.e., when it is needed, regardless of where the patron is). In helping patrons, the reference staff determines the need of the patron, the exact information requested and try to find sources appropriate to the level of knowledge and interest of the patron. This service is provided regardless of whether the patron has come to the library, telephoned, e-mailed or engaged in an online chat session.

4. To provide instruction in library use by the most effective means and with suitable cooperation with other library units.

5. To provide access to remote bibliographic, numeric, and full-text databases.

6. To actively publicise the scope, nature, and availability of the information services the library offers. Using media that is most effective in reaching the entire clientele or selected segments of clientele.

7. To facilitate access to library materials that is not available in the library.

8. To create an environment for and a tradition of good service within the department and to promote the effective utilisation of the staff and materials at our disposal.

9. To cooperate with other library units by providing them with information about user needs derived from ongoing contact with our users. Providing reference services in a library or information centre is accepted as a critical responsibility in meeting the information needs of users and prospective users. Reference services are organised to provide appropriate, well-coordinated access to the information resources existing within an area or a given field of endeavour.

Since the primary functions of a library or information centre is summarised in ultimate terms as facilitating the transfer of information, the distinguishing feature of reference services is that it specifically ensures the optimum uses of information resources through substantive interaction with the users on direct and indirect bases. The librarian/information specialist is the intermediary or the negotiator for unlocking these diverse information resources.

4.0   CONCLUSION

In this unit, you were introduced to the meanings of the basic concepts in the course. The basic concepts of reference and information service as well as that of information have been explained with the view to acquaint you with the clear understanding of the course title. Reference and information services have been regarded as one of the essential information services at the heart of every library and information centre. In the same vein, the concept of information has been conceived differently by different scholars and information professionals. However, regardless of the variations, information has now become an essential ingredient for self-development, community development and overall national development. Hence the need for librarians to acquire, process and disseminate relevant information to their users.

5.0   SUMMARY

The unit has successfully treated the concepts of reference and information service on one hand and the types of reference services on the other. Also, the underlying theories of reference service as well as specific objectives of reference and information services were presented and discussed.

6.0   TUTOR MARKED ASSIGNMENT

1.   What is Reference and Information Service?
2.   Identify and discuss the theories of Reference and Information services?
3.   Enumerate any 5 Specific Objectives of Reference and Information Service.

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UNIT 3   REFERENCE INTERVIEW

CONTENTS

1.0   INTRODUCTION

In this unit, you will learn what reference interview is and some guidelines for successful reference interview. Reference interview is essential in order for reference librarians to find out what information library users need.

2.0   INTENDED LEARNING OUTCOMES (ILOS)

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

- define the term Reference Interview.
- identify the basic guidelines for reference interview.
- explain the guidelines for reference interview.

3.0   MAIN CONTENT

3.1   Reference Interview

An important part of a reference service according to Chowdhury and Chowdhury (2003), is the **reference interview** which involves a personal discussion between a user and reference librarian. Through the interview, the reference librarian tries to understand the specific information need(s) of the user as well as collects background information about him or her particularly on the individual's subject knowledge and the reason for searching for the information. With reference interview, the reference

librarian is able to filter the retrieved information in order to select the most appropriate source(s) for the user.

The American Library Association (ALA) Glossary defines the reference interview as the interpersonal communication between a reference staff member and a library user to determine the precise information needs of the user. In this vein, reference interview has been defined as "a conversation between a member of the library reference staff and a library user for the purpose of clarifying the user's needs and aiding the user in meeting those needs" (Sutton & Holt, 2001, p. 36). "Basic steps in the process," they continue, include: "question negotiation or, more generally, the statement and clarification of the problem; location of the information required to answer the question, or progression toward the solution; and communication of the answer to the user or successful closure of the interview, such as referral to an alternate source for help" (Sutton & Holt, 2001, p. 37).

Bopp and Smith break the reference interview into five steps:
1.   Open the interview
2.   Negotiate the question
3.   Search for information
4.   Communicate the information to the user
5.   Close the interview

It is important to note here that, the ability to take a query, sort it out, and provide appropriate response to the user is the skill of the reference librarian. He or she should in addition possess subject area knowledge. This means not only having a skilled appreciation of reference sources in general, but understanding better than anyone else how to dig out data from a given subject field. The reference librarian should also have good conversational skills; this means an ability to talk to all types of people, to find out what they need. Furthermore, one should know whether a formal reference interview is required or whether it is easier to simply find the citation or answer. He or she should be competent in selecting and acquiring materials from databases to print almanacs and biographical sources.

3.2   Guidelines for Reference Interview

Guidelines for reference interview are stated rules or procedures on how reference interview can be done. The following are guidelines for reference interview;

3.2.1 Visibility/Approachability

A successful reference transaction requires a high level of visibility. Reference assistance should be available through a variety of technologies at a patron's point of need. In order to have a successful reference transaction, it is essential that the reference librarian be approachable. Whether acting in a traditional/in-person role or a remote/virtual role, the librarian's first step in initiating the reference transaction is to make the patron feel comfortable in a situation that can be perceived as intimidating, confusing, or overwhelming. The librarian's initial response in any reference situation sets the tone for the entire communication process, and influences the depth and level of interaction.

To be approachable, the librarian:
- Is to be found in a highly visible physical or virtual location (the library, outreach locations, or the library website). Proper signage or notification that indicates the location, hours, and availability of in-person and remote assistance is available.
- Is poised and ready to engage patrons. The librarian is aware of the need to stop all other activities when a patron approaches and focus attention on the patron's needs.
- Acknowledges patrons by using a friendly greeting to initiate conversation.
- Acknowledges others waiting for service.
- Employs a system of organise question to identify questions and service priorities.
- Establishes an approachable presence by being easily identifiable in compliance with institutional and professional norms and policies.
- Acknowledges patrons by making initial eye contact, employing open body language, or using a friendly greeting to initiate conversation.
- Remains visible to patrons as much as possible.
- Identifies patrons needing or wanting help.
- Occasionally roves through the reference or public areas offering assistance.

To rove successfully, the librarian:
o Uses cues, verbal or nonverbal, to determine which patrons need help, and approaches patrons and offers assistance with lines such as,
▪ "Are you finding what you need?"
▪ "Can I help you with anything?"
▪ "How is your search going?"

- o   Gets the patron started on the initial steps of his/her search, then moves on to other patrons. Offers to provide more assistance if needed.
- o   Checks back on the patron's progress.
- o   Returns to the reference desk periodically to see if there are patrons waiting for assistance if the desk has been left unattended. Gets help from other staff members if demand is heavy.
- o   Provides prominent, jargon-free pointers to all forms of reference services via the library's web or mobile site.
- o   Responds in a timely fashion to remote queries.

3.2.2 Interest

A successful librarian demonstrates a high degree of objective, non-judgmental interest in the reference transaction. While not every query will be of interest to the librarian, the librarian should embrace each patron's informational need and should be committed to providing the most effective assistance. Librarians who demonstrate a high level of interest in the inquiries of patrons will generate a higher level of satisfaction among users. To demonstrate interest, the librarian must:

- Focuses complete attention on the patron and his/her information need.
- Faces the patron when speaking and listening.
- Maintains or re-establishes eye contact with the patron throughout the transaction.
- Signals an understanding of the patron's needs through verbal and non-verbal confirmation, such as nodding of the head, offering brief explanations, or asking additional questions to better understand the patron's query.
- Acknowledges user questions in a timely manner.
- Maintains regular online or voice contact with the patron to convey interest and provide assurance that the query is still viable and a response is forthcoming.
- Signals an understanding of the patron's need.

3.2.3 Listening/Inquiring

The reference interview is the heart of the reference transaction and is crucial to the success of the process. The librarian should effectively identify the patron's information needs in a manner that puts the patron at ease. Effective listening and questioning skills are necessary for a positive interaction. As a good communicator, the librarian must:

- Communicates in a receptive, cordial, and supportive manner.
- Uses a tone of voice and/or written language appropriate to the patron and the nature of the transaction.
- Allows the patron to fully state his/her information need in his/her own words before responding.
- Identifies the goals or objectives of the patron's research, when appropriate.
- Rephrases the question or request and asks for confirmation to ensure accurate understanding.
- Seeks to clarify confusing terminology and avoids jargon.
- Uses open-ended questions to encourage the patron to expand on the request or present additional information. Some examples of open-ended questions include:
  o "Please tell me more about your topic."
  o "What additional information can you give me?"
  o "How much information do you need?"
- Uses closed and/or clarifying questions to refine the search query. Some examples of clarifying questions are:
  o "What have you already found?"
  o "What type of source do you need?"
  o "Do you need a book or an article?"
  o "Do you need current or historical information?"
- Maintains objectivity; does not interject value judgments about the subject matter or the nature of the question into the transaction.
- Respects patron privacy; maintains confidentiality after the transaction.
- Uses current technology during the reference interview to gather as much information as needed to serve the patron's need without compromising patron privacy.

3.2.4 Searching

The search process is the portion of the transaction in which behaviour and accuracy intersect. Without an effective search, not only is the desired information unlikely to be found, but patrons may become discouraged as well. Many aspects of searching that lead to accurate results are dependent on the behaviour of the librarian. As an effective searcher, the librarian must:

- Find out what the patron has already tried, and encourages the patron to contribute his/her ideas.
- Constructs a competent and complete search strategy. The librarian:
- Selects search terms that are most relevant to the information desired.

- Verifies spelling and other possible factual errors in the original query.
- Identifies appropriate sources that are most likely to contain information relevant to the patron's query
- Explains the search strategy to the patron.
- Works with the patron to evaluate results, revise search terms, and identify other sources to try if the search is unsuccessful.
- Works with the patron to narrow or broaden the topic when too little or too much information is identified.
- Attempts to conduct the search within the patron's allotted time frame.
- Explains how to use sources when appropriate.
- Offers pointers, detailed search paths, and names of resources used to find the answer, so that patron can learn to answer similar questions on his/her own, when appropriate.
- Recognises when to refer patrons for more help. This might mean a referral to a subject librarian, specialised library, or community resource.
- Asks the patrons if additional information is needed after results are found.
- Accompany the patron in the search (at least in the initial stages of the search process) unless the patron prefers to conduct the search him/herself.
- Uses appropriate technology to help guide the patron through information resources, when possible.

3.2.5 Follow-up

Supplying information is not the end of the reference transaction. The librarian is responsible for determining if the patron is satisfied with the results of the search, and referring the patron to other sources including those not available through the local library. For successful follow-up, the librarian:

- Asks the patron if his/her questions have been completely answered.
- Encourages the patron to return if he/she has further questions by making a statement such as "If you don't find what you are looking for, please come back and we'll try something else."
- Consults with other librarians or experts in the field when additional subject expertise is needed.
- Makes the patron aware of other available reference pathways (e-mail, chat, etc.).
- Makes arrangements with the patron, when appropriate, to set up an individual research appointment to continue researching the question.

- Refers the patron to other sources or institutions if the query has not been answered to the satisfaction of the patron.
- Takes care not to end the reference interview prematurely.
- Occasionally roves through the reference or public areas offering (additional) assistance.
- Encourages the patron to contact the library again if he/she has further questions by making a statement such as "If you need additional information, please contact us again and we'll try something else."

4.0   CONCLUSION

A reference and information service is directly dependent on the capacity and skills of reference librarians to conduct a successful reference contact and interview. Reference interview has been viewed as the basic foundation upon which a successful reference information service rest in our libraries and information centres. It has become imperative that you have a grasp of what it takes to become a successful reference librarian by adhering to the basic guidelines of conducting the reference interview.

5.0   SUMMARY

In this unit, efforts have been made to expose you to one of the key activities in reference and information service. You have successfully learnt the meaning and justification for reference interview in a reference service palace. Also, some basic guidelines for effective and efficient reference encounter were identified and discussed. It is hoped that you have a clear understanding of reference interview and its basic guidelines.

6.0   TUTOR-MARKED ASSIGNMENT

1.   What do you understand by the term Reference Interview?
2.   Why the need for a reference interview?
3.   Identify the basic guidelines for reference interview?
4.   Explain any 5 basic guidelines for reference interview?

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MODULE 2   SCOPE AND FUNCTIONS OF REFERENCE AND INFORMATION SERVICES

Unit 1   Scope and Functions of Reference and Information Services
Unit 2   Models of Reference and Information Services
Unit 3   Nature of Reference and Information Services

UNIT 1   SCOPE OF REFERENCE AND INFORMATION SERVICES

CONTENTS

1.0   Introduction
2.0   Intended Learning Outcomes (ILOs)
3.0   Main Content
     3.1   Scope of Reference and Information Services
     3.2   Factors that determine the scope of reference and information services
     3.3   Functions of Reference and Information services
     3.4   The Role of the Reference Librarian
4.0   Conclusion
5.0   Summary
6.0   Tutor Marked Assignment
7.0   References/Further Reading

1.0   INTRODUCTION

This unit presents the scope of reference and information services and its types of reference. This will eventually expose you to the preliminary knowledge of reference and information services in libraries. This unit will also educate you on the functions of reference and information services, its importance in libraries and the role of the reference librarian in carrying out the functions.

2.0   INTENDED LEARNING OUTCOMES (ILOS)

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

- Determine the scope of reference and information services.
- Explain the factors that determine the scope of reference and information services.
- Discuss the functions of reference and information service.
- Explain the roles of the reference librarian.

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- Demonstrate the importance of reference and information service to library users.

3.0   MAIN CONTENT

3.1   Scope of Reference and Information Services

Reference service is an information service, which involves the knowledge, use, recommendation, interpretation, or instruction in the use of one or more information sources by a member of the library staff. For reference service to take place there must be sources from which information is extracted. By scope, we refer to the depth of coverage of the subject about which the question is asked and the precision that is required in answering such a question. Reference and information services are at the heart of library operations and represent the public face of access to information. This aspect of librarianship is by far the youngest of the three functions of library i.e collection of information resources and its organisation and service which have not been practiced until the mid-to-late-1800s.

In a complex and information abundant environment, this service is essential as it provide a means for library users to efficiently and accurately access information. They represent the greatest asset of libraries, librarians and other library personnel. Reference services in particular provide a means for users to navigate the complicated information ecosystem with the help of professionals trained in accessing and evaluating information. Committed to core library principles of freedom of inquiry and freedom of access, reference librarians do not discriminate against either individual users or their information needs.

The scope of reference and information service is hinged on the necessity to bring library user and information resources together in a cordial manner irrespective of the type of media and place. Therefore, its scope is all about what the librarian does to ensure that users' information needs are met without delay. Its scope is broadly summarised in its types.

3.2   Factors that Determine the Scope of Reference and Information Services

The scope of reference and information service generally borders on the basis of the following factors:

1. **Categories of users**: Children, students, teachers, researchers, professionals and others.
2. **Types of libraries**: Public, academic and special.

3. **Quality and level of service sought**: Location of specific documents in the library, help in the use of the library catalogue and other tools, or help in consulting reference books, assistance advice in selecting documents for the study undertaken.

4. **Types of questions**: Fact findings, literature searches, questions relating to a specific area of research, industrial or business activity, and similar others.

5. Reference and bibliographical tools maintained for effective use.

6. Persons visiting the library personally, or enquiring via telephone or seeking assistance through post or other means.

Reference and information service in most public libraries would be in the range of assistance to readers in seeking information or books for study or recreation, answering simple fact-finding questions or enquiries relating to public utilities and so on. Most users of public libraries may not be engaged in any serious pursuit of study or research or investigation and their collections are also not geared up to this type of requirements. Of course, there are exceptions for example, large public libraries.

In university and special libraries, the reference service usually would be of an intensive type. In fact, most modern documentation and information services have evolved and grown in the context of serving specialised users, such as researchers, academicians, writers, industrial and business experts, planners, executives and management specialists.

3.3   Functions of Reference and Information Services

Reference and information services functions are preserved in its transactions and works such that it is all about information consultations in which library staff recommend, interpret, evaluate, and/or use information resources to help others to meet particular information needs. It includes formal instruction or exchanges that provide assistance with locations and schedules. As well as other functions that involve the creation, acquisition, management, and assessment of information or research resources, tools, and services.

The American Library Association outlined six functions of reference services and they are as follows:

3.1.1 Supervision Function

Organisation of facilities, selection of reference materials, direction of personnel, refer patrons to resources outside the library when appropriate and study library users.

3.1.2 Information Function

Reference librarian provides answers to all sought of questions and should be able to produce the source that would answer the questions. Assisting in the evaluation of information and provides brief, factual information that meet users' needs.

3.1.3 Guidance Function

This involves assistance in the identification and selection of books, journals, and other materials relevant to users' particular information need. The reference librarian recommends good books, periodicals, audios, and videos in various fields.

3.1.4 Instruction Function

This involves providing information and training users on the use of Online Public Access Catalogue (OPAC), assist users in locating or finding library materials and educating library users on the use of library through orientation programmes. The reference librarian also instructs library users in the selection of appropriate tools and techniques for finding information and offer advice on how users can search the internet for information, and also evaluate the reliability of the information found on different websites.

3.1.5 Bibliographic Function

Preparing list of books in various subjects for easy availability and accessibility to users.

3.1.6 Appraisal Function

This involves acquisition and evaluation of the right materials and knowledge of how to get the most out of it. The reference librarian also ensures the keeping of reference statistics, and participating in the development of the reference collection.

In order for these functions to be carried out, it is important that the reference librarians possess some qualities. The followings are some of

the qualities that a reference librarian must possess as highlighted by (Khan, Chakrabarti, & Banerjee, 2004; Sharma, 2006);

1. **Good Memory**: Reference librarians should have the ability to remember and have hints about certain questions asked by library users. Like other humans, they should have both types of memory such as short-term and long-term memory. Short-term memory enables reference librarian to remember essential facts such as names, address, dates, places etc. during the course of reference interview. While the long-term memory enables the librarian to be verse in various subject areas and general knowledge.

2. **Communication Skills**: Since reference librarians meet variety of users on a daily basis, good communication skill is very important in order for librarians to promote library services to users. Librarians communicate with users through various method such as e-mails, telephone, press releases and face-to-face.

3. **Patience**: Patience is needed for reference librarians to deliver good services to users who are confuse and not able to clearly express their needs. They also need to be patient with those unruly, troublesome, and irritated library users.

4. **Creativity**: Reference librarians should be creative by solving problems or questions from various perspectives. He/she should also have thorough knowledge of the library's collections, anticipate the needs of users and refer users to other libraries if need be.

5. **Marketing Skills**: Reference librarians should have good marketing skills that will enable them promote the various services that the library offers through awareness campaigns, orientations, and trainings.

6. **People Skills**: The reference librarian must have good people's skill to enable him provide good customer service. The librarian should welcome the patron into the library and ensure to help users get the needed information by being friendly and conversational (Cassell & Hiremath, 2006).

7. **Studious**: The reference librarian should be knowledgeable, learned and an academician. He/she should have good reading habits and be able to solve users' problems without consulting reference sources. He/she should have knowledge of reference sources and their contents.

8. **Administrative Experience**: The reference librarian should be verse in all activities of all the departments and sections of the library. He should have knowledge of handling equipment and carryout tasks such as cataloguing, compilation of bibliography, automation etc.

3.4   The Role of the Reference Librarian

The role of the reference librarian has been defined by the patrons' need for human mediation. Reference librarians apply critical-thinking skills, emotional intelligence, teaching ability, and question analysis to connect the users with appropriate resources.

The new roles of the reference librarian in the 21st century include;
i.   Cultural role
ii.   Teaching role
iii.   Providing access to information
iv.   Space provision,
v.   Act as information advocates
vi.   Advisory role
vii.   Information organisation and retrieval
viii.   Knowledge of digital management, and information mining.

For the reference librarians to carry out these new and challenging roles, they will stay in advance of need, believe in themselves and what they can offer, not take their existence for granted, develop themselves, learn from each other, seize the opportunities, lift up their heads, get out more and engage, be confident and claim the future. The reference librarian is faced with the daunting task of performing electronic reference services, digital reference services and using 'Second life' as aid to perform reference services.

It is also important for librarians to understand the institution and its service issues; building and advertising his or her unique knowledge of research, sources, and users; being aware of literature and trends; communicating with other librarians and visiting other libraries; and creating collaborative working relationships with other library and campus unit.

4.0   CONCLUSION

As the users demand changes, so does the reference and information service scope will change? It is not static but works according to global change in knowledge review in the area. Organisations therefore may have to tilt its scope in practical sense to suit their mission and vision or set objectives. To fully understand reference and information service as a field of knowledge, a good grasp of its scope is necessary. The significance of the functions and roles of reference librarian has continued to be emphasised by users of information. Particularly, in this 21st century that is marked with information technology which provides access to myriads and unprecedented information resources, the reference and information services department must be strategically situated to assist

users with the right information, at the right time and in the right way. Reference librarian must be there to avail users with the unique role of evaluating, selecting, guidance, instructing, accessing and utilising information resources in different forms and formats.

5.0   SUMMARY

This unit explained the sphere of reference and information service scope with respect to its workings and factors which determine the coverage. It is also about what is done by the reference librarian to meet the information need of the different users with different background in a cordial and preferred manner. It is the heart of library operations and represents the public face of access to information. You have learnt that, the essence of the reference and information services department in the library involves in assisting and instructing users, evaluating sources of information, selection, answering of users' questions, provision of factual and verifiable answers. The main role of the reference librarian is also to ensure that users' information demands are met. In this regard, the reference librarians apply critical-thinking skills, emotional intelligence, teaching ability, question analysis and collaborative mechanisms to understand users' questions and need in order to provide tailor made reference and information services to them.

6.0   TUTOR MARKED ASSIGNMENT

1.   Explain the scope of reference and information services.
2.   Briefly discuss the factors that determine the extent of the scope of reference and information services.
3.   List and explain the functions of a reference and information services department you know?
4.   Examine and discuss the roles of a reference librarian in carrying out reference and information services functions.

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UNIT 2   MODELS OF REFERENCE AND
INFORMATION SERVICES

CONTENTS

1.0   INTRODUCTION

This unit discusses the various models used in performing reference and information services. Particularly, these models are applied to the direct reference and information service provision. We shall examine them accordingly under this unit.

2.0   INTENDED LEARNING OUTCOMES (ILOS)

By the end of this unit you should be able to:

• Identify the types of models used to provide reference and information services.
• Discuss how they aid reference and information service delivery in the Library.

3.0   MAIN CONTENT

3.1   Models of Reference and Information Services

The methods by which the reference and information services librarian interact with users takes different forms including face-to-face, tiered reference, roving reference, reference by appointment, and service to remote users.

3.1.1 Face-to-Face Reference

The traditional face-to-face reference service model anchors the interaction between the user and the librarian in some service point,

typically a reference desk. In this environment, a library user may approach a reference librarian with an inquiry of any type. While this model signifies value including ease of access, equity, and high-quality service, the disadvantages include inflexibility in the use of library staff, duplication of effort, lack of accountability, high cost, and reinforcement of the image of librarian as clerk.

3.1.2 Tiered Reference

Tiered reference service has been described as an alternate to the traditional model which often divides the reference desk into two or more service points. Initially made popular by the Brandeis model, the tiered reference model's defining feature is that paraprofessionals or trained student assistants answer a majority of simple reference questions so that reference librarians may be reserved for handling more demanding research questions.

3.1.3 Roving Reference

In order to provide more proactive reference service, some reference librarians stroll through the library looking for users who may have questions. This has the advantage of offering assistance to users where they are already working on their questions; allowing more hesitant users to be helped; and eliminating any physical barriers that the desk itself poses to users. The roving method is distinguished by the fact that the librarian is the one who initiates the reference transaction by approaching the potential user. The main problems with roving is that, users sometimes are unsure whether the person who approaches them really is a librarian and that users who do have a question do not know where to go if they want to find the librarian. Roving is used in many libraries, often as an assistant to the traditional reference desk.

3.1.4 Reference by Appointment

This is a version of tiered reference. In this method, users who wish to consult a reference librarian must make an appointment to meet with the librarian. The benefit of this method is that the individual has the full attention of the librarian for an extended period of time. The disadvantage of appointment-based service is that many users do not want to wait for an appointment and simply accept whatever information they can find on their own. Appointment-based reference service is most often used by subject specialists in research and special libraries.

3.1.5 Service to Remote Users

Reference service has been available by telephone for many years. More recently, most libraries have established e-mail accounts or webpage that allow users to submit questions and interact with librarians. Some have initiated virtual reference services using chat, instant messaging, or other software that allows the librarian to communicate over the web with users. Because of the technical requirements of some of these virtual reference services, they are often established in cooperative ventures with other libraries or with commercial companies. These services succeed when the community members served by the library are frequent users of those communication technologies. Virtual reference is now offered by public and academic libraries.

4.0   CONCLUSION

For anyone using libraries today, reference service is a standard feature. Regardless of the type of library, the size of its collection, or the demographics of its users, patrons expect to get help with everything from complex research projects to finding materials in the library's collections. Service has become almost synonymous with libraries and as such reference librarians should develop the most efficient and effective means of providing reference service to their users. During a time when change seems to be the constant phenomenon, librarians are seeking new models for providing services to their users.

5.0   SUMMARY

Reference and information services models provide the reference librarian with methods of attending to users' information need and to serve them using the appropriate method. Some of the ways that have been dealt with in this unit are; face- to-face, roving, tiered and appointment models.

6.0   TUTOR MARKED ASSIGNMENT

State and discuss four (4) reference and information services models of your choice.

7.0   REFERENCES/FURTHER READING

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UNIT 3 NATURE OF REFERENCE AND INFORMATION SERVICES

CONTENTS

1.0 Introduction
2.0 Intended Learning Outcomes (ILOs)
3.0 Main Content
      3.1 Nature of Reference and information service
      3.2 Changes in reference and information service
4.0 Conclusion
5.0 Summary
6.0 Tutor Marked Assignment
7.0 References/Further Reading

1.0 INTRODUCTION

This unit explains the nature and changes in reference and information services in the light of technology, preference of reference information users and the state of their challenges.

2.0 INTENDED LEARNING OUTCOMES (ILOS)

By the end of this unit you should be able to:

- explain the nature of reference and information service.
- account for the changes in reference and information service provision.

3.0 MAIN CONTENT

3.1 Nature of Reference and Information Service

Whether they are physically present or not, people who ask reference librarians for assistance are at a psychological disadvantage. They have a need and library staff members are the ones who may be able to help them. Because users are not certain on how to proceed, they rarely state exactly what they want. This is where the reference interview comes into play. The reference interview is a set of questioning skills that enables the librarian to work with the user to figure out what the query really is. A good interview is a conversation between the librarian and user that identifies and clarifies what the user is looking for. In many cases, the user has not thought deeply about the topic, and the librarian helps the user determine the parameters of the information need. By using good

interview skills, the librarian can help the user define the information need and come up with some search possibilities to satisfy that need.

In addition to discussing the research need of the user, the reference interview serves a psychological role in the reference process. People asking for help often feel at a disadvantage when they reach the point at which they ask whether the help is from a doctor, lawyer, or librarian. Society encourages people to figure things out on their own. When they cannot and need to ask another person for assistance, they can feel as if they have failed. It is very important that people feel comfortable in asking for help and that each user is treated with dignity and respect. Most of the time, reference librarians are not helping users find specific factual information but are helping the user to identify sources and suggesting search strategies. In this regard, reference service is more like counseling the user than providing answers. Reference service is about developing a relationship between the user and the librarian, and not about a specific answer to a question. In order to help librarians work with users, RUSA has developed a set of guidelines to assist librarians with the behavioural nature of the reference process.

Even the most skilled reference librarians have limits to what they can offer. In some subject areas, especially law and medicine, the librarian needs to be very careful about giving advice to users. Thus, no librarian would take the responsibility of recommending books to give directions for the treatment of diseases. Nor would he/she give legal advice nor undertake to instruct applicants in regard to the practical manipulations of the workshop or laboratory.

In light of recent events and the current political climate (including the USA PATRIOT Act), formerly theoretical ethical issues for reference librarians have become practical realities. Ethical questions such as the provision of information that has the potential to harm society (e.g., how to build a bomb) are now concrete issues that reference librarians encounter in their daily lives.

3.2 Changes in Reference and Information Service

A changing reference landscape dominates the current conversation on reference and information services. Although such services' mission and goals remain steady, the way they are provided is constantly changing. The development of subscription and free electronic resources has changed the sources of information available, while virtual reference has made it possible to reach users no matter where they are. Librarians and library users are constantly bombarded with a wide range of information choices that must be evaluated for authenticity and accuracy. Whether at home on their computers or wandering through the stacks, many people

feel as though they are drowning in a sea of information. New media and technologies link users to this new and growing body of global knowledge and enable librarians to assist them virtually as well as face-to-face. Reference services are at once a life raft, map, and compass to those who feel adrift. In providing users with a combination of personalised services in a timely manner, libraries reaffirm their centrality as twenty-first-century public institutions par excellence;

1.   Today, reference stretches far beyond the walls of the library and has loftier goals than welcoming users to the library with a "cultivated female staff." Academic libraries and some special libraries in particular have already seen a slowing of traffic to the physical library and an increasing use of the library's online resources. Users can ask questions 24/7 through virtual reference and expect an immediate response. Likewise, they can access electronic resources that the library provides through its website. Virtual reference is growing quickly; the appeal of chat, instant messaging, social media, and other technology-based services such as mobile technology point to a generational paradigm shift ahead. These online reference services have the advantage of being convenient and necessary in this fast-paced world.

2.   In numerous forms and fashions, technology continues to change reference services. Librarians must be ready to learn new technology and adapt to the needs of users unable to imagine a world without electronic resources. Like few other professionals, librarians must be willing to ride the waves of such change, adapting to meet the needs of their users. Whether it is a Smartphone, an iPad, or a laptop, users will want to receive and read their information via the technology of their choice. New models of reference are also developing to meet different user needs. Libraries are adding more points of service such as an information desk near the front of the library, a reference service point combined with other library services, or an in-depth reference centre where a user can sit down with a librarian and work a plan for researching a paper. In other situations, librarians rove the library to help users who do not approach the reference desk, meet with users to discuss their reference or research needs, or work as an embedded librarian in an online course. These and other new strategies are changing the way libraries offer information services.

3.   Looking ahead, librarians must be aware that reference work will no doubt be based increasingly on electronic means of communication. At the same time, it will continue to be a personal service, although not necessarily face-to-face. There will be more emphasis on electronic materials, while some older materials will

still need to be consulted in print format. Even so, the way librarians and users find and convey information is as fundamental today as it ever was.

4.0 CONCLUSION

There can be little doubt that reference service will be as common in libraries one hundred years from now as it is today. However, the tools used will be vastly different, and the people served will be an even more inclusive community. Reference librarians in the future will continue to teach users about information, answer questions, recommend sources, and promote the library within the community. Those studying to become reference librarians need to keep in mind the reasons reference service was created, for they are the same reasons that it is needed today and will be needed in the future.

5.0 SUMMARY

In summary, the nature of reference and information service operation requires that the reference librarian must bring his knowledge and skills to bear to understanding the psychological dilemma information seekers find themselves; and to employ them to address their challenges, and also know their limits when researching information for the users.

6.0 TUTOR MARKED ASSIGNMENT

1. Using a concrete example, discuss the nature of reference and information services.
2. Examine the changes in reference and information service and advice.

7.0 REFERENCES/FURTHER READING

Richard E. B. & Linda, C. S. (2011). *Reference and Information Services: An Introduction* (4th ed.). Library and Information Science Text Series.

Samuel, R. (1953). The development of the concept of reference service in American libraries, *Library Quarterly, 24*(4) 21(4), 1850-1900. https://www.jstor.org/stable/4304166

MODULE 3   TYPES OF REFERENCE AND
                          INFORMATION SERVICES

Unit 1 Direct Reference and Information Services
Unit 2 Indirect Reference and Information Services

UNIT 1   DIRECT REFERENCE AND INFORMATION
                          SERVICES

CONTENTS

1.0   Introduction
2.0   Intended Learning Outcomes (ILOs)
3.0   Main Content
          3.1   Definition and Meaning of Direct Reference and
                   Information Services
          3.2   Types of Direct reference and Information Services
4.0   Conclusion
5.0   Summary
6.0   Tutor Marked Assignment
7.0   References/Further Reading

1.0   INTRODUCTION

Reference librarianship is categorised according to types of services
rendered. This unit will educates you on the direct reference and
information services, the definition and meaning and the types.

2.0   INTENDED LEARNING OUTCOMES (ILOS)

By the end of this unit you should be able to:

•   define direct reference and information service
•   itemise and discuss the various direct reference and information
        services

3.0   MAIN CONTENT

3.1   Definition and Meaning of Direct Reference service

A reference and information service is considered to be direct when it is
rendered to a client without a barrier or interface between the librarian
and the clients. In this form of service, there is room for interaction
between the information worker and the client irrespective of the medium

of communication. It has to do with person to person relationship. It involves answering users' questions, interview, and providing them with needed information or service.

According to Ranganathan, this type of reference service is often finished in a very short time, in a moment if possible. The reference staff is able to answer the inquiry in a very short time, may be at times immediately. This type of service is more or less fact finding. Normally, sources of information used for fact finding consist of reference books of different types. These include encyclopaedia, dictionaries, yearbooks, biographical dictionaries, geographical dictionaries, etc.

Direct reference and information services are defined as the service rendered to users physically and remotely within specified time possible. This service is characterised by direct contact with the users. It is responsive services that are provided in response to requests for assistance in finding answers to specific questions and literacy instructions.

3.2 Types of Direct Reference and Information Services

Within these philosophies and functions of the reference librarian, several particular types of direct reference and information service have been developed. Some common forms include readers' advisory, ready reference, research consulting, bibliographic, instruction, literacy programmes, outreach and marketing.

3.2.1 Readers' Advisory

Readers' advisory is the process of recommending information sources to library users. Any reference librarian who recommends sources based on the user's needs is in fact doing readers' advisory service. Whether a book, database, or website, the librarian chooses the source for the user based on the librarian's skill level and the nature of the user's question. The public librarian who recommends one fiction writer over another, the academic librarian who recommends one subject database over another, and the special librarian who recommends one journal over another, are all involved in readers' advisory work.

3.2.2 Ready Reference

Ready reference is the provision of short, factual answers to highly specific questions. Answers to these questions are verifiable as accurate or inaccurate. The following are examples of ready-reference questions: "What is the population of Nigeria?" "How many mango trees were grown in Kaduna State in 2016?" "What is the address of the headquarters

of Microsoft?" Answering ready-reference questions is the popular image of the reference librarian.

However, ready reference has never been the primary function of reference service and is rapidly becoming an even smaller component of the reference librarian's duties. In the past, reference librarians did more ready reference simply because the sources required to answer such questions were in library collections and not in the hands of the users. With the development of the web and search tools such as Yahoo! and Google, users have the tools to find this type of information on their own. As a result, there is less need to consult a librarian for ready reference. Ready reference is more common in public libraries than in academic or special libraries, but it is in decline in all types of libraries.

3.2.3 Research Consulting

This is a more common form of reference service in which the reference librarian assists users with research questions. In this case, the librarian may suggest sources, search terms, and pathways that will lead to material relevant to the research project. These questions do not have single, factual answers but have many possible results that vary depending on the researcher's interests and needs. The following are some examples of research questions:

- "What is the effect of pesticides on apple production?"
- "What is the state of literacy in Nigeria?"
- "How did Microsoft grow into a company that dominates the information industry?"

With research questions, there is not one single answer that can be verified as categorically correct or incorrect. Instead, a wide range of possible approaches, search strategies, potential sources are available, and each leading in a different direction. The role of the librarian as a research consultant is to find out what aspects of the problem the user is interested in and to suggest possible search strategies that will lead the user towards the best solution. As a research consultant, the librarian may get the user started in the research, but the user will do most of the searching. The user may return several times during the process. Research consulting is more common in academic and research libraries than in other types of library, but it is becoming the dominant form of reference service in all libraries.

3.2.4 Instructional Service

The reference librarian provides instruction to readers about the library. That instructional role continues well into the 21st century. Instruction tends to take two forms: direct and indirect. Direct instruction is

characterised by the librarian communicating directly to the user and is delivered through any of a number of channels. It may come in a one-on-one situation in which the librarian teaches the user as they work together on a query; it may be done in a voluntary group environment, through workshops or classes that teach general or specific skills to those who choose to attend; or it may be a required part of a specific course or assignment in which the instructor wants all students to use library resources. Required instruction is more common in academic libraries, whereas voluntary and one-on-one instructions are features of reference service in all libraries.

Reference librarians also provide indirect instruction. In indirect instruction, the librarian does not communicate directly with the user, but communicates through instructional tools. In order to assist users with common problems, librarians write guides or pathfinders that describe how and where to approach various research problems. Some guides cover specific issues such as how to use the catalogue, a database, or a specific reference source. Other guides may be directed at a specific discipline such as bibliographies or web pages of useful materials in music or education. Guides may be in print or electronic form and are updated as needed. Indirect instruction is provided in anticipation of user needs.

3.2.5 Literacy Programmes

In addition to providing resources for the literate segment of society, libraries have continued to play a role in education itself. Many librarians conduct literacy programmes, which are designed to teach reading skills to those members of the community who have not acquired such skills through other channels. Frequently, these programmes are aimed at adults who have not completed their schooling, for who English is a second language, or who are new immigrants to the community. Literacy programmes are most common in public libraries. These programmes continue the historic role of the public library in educating members of the communities that they serve.

3.2.6 Outreach and Marketing

Librarians today have gone beyond this passive approach of waiting for users to come to the library and now work to generate interest in their communities. Academic and public libraries frequently have staff whose primary responsibility is to work with specific segments of the community to increase library awareness and use within those populations. In the academic environment, the library may target outreach efforts at specific disciplines or departments, or toward specific types of users such as faculty or graduate students. In public libraries, outreach is

often directed at segments of the community such as teens, senior citizens, minorities, or members of clubs or interest groups. Outreach activities continue to grow in libraries and are often a part of the reference librarian's duties.

3.2.7 Information Service

This type of service may range from answering simple questions to supplying information based on users' information search in the library's collection. The character and extent of library and information service may vary with the kind of library, level of users, the skills, competence, and professional training of the reference librarian providing the information service. Information service is provided in terms of information sought by the library patrons. Usually, the client is not concerned with the source of the information.

Users under this category may include uneducated farmers who wish to know something about weather forecast or a layman from a rural community who may just want to know the name of his Local Government Chairman. It will be ridiculous for a reference librarian to start providing the client with the information sources rather than sourcing for the answer and providing it to the client.

3.2.8 Referral Service

This type of service has to do with directing or guiding library users to what they want in the library as well as on how to use library information resources. This may be in the form of giving explanation on the use of library information access tools. This service is also called the last resort for the reference librarian, having exhausted all avenues within his reach to render reference service to the client. The client is referred to another library where he/she could be assisted.

3.2.8 Translation service

This service entails the rendering of information in foreign or unknown language to a library client into a language that they understand. This service is very necessary especially where a library houses so many relevant materials in foreign language not understood by majority of its users.

4.0   CONCLUSION

Direct reference and information services are classified for front-end engagement with library users. These services are provided for optimum utilisation of library and information resources and to provide guidance

to users. However, these services are carried out based on the policy of the library, the nature of the information resources, the users, knowledge and skills of the reference librarian.

5.0   SUMMARY

The importance of readers' advisory, ready reference and instructional services are central to the success of the library operations. This unit has discussed the types of reference and information service and each is activated according to the nature and degree of assistance the user requires to meeting their information need. Therefore, the reference librarian must continue to study and develop new service that will satisfy users as their information need is not static.

6.0   TUTOR MARKED ASSIGNMENT

1.   What is a direct reference service?
2.   Define and discuss the various types of direct reference and information services

7.0   REFERENCES/FURTHER READING

Lawal, I. M. & Jimoh, A. O. (2016). *Understanding Reference and Information Services*: An Introduction for Library and information Science Students. Ahmadu Bello University Press, Zaria.

Richard E. B. and Linda C. S. (eds.)(2011). *Reference and Information Services: An Introduction.* Fourth Edition. Library and Information Science Text Series.

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UNIT 2   INDIRECT REFERENCE AND INFORMATION SERVICES

CONTENTS

1.0   INTRODUCTION

In the previous unit, you have learnt about direct reference service and its types. Now this unit will explain to you the meaning and types of indirect reference and information services prepared and rendered to library users. These services are prepared on demand and on anticipatory survey of library users' information need.

2.0   INTENDED LEARNING OUTCOMES (ILOS)

By the end of this unit you should be able to:

- define indirect reference and information service.
- identify and discuss the various types of indirect reference and information services.

3.0   MAIN CONTENT

3.1   Definition and Meaning of Indirect Reference and Information Services

Indirect reference services are all the services that are carried out behind the scene. Such services are enjoyed by the clients without knowing who in the library provided them. Such services include acquisition of reference information resources, supervision, and compilation of information retrieval aids and their administration. In essence, anything that contributes to a successful reference and information work which is carried out without the client or user knowing when or who prepared the

service. In another literature, this type of service is classified as long range service because of the time it takes in preparing and to respond with the appropriate information sought to the library client.

3.2   Types of Indirect Reference and Information Services

Under this category the following reference and information services are classified:

3.2.1 Subject Specialists

Many large libraries hire librarians to be specialists in a specific subject field or discipline. These librarians immerse themselves in the subject area, usually selecting materials for the library's collection as well as assisting users with specialised research. Although subject specialists can be assigned to cover any discipline, they are most common in areas that society sees as requiring more specialised knowledge to succeed, such as law, medicine, the sciences, and business. Subject specialists often have advanced degrees within their field of specialisation. They work closely with researchers in the community and handle very complex questions. Subject specialists are most often found in academic libraries, large public libraries, and special libraries.

3.2.2 Bibliographic Verification and Citation

Bibliographic verification is the process of reading, identifying, and interpreting citations to information sources. Those sources include books, journals, theses, web pages, manuscripts, or any other form of publication. In the process of verification, the librarian usually finds other reference sources that cite the same publication, correct errors, and determines where to find the desired information. As information becomes more and more complex, verification is a growing activity for reference librarians. This is the primary activity of interlibrary loan librarians whose entire operation depends on citations.

A newer function related to bibliographic verification is helping users to correctly cite the information sources that they have used. Students, researchers, and the general public need to be able to provide accurate citations to their sources so that others will be able to find those sources. With the wide range of available citation styles such as American Psychological Association (APA) which is used as a formatting style by social sciences for citation, Modern Language Association (MLA) which is a style for writing papers and essays and its mostly used in Arts and Humanities for citation; Chicago (from The Chicago Manual of Style) and an ever-growing number of formats, users find it increasingly difficult to accurately cite the information sources that they use. In addition to the

relatively new format of the web, users are very confused about citations. Aiding users with citations are a rapidly growing function of the reference librarian. This is extremely common in academic and school libraries where students are learning how to cite material. However, citations are common areas of query in public and special libraries as well. Reference librarians are often responsible for maintaining good standards in citations and references.

3.2.3 Interlibrary Loan

Interlibrary loan is the process of sharing information materials between libraries. One library may loan a physical item to another library for a specific period of time or may copy the original and deliver it to the requesting library. Interlibrary loan is a common service in most libraries of all types because it extends the range of material available to users beyond the home library's collection. Most libraries belong to consortia that determine which materials may be borrowed or photocopied. Libraries regularly exchange information materials in all formats using established codes and copyright guidelines. When cooperative union catalogues such as Online Computer Library Catalogue (OCLC) were adapted for interlibrary loan, the process was made significantly easier, and the volume of traffic among lending libraries rose tremendously. Interlibrary loan librarians spend a lot of time doing bibliographic verification.

3.2.4 Document Delivery Service (DDS)

This is an indirect reference service that involves the physical or electronic delivery of a document from a library's collection to a library user base on request. These documents could be a part of a book, or softcopy of information resources depending on the library users' request. The requested document can be delivered at the circulation desk within the library, or by post to the user's address, or through e-mail.

3.2.5 Access Tools

In order to ease access to reference information collections, the librarian need to prepare special information access tools such as bibliographies, abstracts, indexes, collection list, etc. Anything that can facilitate easy access and retrieval of reference information resources is known as an access tool.

3.2.6 Technical Services

These include such activities as cataloguing, classification, and all other routine functions like labeling and shelving as well as auxiliary duties.

Auxiliary duties consist of filing, shelf maintenance, recording keeping, watching over readers and other chores necessary for the cooperate existence of any reference section in a library.

3.2.7 Current Awareness Service (CAS)

This is concern with the dissemination of up-to-date information to library users. It includes display of newly acquired information resources in the various fields of library users. It is like sending message alerts to users about latest publications and developments in the library.

3.2.8 Selective Dissemination of Information (SDI)

This is a personalised service directed to library users according to their required needs. It is an enhancement of current awareness service that involves matching information or documents or resources with the interest of each users of the library.

4.0   CONCLUSION

Indirect reference and information services are behind the scene activity that the reference librarian engages himself in order to meet the information needs of the user. Its importance can never be under estimated because it is the life wire of the reference transaction. Some of the work done covers designing information access and retrieval tools to ease user's utilisation of information for educational and recreation purposes. This aspect of reference service also requires the knowledge of users' information need, behaviour as well as challenges to access and use of information resources.

5.0   SUMMARY

By way of recap, your attention has been drawn to the various types of indirect reference and information services, what they mean and how they could be employed to ensure unhindered and simplified access to information resource in the library. Some of the behind the scene activities include amongst others; translation service, current awareness service, bibliographic verification service, inter-library loan, bibliographic compilation, abstract, and indexing services. They are all important in bridging the gap between the users and the library's information resources. Library without a form of anticipatory information services will not be able to satisfy users' needs.

6.0   TUTOR MARKED ASSIGNMENT

1.   what is the meaning of indirect reference and information service?
2.   Enumerates and discuss four (4) types of indirect reference and information services provided in any library.

7.0   REFERENCES/FURTHER READING

Lawal, I. M. & Jimoh, A. O. (2016). *Understanding Reference and Information Services*: An Introduction for Library and information Science Students. Ahmadu Bello University Press, Zaria.

Richard E. B. and Linda C. S. (eds.)(2011). *Reference and Information Services: An Introduction.* Fourth Edition. Library and Information Science Text Series

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MODULE 4 REFERENCE AND INFORMATION SOURCES/ RESOURCES

Unit 1 Concept and types of Reference Sources and Resources
Unit 2 Criteria and Techniques of Reference Information Resources Evaluation

UNIT 1 CONCEPT AND TYPES OF REFERENCE SOURCES/ RESOURCES

CONTENTS

1.0 Introduction
2.0 Intended Learning Outcomes (ILOs)
3.0 Main Content
    3.1 Meaning and Characteristics of Reference Sources and Resources
    3.2 Types of Reference Sources and Resources
    3.3 Electronic Resources for Reference Services
    3.4 Evaluation of Reference Sources and Resources
4.0 Conclusion
5.0 Summary
6.0 Tutor Marked Assignment
7.0 References/Further Reading

1.0 INTRODUCTION

In this unit, you will explore the various meanings of reference sources and the various characteristics of information resources in our libraries and information centres. You will be able to distinguish them with other textbooks and journal publications as each category possesses different and distinct characteristics. You will also be exposed to the various types of reference sources/resources as well as the modalities and attributes for their evaluation in our libraries and information centres.

2.0 INTENDED LEARNING OUTCOMES

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

• State the meaning of reference sources and resources.
• Highlight the characteristics of reference sources and resources.
• Identify the various types of reference sources/resources.
• Discuss the types of reference sources/resources.
• Evaluate reference sources/resources.

3.0   MAIN CONTENT

3.1   Meaning and Characteristics of Reference Sources/Resources

Reference resources are those books which are designed to be consulted or referred to from time to time for a specific piece of information. Ordinarily, these books do not lend themselves to continuous reading. Broadly, the resources can be called a reference book, provided the information contained in it is so organised that it becomes readily accessible (Kumar, 2008). Also, Aboyade and Aboyade (2017) defined reference resources as specific kind of publications which has been written for the purpose of consultation on certain items of information rather than to be read from cover to cover. In other words, it is a compendium of information usually of a specific type compiled for ease of references. The work is purely informative and the authors' emphasis is purely on facts.

According to Kumar (2008), an ordinary reference resource possesses the following characteristics:

1.   It is made of continuous exposition. It is developed sentence by sentence, paragraph by paragraph, chapter by chapter, and there is a link at each stage. There is an element of continuity. In case of a biography of a person, it would normally be developed from childhood to death and later influence.

2.   Reference book is designed by its arrangement and treatment to serve certain purposes. A reference book usually possesses the following characteristics;

      i.   It is meant for consultation for specific piece of information. Of course, works like dictionaries, encyclopaedias, and yearbooks provide information directly but point out the sources which may contain information.

      ii.   It is not meant for continuous reading. No one is expected to read a dictionary or an encyclopaedia or a directory from cover to cover.

      iii.   Very often, a reference book may consist of disjoint entries varying in length. For example, one entry in an encyclopaedia may have no relationship with the next entry. This entry may have been brought together merely due to

the incident of alphabetisation. In other words, we can say that a reference book usually lacks continuous exposition.

    iv.   It is usually not lent out because reference books are required from time to time for consultation. One never knows, somebody may require it at anytime. Thus, its use is restricted to the library building itself.

    v.   Information in a reference book is so organised that the required information can be located promptly and exhaustively.

3.2 Types of Reference Sources/Resources

According to Aboyade and Aboyade (2017), reference resources can be broadly classified into various types;

3.2.1 Atlas:

An atlas is a collection of maps. In other words, it is a geographical representation of earth surface or a region of earth. In essence, an atlas presents geographical features and political boundaries as well as geo-political, social, religious and economic statistics of a place. Examples of atlas include world Atlas, Times Atlas of the World, etc.

3.2.2 Biography

A biography is a detailed description or an account of a person's personal life. Quite unlike a profile or a resume, a biography presents the subject's story highlighting various aspects of his/her personal life including intimate details of experiences. A biography is usually written by someone else and is non-fiction. Examples include Appleton's encyclopaedia of Americans, Biography of noble American women, National biography of living persons, Who's who in America, and Who's who in Nigeria etc. Several professionals also publish their *who's who* in their profession. An example is *Who's who in Librarianship.* Examples of biographical dictionaries include General biography about dead persons, General biographies about living persons, National biography about dead persons, and National biography about living persons

3.2.3 Encyclopaedia

It is a compendium holding a summary of information from either all branches of knowledge or a particular branch of knowledge. Encyclopaedias seldom treat a topic in minute detail, but they are usually factual and current. The articles are arranged and accessed alphabetically

by article name. Not only do they provide readable introduction by an authority, but also list reference for further reading for those users wishing to go beyond mere introduction. Encyclopaedia could be general or subject based. Examples of general encyclopaedia are Encyclopaedia Britannica, Encyclopaedia Americana, while Encyclopaedia of Military Aircraft is subject based.

- **Encyclopaedia Britannica: (30 volumes):** Encyclopaedia Britannica is regarded as one of the most authoritative encyclopaedias in English Language. It was first published in Scotland in 1968. The 15th edition was first published in 1974 and in 30 volumes. Encyclopaedia Britannica appears to be the most distinguished of the encyclopaedia, emphasizing both old and new areas of knowledge. The newest edition has an index volume that gives synoptic information. It is in both print and electronic form.

- **Encyclopaedia Americana: (30 volumes):** This is a scholarly encyclopaedia consisting mainly of short entries, though complex subject is treated in longer articles. It has an excellent coverage of the sciences and technology. It has an index volume.

- **Subject Encyclopaedia:** With information explosion, encyclopaedias of special subject areas have been published. Examples include International encyclopaedia of Social Science, encyclopaedia of Environmental Science, encyclopaedia of Modern Military Aircraft etc.

Encyclopaedias are useful in that they collect knowledge and disseminate it around the world; transmit knowledge from generation to generation so that the work of preceding centuries will not become useless or forgotten. This will enable the incoming generations become better instructed so that they can be more virtuous.

3.2.4 Dictionaries

A dictionary is referred to a collection of words often listed alphabetically showing their usage information, definitions, phonetics, pronunciations, synonyms, antonyms and other grammatical features. Dictionaries were originally invented to list the translated meaning of words from one language to another.

Modern dictionaries provide information about meanings, derivations, spellings, and supplication of words. Dictionaries also give synonyms, rhymes, slangs, colloquialisms, dialect and usage. Unabridged dictionaries contain complete information about words while abridge ones condense their information so as to be more portable.

General Dictionaries in English
Some examples of dictionary in English are;

- **The Oxford English Dictionaries:** This is the most scholarly and perhaps the most important dictionary of English Language.

- **Shorter Oxford English Dictionary:** The shorter edition act as a supplement.

- **Webster's Third New International Dictionary:** This was published in 1966. Although, the treatment of the words is a radical change from the words in their current usage, Webster's New Twentieth Century Dictionary and Webster's New Collegiate Dictionary are abridged versions of the Webster.

- **Special Dictionaries:** Special dictionaries include Chambers' Dictionary of Science and Technologies, Henderson's Dictionary of Biological Terms, and The Penguin Dictionary of Science etc.

3.2.5 Directory

This is a list of names, addresses of persons, organisations, ministries, societies, associations and recreational centres. This list is systematically arranged usually in alphabetical or classified order, giving address, affiliations etc., for individuals' official functions and similar data for organisations including learned societies, professionals, trade associations, institutions of learning, firms, clubs, fraternities, political groups, etc. Examples of directories are Industrial directory of Nigeria, Directory of British Scientist, Telephone directory etc.

3.2.6 Gazetteer

A gazetteer is a geographical dictionary or directory that provides basic information about geographical names and places usually with descriptive or statistical information. It contains information concerning the geographical make-up of a country or a region or a continent showing the social statistics and physical features such as mountains, waterways, or roads. When a researcher wants information about political or legal status of a country, its location or its features, a gazetteer is usually the appropriate reference book to be consulted. Examples of gazetteer include Colombia-Lippincotts Gazetteers of the World, Time Index Gazetteers of the World.

3.2.7 Manual or Users' Guide

A manual is a technical communication document designed to give assistance to a user of a particular system. It is usually written by a technical person. It is usually associated with goods and hardware. It contains both written guides and the associated images. It is a reference tools that provide answer to such activities as how to operate a gadget. A typical example is Campbell's Encyclopaedia of World Cookery which teaches how to prepare different types of meal in different countries.

3.2.8 Yearbook

A yearbook or annual is a book of records and highlights to commemorate the past year of school, a community, or a country etc. It is a reference material usually published annually, but may be less frequent at times. It contains information about the events that have taking place within a year. Yearbooks are useful for historical research as they are often prepared and published soon after the events have occurred. Examples include Europe yearbook, Statement's yearbook, African Contemporary Record, West African Annuals etc.

3.2.9 Bibliographies

These are descriptive list of works or articles, government publications, manuscripts, book and non-book materials that are related to a particular subject(s), place, person, or times. Bibliographies are usually arranged in alphabetical order according to authors or subjects. Each article should be followed by a list of reference which apart from indicating the sources consulted by the author, would serve as a guide to further reading for the reader who wishes to study the subject to a greater extent. There are two (2) kind of bibliography namely, general and special bibliographies.

3.2.10 Almanacs

These are books that contain important dates, facts, and statistical information relating to world events on a regular basis such as weekly, monthly, and annually. Almanac contains information such as weather forecasts, full moons, dates etc. Examples of almanac include;
- Poor Richard's Almanac
- The World fact book
- Farmer's Almanac

3.2.11 Handbooks

These are information materials that provide summarise and comprehensive information on a specific subject. It comprises data,

procedures, processes, principles, diagrams, graphs, illustrations etc. Examples of handbooks include Guinness Book of World Records, handbook of communication etc.

3.3 Electronic-Resources for Reference Services

No discussion of electronic resources for reference would be complete without mentioning a few key early players. In the mid-1960s, the National Library of Medicine in the United States created computer programmes that enabled highly trained searchers to retrieve citations to relevant literature from its internal databases through a batch searching system called MEDLARS (Medical Literature Analysis and Retrieval System). When it went online in the early 1970s, it became MEDLINE (MEDLARS ONLINE). The MEDLINE system was critical to the diffusion of medical information to researchers across the country. Similarly, the National Technical Information Service system was developed to make reports of federally funded research projects accessible to the research and development work of the nation's universities and businesses. By the mid-1970s, the Dialog information system had been applied to proprietary abstracting and indexing databases from many disciplines and made available to reference librarians and information centres. Parallel developments were made by the System Development Corporation (SDC) and the Bibliographic Retrieval Services (BRS) corporations as well. They all provided powerful searching capabilities on the abstracting and indexing databases across nearly all disciplines (Bopp & Smith, 2011).

Now there has been a vast expansion of the world of end-user searching far beyond the scope of the local CD-ROM workstation and far beyond the walls of the reference room. The primary audience for current electronic information resources is the end user. With the development of the web and proliferation of low-cost computers, the mass audience needed to support these expanded services that now exist. The web provides a common platform for the delivery of electronic resources to users because it is format-independent. One of the web's primary attractions is the ability to provide access to electronic resources to any location on the globe. Librarians are now able to provide resources to their users wherever they happen to be. To provide these services, each library subscribes to proprietary web-based resources for the library's primary user community. Many libraries, of course, also provide links to more scholarly and authoritative free websites and resources.

When electronic resources are redesigned for the web, much of the structure of the command-based search services is built into the search screen. In place of highly structured search command languages, most of these services provide a point-and- click interface with a "fill in the box"

search window designed for easy searching by the end user. These point-and-click interfaces resemble the web search engines such as Google and Yahoo. The results are displayed on the screen for review. The user can select items to be printed or downloaded. In some cases, with a few more clicks, the user will be connected to a site with the full text of the source online, ready to be read, downloaded, imported into the user's own database, and/or printed. This system for providing electronic information services can be seen at thousands upon thousands of workstations in homes, offices, and libraries throughout the world.

3.4   Evaluation of Reference Sources/Resources

Outlining the criteria for evaluating reference sources is necessary so as to enable users determine the validity and reliability of the information available in these sources. Hence, Aboyade and Aboyade (2017) outlined the criteria for evaluating reference sources and resources on the basis of the following;

3.4.1 Recency

The freshness of the source can be determined by looking at the very year of publication of the material. This is very important because current information may not be found in the older edition of a book. This is particularly necessary in technology and science books.

3.4.2 Authority

The source must be from an authoritative person. The qualification and affiliation of the author(s), contributors, editors, compilers etc., must not be doubtful.

3.4.3 Arrangement

The information contained in the source should be arranged in such a way as to make retrieval easy. Most reference books contain articles that are classified, in which case an index is usually provided.

3.4.4 Scope

The subject matter covered by a reference material should be wide and robust, that is, adequacy of coverage.

3.4.5 Treatment

The treatment given by the author to his work must take into cognisance the end users. For example, children's subject should be in an appropriate

form in terms of language, type, illustration, etc. Also, a reference source for the researcher should contain bibliographic references.

3.4.6 Illustration

As much as possible, illustration should be made where and when necessary.

4.0   CONCLUSION

This unit tried to help you understand the concept of reference sources/resources and their various characteristics. Essentially, we identified that reference sources are important components of library and information service provision in every type of library. They are considered as veritable tools for accessing information by different categories of library users. It was established that, various types of reference resources have to be deployed to our library and information centres in order to facilitate learning, teaching and research. It is therefore, important that, as library managers, we should develop and maintain very rich and current collection of reference sources in our libraries and information centres.

5.0   SUMMARY

We have succeeded in discussing extensively on the concept of reference sources and resources, their basic characteristics and types. We observed that several definitions were provided as there are many authorities in the field of library and information science. This is to say that, there is no single universally accepted definition of reference sources and resources. The term has been used differently in different context. You have also learnt the various types of reference sources/resources and the factors considered for their evaluation. We have also discussed the e-resources for reference services and their place in the provision of reference services in library and information centres. This will no doubt help you in making swift and relevant decision and choice of appropriate reference and information resources in the library.

6.0   TUTOR MARKED ASSIGNMENT

1.   What do you understand by reference resources?
2.   Identify and discuss the characteristics of reference sources and resources.
3.   What are the types of reference sources you know?
4.   Distinguish between encyclopedia and dictionary as reference sources.
5.   Discuss any 4 factors to be considered for evaluation of reference sources.

7.0   REFERENCES/FURTHER READING

Aboyade, W. & Aboyade, M. (2017). *Fundamentals of Library and Information Science*. Osogbo; Joymab Educational Publication.

Kumar, K. (2008). *Library Manual*. New Delhi: UBS Publisher.

UNIT 2   CRITERIA AND TECHNIQUES OF REFERENCE INFORMATION RESOURCES EVALUATION

CONTENTS

1.0   INTRODUCTION

This unit is intended to give you a foundation in the evaluation of reference information resources. As librarians, once you find information, you need to evaluate it, to determine its value with respect to the information needs of your customers and organisation as a whole. When you have any item of information you should critically evaluate it to determine its suitability and value. This applies to any information resource no matter what format it might be, including a story told by your superior, found on the Internet, or an article in a major journal. There is no one single test or criterion which you may use to judge your information value but there are a number of clues or criteria you should use to base your judgment.

2.0   INTENDED LEARNING OUTCOMES (ILOS)

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

- identify the variety of criteria used for information resources evaluation.
- explain the techniques of reference information resources evaluation.

3.0   MAIN CONTENT

3.1   Criteria for Information Resources Evaluation

There are a variety of methods or criteria to consider when evaluating information resources ranging from personal, informal methods to the more educational, formal techniques. There is no one single perfect method of evaluating information resources, rather you must make an inference from a collection of clues or indicators based on the use you plan to make of your information resource.

Similarly, there exist variety of criteria for information resources evaluation as there are variety of information resources that are generated and use by individuals and organisations. As we learnt earlier in module one, information resources could be categorised into different types ranging from people, textbooks, journals, magazines, newspapers, reports, policies, databases, CD-ROMs, computers, software, electronic/web resources, reference sources etc. As the list of information resources are endless, so also the criteria for information resources evaluation. You should understand that every type of information resource has unique criteria for their evaluation. The criteria used for evaluating textbooks might not fit to evaluate journals and databases respectively. The same situation applies to the other types of information resources. To avoid poor evaluation of information resources, information managers should employ relevant and appropriate indicators that suit each type of information resources. Some of the evaluation criteria for electronic sources and print resources are discussed below:

3.1.1 Evaluation Web Resources

The following are criteria for evaluating web or electronic resources/sources;

3.1.1.1External/Internal Criteria

External: External criteria refers to who and where of information. In other words, who wrote the article and from where did it come from? When we cannot evaluate the information itself, we can evaluate where it has come from and hope that those sources are credible. For example, if the author has a PhD in his/her title, does this increase or decrease his/her credibility? Does this title increase your belief in their information provided, or does it decrease it? Did they include this title because otherwise they had no substantial proof of knowledge in that area/topic? These are just some of the questions you should ask yourself.

3.1.1.2 Internal

Internal criteria involve using your own expertise or independent knowledge to determine if the information is accurate. Because everyone has an area in which they are proficient. When encountering information which contains inaccurate pieces of data, one would assume that the site is not a credible source to gather information.

3.1.2 Credibility Indicators

There are a multitude of indicators which you can use to evaluate a site. Some of the most common indicators mentioned in several sources are to look at the following:

3.1.2.1 Authorship

This is a major factor in considering the accuracy and credibility of information found on the internet. Evaluating credentials of an author involves analysing the educational background, past writings, expertise and responsibility he/she has for the information. One should check the knowledge base, skills, or standards employed by the author in gathering and communicating the data. Obviously, when we look for information of critical value, we want to know the level of the authority with which he/she speaks. The most effective means of discovering the credibility of an author is to ask yourself the following questions:
• Has the content been reviewed, critiqued, or verified in any way?
• Is the author a well-known and well-regarded name you recognise?
• Have you seen the author's name cited in other sources or bibliographies? Do authoritative sites link to the page?
• What biographical information is available- author's position, address, and institutional or organisational affiliations? What are the basic values and goals of the institution or organisation?

3.1.2.2 Links to and from a Resource

Credibility of information could be determined when one person links to or cites another. They propose that the "web links that constitute the internet is a vast network of relations of credibility. The people who establish active links to reliable information and whose information or viewpoints are in turn identified and recommended by others gain credibility both as users of information and as providers of it." Also noted here was the fact that there are many times when the author or agent of a particular piece of information cannot be identified; therefore, judgments of credibility rely upon the avenues through which the information was attained, the links others have made to the information, and the frequency with which the information has been accessed.

3.1.2.3 Publisher

The publisher of the document should be noted. Unlike print materials, webpages do not have to go through a screening process in order to verify that it has met the standards or aims of the organisation that serves as publisher. On the contrary, the publisher of internet materials may simply be the server (computer) where the document lives. Therefore, there are a series of questions to assess the role and authority of the "publisher," or server:

- Is the name of any organisation given on the document you are reading? Are there headers, footers, or a distinctive watermark that show the document to be part of an official academic or scholarly website? Can you contact the webmaster from this document?
- Can you link to a page where the above information is listed? Can you tell that it is on the same server and in the same directory (by looking at the URL)?
- Is this organisation recognised in the field in which you are studying?
- Is this organisation suitable to address the topic at hand?
- Can you ascertain the relationship of the author and the publisher/server? Was the document that you are viewing prepared as part of the author's professional duties within his/her expertise? Or is the relationship of a casual or for-fee nature, telling you nothing about the author's credentials within an institution?
- Can you verify the identity of the server where the document resides?
- Does the webpage actually reside in an individual's personal internet account rather than being part of an official website?

To check the validity of the publisher, web databases to which academic institutions often subscribe are highly reliable. This information along with information one can receive from government agencies, trade and professional associations, major universities or research centres, can equip navigators with the necessary tools to evaluate publisher validity.

3.1.2.4 Date of Publication/Currency

Determining when the source was published is a necessary step in discerning a site's accuracy. It can usually be found at the bottom of the homepage and sometimes every page. Look to make sure the source is current or out-of-date for your specific topic. Topics which continually change or develop rapidly (sciences) require more current information. The reverse may also be true, if perhaps, you were studying humanities. The following criteria can be used to ascertain the timeliness of a document:

- The article includes the date on which information was gathered.
- The document refers to clearly dated information.
- Where there is a need to add data or update it on a constant basis, the document includes information of the regularity of updates.
- The document includes a publication date or a "last updated" date.
- The document includes a date of copyright.
- If no date is given in an electronic document, you can view the directory in which it resides and read the date of latest modification.

3.1.2.5 Domain Types

This involves examining the end of the URL. For example, if the following domain types were found in the URL, you would be able to determine where the information came from:

- **gov** is a U.S. government site.
- **mil** is a U.S. military site.
- **edu** is an accredited post-secondary educational institution.
- **com** is a commercial, for-profit entity.
- **org** is a non-commercial, not-for-profit entity.
- **net** is a computer network, particularly an internet-related network.
- **int** is an international organisation.
- **jp, .ru, .ca, .au,** etc. are country identifiers.

3.1.2.6 Site Format/Overall Design

Certain types of formats are more accessible on the web and are easier to use. When selecting, first rate sites, a variety of qualities should be present. The information should be easy to find and use. The design should be appealing to its audience. The text should be easy to read, not muddled with distracting graphics, fonts and backgrounds. The site should be well organised and easy to get around. The page should load in a reasonable amount of time and consistently be available. In addition, recognising spelling errors, grammatical errors, and profanity will assist in evaluating website design. A great site has personality and strength and character.

3.1.2.7 Purpose

Credibility issues are not only related to the material
itself, but also to the reader's purpose. Therefore, another method of evaluating information is to consider the viewer's purpose for using the site. For instance, a viewer's purpose might be for their personal interest or for professional or educational reasons. A person viewing a site about

another country for example may be looking at that site to plan a vacation. The purpose of locating and evaluating the information is personal. On the other hand, if the viewer is using the site for educational reasons such as researching the government, economy, and natural resources of this country, their purpose is quite different, and a different type of site would be necessary. Obviously, this information would need to be accurate and verified in several other types of sources. These two uses of the information, personal and professional/educational are quite different and would make a difference in the evaluation of information.

3.1.3 Tools

The evaluation tools that have been designed and used for centuries to evaluate traditional printed resources are not sufficient in assessing the credibility of material found on the web due to the nature of this vast new medium. However, there are a variety of tools that have been designed to assist in the evaluation of internet information. These include checklists, surveys or worksheets, as well as rubrics. The creators of these evaluation tools have utilised different credibility indicators which are evaluated using the criteria that they have established. A few of the more useful evaluation tools include Kathy Schrock's surveys, Alexander and Tate's checklist, as well as the CARS checklist which assesses the credibility, accuracy, reasonableness and support presented within an internet site. These tools are especially useful for educators in evaluating websites to be incorporated into their classrooms as well as teaching evaluation criteria and critical thinking skills to their students prior to using the internet.

3.2   Techniques for Evaluating Printed Reference Information Resources

The followings are criteria for evaluating printed information sources;

3.2.1 Author

This refers to the person that wrote the book and whose name is seen on the title page of the book. The author may be an individual, corporate body, agency or group of people. Apart from author, we have editors or compilers who may sometimes be in charge of a book. Therefore, it is important to ask yourself if you are conversant with the author's name and if the author is an authority in his field.

3.2.2 Title

The title of book gives brief description about the book. The title of a book can be found on the front page, the page before the preface and sometimes on the spine.

3.2.3 Volume

In a set of some books, each will respectively have its own volume number.

3.2.4 Edition

The essence of books having editions is to update or add information to the existing book. When information is added and changes are made to a book, it is called new, revised edition latest edition.

3.2.5 Series

This refers to is a number of separate works which are connected to each other by the publisher and often in uniform style with a collective title.

3.2.6 Place of Publication

The place of publication is usually found on the title page, but sometimes it is on the "verso" or back of the title page.

3.2.7 Publisher's Name

This is generally found on the title page or in some   cases behind the title page.

- Is the publisher well known in the field?
- How much do they publish?
- Is this a "vanity press" where anyone can have something published for a fee?
- Is it a university press?
- Is the publisher a professional organisation or association?

Generally, you can assume that known publishing houses, university presses and professional organisations will publish quality materials.

3.2.8 Date of Publication

The date of publication is also referred to as the copyright date and it can appear on the title page or on the verso of the title page. This is one of the

most important things to note about a reference book. Is the material still current?

3.2.9 Foreword or Preface

In the foreword or preface, the author states the reason for writing the book and appreciates those who assisted and contributed during the development of the content of the book. Hence, you may ask yourself, does the preface states a purpose and address your issues?

3.2.10 Table of Contents

This shows a list of the chapters that makes up a book.

3.2.11 Text

This is the main body of the book. You may need to check how well the book is arranged? Is it arranged in alphabetical order? Is it arranged in chronological? Is it arranged by subject?

3.2.12 Appendix

This is supplementary materials that were not introduced in the text.

3.2.13 Glossary

This is a list of unfamiliar, technical, or outdated terms with definitions or explanations. It is found in the back or end of a book.

3.2.14 Index

This is a list of topics, names and other items alphabetically arranged in a book with direction to page numbers where the items can be located.
In summary, in evaluating printed or electronic resources, it is important to take these criteria into consideration:

1. **Authority**: The authoritativeness of information resources can usually be judged on the basic qualification, experience of the editors and contributors. To be considered by librarian is the reputation and financial standing of the publishers or sponsoring agencies. Where did the information come from? Did it come from an authority in the field? Authority should be judged on both the author and the publisher of the material;
*   Is the author's name available?
*   What is the author's training, education, and experience in the field?

- Are there other works by this author in this field? Books, articles?
- Does the author have a reputation in the field - good or bad?
- If your information source is a website, this might be harder to figure out. Is there an author or contact person listed and is there a contact e-mail address available? It could be at the top of the page with the title or at the bottom of the page.

2. **Reliability**: Reliability is directly related to authority but does address different issues. Reliability in this context relates to the accuracy and treatment of the information. How reliable is this information resources? Can you trust and believe it?

3. **Accuracy**:
- Is the information correct as far as you can tell? Look at several information sources and compare them.
- Does the author cite his or her sources? Does it have a complete bibliography?
- Were primary or secondary sources used?
- Does it appear to be well edited? Do you see poor grammar, non-standard language or misspelled words?
- If your information source is a website, what is the origin of the source? The domain or last part of the web address can tell you something about its origin. The most common are:
  o .edu - an educational institution
  o .gov - a government agency
  o .com - a commercial entity
  o .org - a not-for-profit organisation

   Keep in mind that while *.com* sites might provide valid information; they are probably more interested in selling something. How reliable is this information source? Can you trust and believe it*?*

1. **Objectivity or Bias**:
   o Do you detect a bias on the part of the author in the writing?
   o Do the facts support the viewpoint of the author?
   o Is it written from an objective viewpoint, or does it appeal to emotions or biases?
   o Is the information presented as facts which can be documented or opinions of the author?

   Bias is not necessarily a bad thing and we all have our own opinions and biases but you should be aware of them and take that into consideration when looking   at an information resource.

2. **Currency**:
   o How old is this information? Is there newer information available?
   o When was the information published?
   o Can you tell when it was published? If it is not dated, you should be cautious of the information source.

o   Is that information up-to-date? Have new discoveries been made or have events taken place since the information was published?
o   Is your topic one which is changing quickly such as medical research or technology or one which is fairly stable and requires more background information such as history or literature?
o   If your information source is a website, the date of publication and/or last updated date are usually found at the bottom of the page.

3.   **Scope**:
•   Is the information the most complete available? Is it comprehensive? Who is it written for?
•   Is the information complete, or is it a summary of other work?
•   Is the subject covered completely?
•   What level is the information? Is it advanced, technical, basic information?
•   Who is the intended audience for the material? Is it popular or scholarly?
•   If your information source is a website, does it include links and are they annotated?

Relevancy: After all is said and done, does the information source answer your questions? Does it "fill your information need? While the other criteria are based on facts, things you can see or find out about your information resource. You must know what information you need, what type of information resource you need it to come from and what you will be using that information for (a final term paper, a short composition, your personal knowledge or information, etc.).You must make the judgment as to the relevancy of your information resource. Is the information resource relevant to your information need? It is entirely possible and highly likely that you will find an item which is very reliable from a very authoritative source, very current and very complete but not relevant to your topic.

4.0   CONCLUSION

Evaluating reference information resources is very important in the work of reference service department in order to ensure appropriate information resources are acquired and organised for easy access to users. Apart from evaluating printed sources, reference service librarians also evaluate electronic resources and ensure these resources meets the needs of the library users.

5.0   SUMMARY

In this unit, you have learnt that the success, efficiency, effectiveness and benefits of information resource can only be measured through a

systematic, critical and logical evaluation using certain techniques and criteria. It was established that the success of information resources evaluation is a function of how well and appropriate techniques and criteria are used for that purpose. Different types of information resources either in our libraries or organisation require variety of evaluation criteria to ascertain their worth and place in the library.

6.0   TUTOR-MARKED ASSIGNMENT

1.   Identify and discuss the techniques of evaluation that could be used in Library and information centre?
2.   Identify any 4 evaluation criteria used for evaluating web-based information resources?

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MODULE 5   ICT APPLICATION IN REFERENCE AND INFORMATION SERVICES

Unit 1   Information and Communication Technology and
               Reference and Information Services
Unit 2   Online Reference and Information Services
Unit 3   Application of ICT in Reference and Information Services

UNIT 1   INFORMATION AND COMMUNICATION TECHNOLOGY AND REFERENCE AND INFORMATION SERVICE

CONTENTS

1.0   Introduction
2.0   Intended Learning Outcomes (ILOs)
3.0   Main Content
       3.1   Meaning of Information and Communication Technology (ICT)
       3.2   Types of ICT used for Reference and Information Services
       3.3   Benefits of ICT in Reference and Information Services
4.0   Conclusion
5.0   Summary
6.0   Tutor Marked Assignment
7.0   References/Further Reading

1.0   INTRODUCTION

Information and Communication technology has become a very essential tool in facilitating unhindered access to information. In this unit, you will learn the meaning of ICT and the many types of ICT used for the provision of reference and information services in and outside our libraries and information centres. You will also appreciate the many benefits associated with the deployment and use of ICTs in reference and information service delivery.

2.0   INTENDED LEARNING OUTCOMES (ILOS)

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

•   Define Information and Communication Technology (ICT).
•   Identify the types of ICT tools used for reference and Information services.
•   Enumerate the benefits of ICT use in reference and information services.

3.0   MAIN CONTENT

3.1   Meaning of Information and Communication Technology (ICT)

Conceptually, ICT can be viewed as the computer-based and other allied automated information and communication systems and devices employed to acquire, generate process, store, and transmit data (Mohammed, 2017). ICTs are generically considered as technologies used for collecting, storing, editing and passing on or communicating information in different forms within an environment, between and among given environments. In another perspective, ICTs can be conceived to include telecommunication technologies such as satellite systems, radio and television, telephony and digital technologies such as information networks, computer hardware and software, digital network, and the internet. Kumar and Praveen (2016), look at the term "ICT" as the use of computer-based technology and the internet to make information and communication services available to a wide range of users. The term is used broadly to address a range of technologies including telephones and emerging technological devices. Central to these, is the internet which provides the mechanism for transporting data in a number of formats including text, images, sound, and videos.

Information and Communication Technology (ICT) is an umbrella term that includes all technologies for the manipulation and communication of information. By and large, ICTs can generally be conceived as automated and virtual products (including software applications) and services that facilitate information generation, identification, location, storage, retrieval, dissemination, access and utilisation. Some of the early ICTs include television, radio, telephone, still camera and slide projectors. Whereas, the contemporary ICTs include cable television news networks, digitised radio and television sets, computers, digital camera and projectors, satellite and wireless systems such as smart phones, tablets, the internet, Local Area and Wide Area Networks, and electronic-information resources. Fundamentally, the concept of ICT can be tallied with that of technology which can simply be conceived as an instrument, equipment, device, infrastructure and tool used to support, facilitate and sustain effective and efficient performance of a system, an operation, a duty, a task and a function as well as provision of a varied service (Mohammed, 2014a).

3.2   ICT Tools Used in Reference and Information Services

Vishwas, Giridhar and Nandkumar (2014) highlighted various types of information and communication technologies used in reference and information services provision to academic users by the libraries. Library

uses various technologies to provide information to its users. The followings are the some of the ICT tools which are basically used for different communication in reference and information services;

3.2.1 Communication Technology

Email is the most effective way of formal communication; it is the best system to exchange the messages and information in electronic format. Revolutionary changes have been seen in communication, because different types of information such as personal message, letter, article, computer programming files, pictures, sound, etc. are being possible to send or receive from any corner of the world within some fraction of second. At present, this is the most useful tool for different types of communication (personal, official communication, etc.). This tool can be used to provide the required information at the right time. At present, reference librarians are using this live tool to serve the library users; through reference chat, question is basically asked. It can also be considered as a medium for faster information. Examples of communication technology are as follows;

3.2.1.1 Voice mail

This is the new and innovative emergence of mail technology. We can also say it as an alternative to email technology. It helps to send the mail immediately through voice to reference librarian.

3.2.1.2 Telephone

This is used for personal contact of the users. Generally, users ask their queries regarding the resources and availability of the reading room. They also use the telephone for advance booking of carrels for reading and research purpose.

3.2.1.3. Fax:

(short for facsimile and sometimes called telecopying) is described by Rouse (2006) as "the telephonic transmission of scanned-in printed material (text or images), usually to a telephone number associated with a printer or other output device. The original document is scanned with a fax machine, which treats the contents (text or images) as a single fixed graphic image, converting it into a bitmap. In this digital form, the information is transmitted as electrical signals through the telephone system. The receiving fax machine reconverts the coded image and prints a paper copy of the document". This technology helps us for providing reference services such as to send information, and communicate with client, etc.

1.2.1.4 Videoconferencing

This is explained as a "means to conduct a conference between two or more participants at different sites by using computer networks to transmit audio and video data. For example, a point-to-point (two-person) video conferencing system works much like a video telephone. Each participant has a video camera, microphone, and speakers mounted on his or her computer. As the two participants speak to one another, their voices are carried over the network and delivered to the other speakers, and whatever images appear in front of the video camera appear in a window on the other participant's monitor. These tools are used for the various purposes of library activities such as to conduct reference interview for library client available at remote places. Basically, when users are out of the campus and they study in other universities under the student exchange programme, it is essential to use this technology to guide them about the use of resources.

3.2.1.6 Internet

This is the most important component of ICT. It is basically a network of networks that performs the connectivity among the computers. Internet provides the medium for communication using different online tools.

3.3   Benefits of ICT in Reference and Information Services

The benefit of ICT in reference and information services is obvious. Bhoi (2017) posited that, by using computer and internet technology, the reference service has become very simple. Various types of information resources like the encyclopaedias, directories, databases, online library catalogues, maps, biographies, and online information resources are available on the internet which can be used to provide required information to the users. In the reference section, queries are answered through the telephone. For ready reference service, library staff uses internet and e-mail facility. The computer has provided a great promptness to reference section. The role of technology in reference services are as follows:

- It enables library staff fulfill the demands of the users through various electronic resources like database, online library catalogue, directories etc.
- It saves time.
- It helps reference librarians to provide round the clock service to users.
- Easy access to library services.
- Improves the efficiency of internal operations.

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- Improves access to local library resources.
- Provides access to information resources outside the library.
- Interoperability of information systems among libraries.

4.0   CONCLUSION

This unit has succeeded in providing a working definition of information and communication technology as veritable tool and strategy for effective and efficient reference and information services provision in our libraries and information centres. It has also presented some types of ICTs that can be used in reference and information services delivery. This will enable the library manager to effectively render assistance to the teeming library users with much satisfaction. It is therefore hoped that as reference librarian, you should endeavour to ensure that appropriate ICTs are deployed and used in order to ensure timely and satisfactory reference and information services in libraries.

5.0   SUMMARY

We have discussed the concept of information and communication technologies. ICTs are generically considered as technologies used for collecting, storing, editing, and communicating information in different forms within an environment, between and among given environments. We noted that a number of perspectives have been advanced in order to understand the various components of ICT. The various types of ICTs used in reference services have been outlined and discussed. Also, the relevance and benefits of using ICTs for the provision of reference service was discussed.

6.0   TUTOR-MARKED ASSIGNMENT

1. What is the meaning of Information and Communication technology?
2. Identify and discuss the various ICTs used for reference and Information service?
3. What are the benefits of ICTs in reference service in libraries?

7.0   REFERENCES/FURTHER READING

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UNIT 2   ONLINE REFERENCE AND INFORMATION SERVICES

CONTENTS

1.0   Introduction
2.0   Intended Learning Outcomes (ILO)
3.0   Main Content
      3.1   Concept of Online Reference and Information Services
      3.2   Types of Online Reference and Information Services
      3.3   Ethical Issues in Online Reference Service
4.0   Conclusion
5.0   Summary
6.0   Tutor Marked Assignment
7.0   References/Further Reading

1.0   INTRODUCTION

In the previous unit, you were introduced to the concept of ICT and its benefits in reference and information services. Now, in this unit you will learn the concept of online reference and information services and types. You will also be exposed to some of the ethical issues surrounding online reference service.

2.0   INTENDED LEARNING OUTCOMES (ILOS)

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

- Explain the concept of online reference and information services.
- Highlight the various types of online reference and information services.
- Discuss the ethical issues in online reference service.

3.0   MAIN CONTENT

3.1   Concept of Online Reference and Information Services

Vijayakumar and Vijayakumar (2005) sees the terms "online reference," "Internet information services," "live reference" and "real-time reference" as terms that are used interchangeably to describe reference services that utilize computer technology in some ways. Whether it is e-mail reference, chat reference or an automated routing system, online reference is significantly influencing the delivery of high-quality library services (Virtual Reference). Online reference techniques have been around in one form or another for almost a decade now. Virtual reference services or

Digital reference services are simply defined as the provision of real-time personal assistance to users via web-based interactive software. To satisfy the information need of users, the librarian can "chat" as a component of the software to answer a fairly specific or simple question or deliver digital materials or suggest relevant web resources to the user and provide online bibliographic instruction. This service may happen when the library is closed or when the user is unable to get to the library. This way, users can still be in contact with experienced reference librarians.

Questions submitted via online and linked web pages require attention from reference staff and the virtual reference transaction can be more complex and time-consuming than traditional in-library service. With the expansion of reference modes to online communication, namely e-mail (asynchronous) and chat (synchronous), there has been a delay in applying instruction to online reference. Academic libraries have started offering e-mail reference where users could submit their questions via an e-mail address. Recently the adoption of web forms not only changed the quality of the e-mail reference engagement for the better, but also challenged librarians to develop effective means for managing questions and responses.

An online reference transaction will usually include the following elements: the user, the interface (web form; e-mail; chat; video etc.), electronic resources (including electronic or CD-based resources; web resources; local digitised material etc.), as well as print resources and the information professional.

3.2   Types of Online/Virtual Reference and Information Services

Bardhan and Mishra (2012) identified two types of online/digital/virtual reference services:

3.2.1 Asynchronous Virtual Reference Services

It is a type of virtual reference service in which user/patron/client submits a question and the librarian responds after some time. In other words, there is a time delay between the question being posted by the user and the answer being given by the librarian. Asynchronous virtual reference service takes the form of the following:

3.2.1.1. Email reference service

In this type of reference service, a user sends a request in the form of email to a librarian or specifically designed reference email ID by reference service section of the library. The user specifies his/her specific

information need in the e-mail, and the librarian responds to the query accordingly. This is a simple, cheap, and cost effective method of virtual reference service. Email reference service is the most widely used service among users as users can post a question even if the library is closed. It does not require any additional software to use the service. This service is available free of charge and no additional effort is required on the part of the librarian to implement the service. The email reference service is very much useful for users that have poor oral communications skill.

3.2.1.2 Web Form

The web-based form has to be accessed from the library homepage or reference webpage. The required fields then have to be filled in by the user and ultimately the form is reverted back to the library through email. Web forums are created for digital reference services to help the users to be more productive to ask their queries. Ask a librarian website has been framed out, which is designed to provide a structured web form where a user is asked to reciprocate to particular queries in addition to their information needs.

3.2.2 Synchronous Virtual Reference Service

In synchronous virtual reference service, the exchange of information between the user and reference librarian takes place in 'real-time' with an immediate response to the question. In this case, there is a live interaction between the user and the reference librarian. It is therefore called as real-time digital reference service. Synchronous virtual reference service takes the form of the following:

3.2.2.1 Instant Messaging

Instant messaging is one of the most common forms of web communication. It is more instant than an email reference service. The exchange of information between user and reference librarian takes place in real time, that is, there is live communication between user and the reference librarian. The digital reference librarian prefer web based electronic resources as these sources are easy to access, easy to keep, and easy to share with the users. Speed of this service is faster than email service, as the users do not need to wait for the response. This service can be offered round the clock. The reference librarian tries to keep the interaction short to prevent the system from logging off, and users from getting bored while introducing themselves. This should be taken into consideration by the reference librarian since the average time of an interview in digital setting is ten minutes. In addition, this service needs instant messaging software to be installed on the users' and librarians' desktop to communicate with each other.

3.2.2.2 Video Conferencing

It is a video based virtual reference service which is also called video help. It was introduced to overcome the communication problems inculcated in text-based services. This mode of communication involves visual elements where the reference librarian and the user can use both text and voice transactions. They can see and hear each other in the same manner as in face-to-face interview. Video conferencing is useful in distance learning, online lectures, and research and reference applications. It is also useful in off campus library services of the university.

3.3   Ethical Issues in Online Reference Service

In general, the rise of digital reference is an exciting prospect. In its most elementary form, digital reference is providing reference services electronically. It might be a synchronous activity in which the user and librarian are interacting "live," or it might be asynchronous, in which the user asks a question electronically and it is subsequently answered by a librarian. The advantages are obvious, information seekers from remote and convenient locations can have 24/7 access to information professionals, who in turn, have access to the world of digitally available information.

According to Bardhan and Mishra (2012), the basic ethical issues implicated in regular reference processes such as confidentiality and privacy applies in the digital environment. However, the vulnerability to ethical violations may increase because of the nature of the technology itself. For example, in the electronic environment, it is often possible to track an individual's identity, queries, and precise use of electronic databases because an electronic trail may be preserved. These records should be treated with the same respect for confidentiality and privacy as circulation records. There is also the ethical issue of availability and access to digital reference services. It is clear from a variety of studies that there are groups of individuals who remain part of the digital divide. These groups do not have the same access to digital services for at least two reasons: they lack the computer equipment and network access and they do not have the training to use the equipment even if it is available. If librarians devote more and more of their resources and time to digital reference, then service to those who do not have technological access will be negatively affected. Such disparities in library service imply not that digital reference service is unethical but only that digital reference raises ethical implications that must be concurrently addressed. As the digital environment grows, there is no doubt that the ethical concerns will grow as well.

4.0   CONCLUSION

This unit has tried to help you understand the concept of online reference and information service. It is a concept that is very much applied as an integral aspect of library and information sciences and services. Essentially, online reference and information service is an effort aimed at improving the efficiency, effectiveness and relevance of reference services in our libraries and information centres. More so, various types of online reference services have been outlined and discussed in this unit. It is expected that you should not only be current and knowledgeable in this area, but you should be able to deploy and use various technologies to engage library users remotely.

5.0   SUMMARY

In this unit, we have discussed extensively on the concept of online reference information services on one hand, and types of online reference information services on the other. We have also learnt that online reference services have now become an important component of library services delivery to the extent that achieving library goals and objectives will be near impossible without a committed effort to deploy and use ICTs in every aspect of library services. The benefits of deploying and using various types of online reference services were highlighted with the hope that you can have a good grasp of them.

6.0   TUTOR-MARKED ASSIGNMENT

1.   What do you understand by online reference information services?
2.   Identify and discuss the various types of online reference information services you know?
3.   Highlight any 4 benefits of online reference information services?

7.0   REFERENCES/FURTHER READING

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UNIT 3   APPLICATION OF ICT IN REFERENCE AND INFORMATION SERVICES

CONTENTS

1.0   INTRODUCTION

In the 21st century, provision of reference and information services has been altered by the rapid advancement in ICTs. Today, various ICT tools including social media are now used to create a virtual reference service environment with more satisfying learning experiences. In this unit, you will have the opportunity of identifying the relevant ICT tools for reference service as well as demonstrating how various social media can be used for reference and information service in libraries and information centres.

2.0   INTENDED LEARNING OUTCOMES

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

• discuss the ICT enabled reference services.
• identify the various social media use in reference and information services.
• demonstrate how various social media are used for reference and information services.

3.0   MAIN CONTENT

3.1   ICT enabled Reference and Information Services

The emergence of information revolution as championed by information and communication technology (ICT) has enabled libraries to devise viable strategies for improved service delivery (Igwe, 2010). The followings are ICT enabled reference and information services;

3.2.1 E-mail Based Reference Services

Users send their queries or requests to the librarian using E-Mail facility. Email reference service is one of the most popular services provided by librarians today. This service does not require any additional software, and from librarians' point of view, email-based reference service is an easy to use service and provides assistance at no extra cost and training is not required. Quick and ready reference services can be offered using email.

3.2.2 Library Website-Based Services

User at the click on the button of the library's website, pops up to the subject based resources and gets the information required on their own. A library webpage is designed and provided by librarians, and links to different reference tools and databases which provide both short and long-range services to the users.

3.2.3 Ask about Service

This service allows the users to ask question online and receive answers for free from public information location mainly on the World Wide Web. For example, Ask ERIC (http://askeric.org), Ask A Question (http://talonline.ca/askaquestion), and Ask Me (www.askme.com) are few notable sites from where users can get specified information from the experts in their field.

3.2.4 Chat Reference Service

In this service, a reference librarian and the user can communicate with each other using short text massages in real time by using normal chat software e.g. WhatsApp, Messenger, Wechat, VIBER, BBM and gets clarification of the complex question asked by users and try to solve them instantly by using different resources.

3.2.5 Video Conferencing / Web Camera Reference Service

In this reference service, librarian and users are able to see each other e.g. Skype, Hangout etc. The discussions with experts, meetings and online demonstrations can be made available to users.

3.2.6 Global Digital Reference Service

In this service, questions can be sent electronically and answered by any reference librarian in any other country instantly.

3.2.7 FAQ (Frequency Asked Question)

In this service, users can get response to standard queries, information about an organisation, their services, activities and progress etc.

3.2.8 Ask-a-Librarian

This is also an e-mail based online or off-line based service in which the user can ask a librarian question and the librarian using different tools finds the answer and respond to the user. Many libraries are providing this type of reference service to users.

3.2.9 Social Networking Based Services

In this reference service, librarians are using social media tools for sharing information and distributing educational resources to users, e.g. facebook.com, slideshare.com, LIS link, twitter, etc.

3.2.10 Mobile Based Services

In this reference service, librarians are using Smartphone for QR Code (Quick Responses Code) services, Mobile wiki, mobile dictionaries, Web-OPAC etc. for sharing and dissemination of information to the users.

3.2 Use of social media in Reference and Information Services

Social media are a collective term for online tools and services such as blogs, wikis, social networking sites, photo and video sharing communities, social bookmarking, podcasts, discussion forums, RSS feeds, virtual worlds, presentation sharing and a lot more. Over two hundred social networking sites are now available in the world. Due to the popularity of social media, library professional cannot keep themselves aside from the use of social media in the LIS domain. It is a great challenge for librarians to capture the attention of the remote users who are using social media like social news (Dig, Propeller), Social Bookmarking (Delicious, Blink list), Social Networking (Face book, MySpace, LinkedIn), Social Photo and Video Sharing (YouTube, Flickr), Wikis, and who are reluctant to visit the library physically (Chakrabarti, 2016).

Chauhan (2013) highlighted the following uses of social media applications or sites in reference and information services;

3.2.1 Facebook

Most popular because it is librarian-friendly with many applications like JSTOR search, WorldCat, and much more. Reference librarians can interact with users to know their information need. Libraries try to link some of these specialised library applications to Facebook. It also enables libraries to share news, events, and latest happenings in the library.

3.2.2 MySpace

In academic institutions where the students are, reference librarians have taken advantage of this site to post calendar, custom catalogue search tools, and blog features to improve their presence.

3.2.3 Blogs

Here, reference librarians can periodically post messages, share information on a particular subject or issue and allow users to contribute to the content. They can write articles, news on topical issues, and expect an instant reaction from their users.

3.2.4 Wikis

Is a free online encyclopaedia that gives a background knowledge and definition of concepts. It offers a platform for users to access, edit, and contribute to content. This is a collaborative webpage for developing web content.

3.2.5 LinkedIn

Reference Librarians can get patrons connected with specialists in their particular field of interest via LinkedIn. Reference librarians are using this platform to render specialised services such as Strategic/Selective Dissemination of Information (SDI).

3.2.6 Twitter

This is a micro blogging application which helps to keep staff and patrons updated on daily activities like frequently updated collections. Users can utilize this platform to type in short messages or status update. Reference service librarians can use this platform to give users first-hand information. Users can send Instant Messages (IM) on complaints, request or ask questions on a particular need and get a feedback on the spot using twitter.

3.2.7 Flickr

Reference service Librarians can use this tool to share and distribute new images of library collections to patrons when the need arises. Cover page of new arrivals of both books and journals can be disseminated to users via Flickr.

3.2.8 YouTube

This is an application use in promoting library reference services. Reference librarians can use YouTube for video streaming library collections, teaching information literacy skills, and helping users have access to library services and resources.

3.2.9 Pinterest

This application offers reference librarians the opportunity to market library resources and create their own profile that will enable them to pin photos and stream videos of their library services, events, educational resources etc.

4.0   CONCLUSION

This unit has tried to help you understand the ICT tools used in reference and information service. Library uses various technologies to provide information to its users which include communication technologies such as email, fax, videoconferencing etc. It was also established that social media such as Facebook, Flickr, twitter, and MySpace etc. are among the many social networking sites used to render timely and real time reference information service. It is hoped that you will apply the knowledge gain to serve library users effectively and efficiently.

5.0   SUMMARY

In this unit, you have learnt the various ICT tools used in reference and information services. You have also been able to identify the social media used in reference and information service in our libraries and information centres. The unit further exposed you to how social media can be used by librarians to provide reference and information service.

6.0   TUTOR-MARKED ASSIGNMENT

1.   What are the ICT tools used in reference and Information services in every library of your choice?
2.   Identify the social media used in reference and information service?
3.   How can you demonstrate the use of any 3 of the social media?

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