

## **COURSE GUIDE**

### **LIS 306 INDEXING AND ABSTRACTING**

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## **INTRODUCTION**

### **INDEXING AND ABSTRACTING**

This is a first-semester course with 2 credit units which will last for a minimum duration of one semester. It is a mandatory course for all undergraduates in the Department of Library and Information Science. It is also a suitable courseware for students in related fields who need to have an understanding of how knowledge and information are being organised.

### **WHAT YOU WILL LEARN IN THIS COURSE**

Definition of concepts; purpose, forms and types of index and abstracts; functions of index and abstract in information retrieval; bibliographic control and types of computerized indexes and abstracts; list of subject headings and thesaurus construction and uses; indexing languages; evaluation of indexes and abstracts; technical and practical indexing and abstracting processes; the use of computers in indexing and abstracting, databases and networks of index and abstract; practicum on indexing and abstracting.

### **COURSE AIMS**

This course aims to introduce students to the general knowledge of the definition of concepts; purpose, forms and types of index and abstracts; functions of index and abstract in information retrieval; bibliographic control and types of computerized indexes and abstracts; list of subject headings and thesaurus and uses; indexing languages; evaluation of indexes and abstracts; technical and practical indexing and abstracting processes; the use of computers in indexing and abstracting, databases and networks of index and abstract; practicum on indexing and abstracting. Knowledge and understanding of these concepts and the functions of indexing and abstracting will enable you to understand the work and duties of library or information professionals.

### **COURSE OBJECTIVES**

To achieve the stated aims, each section in this study material has specific objectives which will guide you in checking ~~on~~ your progress while you study.

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

- define the term index

- list and explain the purpose of the index as a retrieval device or system
- list and explain the forms and types of index
- discuss the functions of an index
- define the term abstract
- list and explain the purpose of abstract in information retrieval
- list and explain the forms and types of abstract
- discuss the functions of abstract as a retrieval device
- explain the concept of bibliographic control
- acquire necessary skills for thesaurus construction and use, including the use of subject headings
- list and explain indexing languages
- evaluate indexes and abstracts
- carry out the processes involved in indexing and abstracting
- identify the use of computers in indexing and abstracting
- describe the database and networks of index and abstract
- demonstrate practical experience in indexing and abstracting.

## **WORKING THROUGH THIS COURSE**

To complete this course successfully, you have to go through the modules, carefully read the study sections, do all practical exercises and assessments, and open and read through the links provided by double-clicking on them. Read the recommended books and other materials available to you and ensure you attend the practical sessions for this course. Always participate in the online facilitation going on in your study centre. Each section of the study has an introduction, objectives you should achieve at the end of the study, a conclusion, and a summary informing you in a nutshell what you studied in the section.

## **COURSE MATERIALS**

There is the Tutor-Marked Assignment (TMA) to evaluate what you have learnt. You can download the courseware into your device so that you can study it whenever you are offline.

## **FINAL EXAMINATION AND GRADING**

There are two primary shapes of evaluations, to be specific; developmental and summative. The developmental appraisals at the conclusion of each unit will empower you to assess your learning yield. The summative appraisal which could be a Computer-Based Test (CBT) is made up of objectives and sub-objective questions. There are three ceaseless appraisals, 10% each and the last examinations are based on

70%. You are required to do all the computer-based tests and the final examination.

## **STUDY UNITS**

There are 14 study units in this course, separated into five modules. The modules and units are presented as follows:

### **Module 1 Introduction to Indexing**

- Unit 1 Meaning of Indexing and Abstracting
- Unit 2 Nature and Purpose of Indexing and Abstracting
- Unit 3 Functions of Index and Abstract in Information Retrieval

### **Module 2 Forms and Types of Indexes, Techniques and Languages**

- Unit 1 Forms of Indexes
- Unit 2 Indexing Techniques
- Unit 3 Indexing Languages
- Unit 4 Bibliographic Control
- Unit 5 Computerized Indexing Systems

### **Module 3 Computerized Indexing Systems**

- Unit 1 Automated Method of Index Production
- Unit 2 Computers as Indexing tool
- Unit 3 Indexing Using a Computer
- Unit 4 Indexing Software
- Unit 5 Internet and Indexing

### **Module 4 Types And Techniques Of Abstracts And Abstracting**

- Unit 1 Types of Abstract
- Unit 2 Evaluation of Abstract And Index
- Unit 3 Abstracting Techniques
- Unit 4 Computerised Abstracting Systems

### **Module 5 Practicum On Indexing And Abstracting**

- Unit 1 Indexing
- Unit 2 Abstracts guides and practice
- Unit 3 Thesaurus construction and use

## PRESENTATION SCHEDULE

The presentation schedule shows you when you need to finish your computer-based exams (CBT), participate in the discussion forum, and attend facilitation. Ensure that you submit your assignments within the stipulated time frame because delay in submitting assignments will not be tolerated.

<b>Unit of the Work</b>	<b>Duration (Weeks)</b>	<b>Assessment (End of Unit)</b>
Unit 1 Meaning of Indexing and bstracting	1	Assignment 1
Unit 2 Nature and Purpose of Indexing and Abstracting	1	
Unit 3 Functions of Index and Abstract in Information Retrieval	1	Assignment 2
Unit 4 Forms of Indexes	1	
Unit 5 Indexing Techniques	1	Assignment 3
Unit 6 Bibliographic Control	1	Assignment 4
Unit 7 Computerized Indexing Systems	1	
Unit 8 Automated Method of Index Production	1	Assignment 5
Unit 9 Computers as Indexing tool	1	
Unit 10 Indexing Using a Computer	1	Assignment 6
Unit 11 Indexing Software	1	
Unit 12 Internet and Indexing	1	Assignment 7
Unit 13 Types of Abstract	1	
Unit 14 Evaluation of Abstract And Index	1	
Unit 15 Abstracting Techniques	1	Assignment 8
Unit 16 Computerized Abstracting Systems	1	
Unit 17 Types of Abstract	1	

Unit 18 Evaluation of Abstract And Index	1	Assignment 9
Unit 19 Abstracting Techniques	1	
Unit 20 Computerized Abstracting Systems	1	Assignment 10
Total	<b>20</b>	

## FINAL EXAMINATION AND GRADING

To prepare for this exam, review all of the subjects covered in the course. It's also a good idea to go over all of the exercises and tutor-marked assignments again before the exam. You should begin revising after you have done learning the last unit. This final exam will take three hours to complete. It accounts for 60% of the overall course grade.

## COURSE OVERVIEW

This course intends to introduce you to the indexing and abstracting system and services. The basic concepts, types, forms, principles and techniques of constructing indexes and abstracts as well as techniques for coming evaluating indexes and abstracts. The understanding of indexing and abstracting processes is essential for the design and implementation of effective retrieval systems, and the building of thesauri both supports and enhances this understanding. Besides, the course introduces you to the concepts underlying the indexing and abstracting processes which are relevant to the organisation of all databases used for the storage and retrieval of information, and the course complements the aims of bibliographic storage and retrieval.

## HOW TO GET THE MOST FROM THIS COURSE

To get the most out of the course there is the need for you to have a laptop. Also, 24 hours Internet connectivity is highly important to all to enable you to access the internet anywhere anytime. Always attempt marked tutor examination at the end of every unit. It is imperative to always attend the online classes in real-time and ask questions on topics that are not clear. You may wish to play the recorded session of the class session over and over again to have a full understanding of what has been thought. Always do not hesitate to contact the librarian for information resources or any other assistant that will help in ensuring a better understanding of the course



## **FACILITATORS/TUTORS AND TUTORIALS**

You will receive classes online. The online facilitation is designed based on a learner-centred pedagogical approach in which the student is an active participant in the learning process. Both asynchronous and synchronous facilitation will be used.

## **SUMMARY**

This course intends to introduce you to the indexing and abstracting system and services. The basic concepts, types, forms, principles and techniques of constructing indexes and abstracts as well as techniques for coming evaluating indexes and abstracts.

**MAIN  
COURSE**

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## **MODULE 1 INTRODUCTION TO INDEXING AND ABSTRACTING**

This module introduces you to the meaning of indexing and abstracting, nature, purpose of indexing and abstracting as well as the nature or goals of indexing and abstracting

- Unit 1 Meaning of Indexing and abstracting
- Unit 2 Nature and purpose of Indexing and abstracting
- Unit 3 Functions of Index and Abstract in Information Retrieval

### **UNIT 1 MEANING OF INDEXING AND ABSTRACTING**

#### **CONTENTS**

- 1.0 Introduction
- 2.0 Objectives
- 3.0 Main Content
  - 3.1 Index
  - 3.2 Indexing
  - 3.3 Indexer
  - 3.4 Abstract
  - 3.5 Abstracting
- 4.0 Conclusion
- 5.0 Summary
- 6.0 Tutor-Marked Assignment
- 7.0 References/Further Reading

#### **1.0 INTRODUCTION**

Libraries and information centres are places where people get information and learn new things. In a similar spirit, these organisations seek to meet their users'/clientele's information demands. If the items in their collections are not processed and organised, it would be difficult to provide access to their resources. These organisations ensure that information is stored in paper formats such as books, and non-pape formats such as electronic, to make information easily accessible to users. Classification, catalogues, indexes, abstracts, and bibliographies are examples of tools or systems established by information professionals for easy retrieval. The purpose of indexing and abstracting information resources is to bring readers/users closer to information sources and, more specifically, to help them find or locate their information need or reading interests within the sources. Indexing and abstracting are critical processes that ensure that information in documents can be found quickly.

## 2.0 OBJECTIVES

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

- explain what indexing and indexes are
- define the terms "abstracting" and "abstracts"
- identify an indexer as well as an abstractor.

## 3.0 MAIN CONTENT

### 3.1 Index

An index is a list of entries organized in a systematic way, usually alphabetically, to help users find information in a document. Indexes are surrogates, indications, or locators that help you find the information you need. Indexes are systematic guides to the location of words, concepts, and other information items in books, magazines, and other publications, and they do more than merely locate them. Indexes are indicators or locators that aid in the discovery of information. Indexes are systematic guides to the placement of words, concepts, and other information items. An index is a list of entries that appear in alphabetical order to help users find information. It may also include references or bibliographic information to show where each item may be found. Any of the following could be used as an index:

- i. A list that is organised in such a way that each item may be tracked using surrogates, source or page numbers, or other symbols that indicate its place in a sequence.
- ii. An alphabetical list of tables of contents, names of people, and their specific placements in the volumes, usually by page number but frequently by entry number.
- iii. A list of subjects addressed in a book or document that has been thoughtfully created with the reader's needs in mind.
- iv. A systematic presentation of a document's most important terms and concepts in all formats, structured so that those terms and concepts may be found in the source content via accurate and direct references to their places and locations.
- v. An open-ended finding guide to the literature of a given academic subject area, works of a specific literary genre or genre, or the content of a serial publication that has been analysed.

Indexes take the user straight to the information they need, with no obstacles in the way. It directs the user to the most relevant information while minimizing the necessity for cross-references. An index aims to reduce the user's time and effort in finding information while also

increasing the user's search success. These are accomplished by selecting the most appropriate terminology or words for a finder's language and implementing a system of accurate and comprehensive cross-references to related material.

Example of a periodical index entry:

ABU see Ahmadu Bello University, Zaria

Ahmadu Bello University, Zaria(ABU) resumes for the 2020/2021 academic session. – John Auta. DT 16<sup>th</sup> Jan. 2021, P.13

APC see All people Congress

APC elect new excos. – Aliyu Hussaini NN July 09, 2021, P.10 (Explain with illustration. E.g,

### 3.2 Indexing

The systematic technique of arranging entries to enable information consumers to locate objects in a document is known as indexing. It's a method for giving a roadmap to the Information and knowledge contained in documents. In indexing, subject terms, headings, and descriptors describing the intellectual body of texts covering the major theme are carefully selected. In essence, indexing is the act of analyzing the content of documents to produce entries in an index, revealing the main characteristics of the document item in a simplified form, and showing the location of the information; developing information-replacement items. In essence, indexing is the process of constructing substitutes for information items by analyzing the content of documents, revealing the main elements of the document item in a simplified form, and showing the location of the information.

### 3.3 Indexing History

Information classification, categorisation, and organisation appear to be fundamental human activities since the dawn of time. This necessitates the use of specific talents to retrieve information. The most basic method is to use indexing. The use of a known set of symbols, such as the alphabet, is at the heart of an index.

The figurative or applied sense of the phrase, book index, is the earliest, and its precise usage (like the word itself) dates back to ancient Rome. When referring to literary works, the term index referred to a little slip affixed to papyrus scrolls on which the title of the work (and often also the author's name) was written so that each page could be found.

Due to a lack of precise book and manuscript inventories, locating the earliest index appears to be a challenging task. A table of contents is frequently referred to as an index by catalogers of Hebrew and Latin Mss.

Many manuscripts are being scanned, but the cataloguing appears to be lacking, with indexes not being specified.

Masoretes, a group of Hebrew scholars from the 10th century, appear to have collected a list of Hebrew biblical words in alphabetical order, with the sentences from which they came matched with them.

Tables (cannon) comparing the verses of the four Gospels preserved in mss from the dark ages show an early form of indexing. The breaking up of manuscripts into chapters is the first step in indexing, which is especially important for the Bible and Justinian's legal code. This was done for the Bible by Stephan Langdon (1150-1228). In 2nd and 3rd century Greek New Testament manuscripts, chapters were designated. With his chapter divisions, he incorporated verse numbers. It was able to compile Bible concordances as a result of this. The interests of the institutions, libraries and monastic homes where they were compiled were reflected in medieval indexing. They were what we'd refer to as "in-house" goods. In a compendium of treatises, alphabetical lists of moral issues might be created, but neutral information, such as that found on rivers, rocks, and flowers, might be ignored. Their utility was frequently hampered by copyist faults and inconsistencies in leaf numbering.

It was impossible to presume that everyone knew the alphabet. Giovanni di Genoa in his *Catholican* (1286) though it essential to explain this: - 'Amo' comes before 'bibo' because 'a' is the first letter of the former and 'b' is the first letter of the of the latter and 'a' comes before 'b' ... by the power of God working in me, I have created this order". Eisenstein (1979). 'The reader must master the alphabet, to wit: the order of the letters as they stand,' as noted by Robert Cowdrey in his Table alphabetical of hard English words in 1604. Eisenstein (1979).

Looking at the first printed index, the commercialization of publishing was one of the implications of the discovery of printing after 1456. Rather than stationers and scribes working in university cities or monastic scriptoria, production was now handled by printers' workshops in commercial centres. The employment of the alphabet in the arrangement of the types was crucial.

The earliest printed indexes can be found in two copies of St Augustine's *De arte praedicandi*, both issued in the early 1460s by Fust and Schoeffer (the printers of Gutenberg's Bible) in Mainz and Mentelin in Strassburg. Fust's primacy has been proven by previous studies, and Mentelin most likely replicated Fust's edition, including the index. The index is mentioned in the book's preface, which also describes how to utilize it. The index features 230 entries for only 29 pages of text, with many cross-references and several rotated multi-word entries. The locators refer to

paragraphs denoted by letters. Schoeffer noted the index to Augustine's book as a beneficial feature in later marketing for his books. The earliest dated index appears in 1468 in Sweynhym and Pannartz's *Speculum vitae*, a moral treatise printed in Rome. Other early printers reprinted this index several times.

There is just one book with an index among all the books and other printed material from Fust and Schoeffer's shop that came from the joint press before 1467, namely St Augustine's *De arte praedicandi* (On the Art of Preaching), which is the fourth part of his larger work *Dedoctrina Christiana*. The first dated index appears in the *editio princeps* of *Speculum vitae*,<sup>3</sup> a moral treatise analysing the advantages and merits as well as the downsides and risks of many occupations from king to shepherd, shortly after Augustine's index, whose exact dating is still uncertain, written by the Spanish bishop Rodrigo de Zamora (Rodericus Sancius Zamorensis, 1404-1470), and published in Rome by Sweynhym and Pannartz in 1468 as their fifth publication. The book is 300 pages long (287 x 200 mm), with 292 pages devoted to the preface, table of contents, and text and just six and a half pages (leaves 147a-150b) to the index.

In his catalogues, Mainz printer Peter Schoeffer (ca. 1425-1503) expressly states that his better-organised books contain complete indexes; an index is an influential sales factor. According to Colin Clair (1969), the first dated (kind of) printed list reflecting an index appeared in *Epistolae Hieronymi* in 1470, and it was a list of the first words of each of the gatherings. Ulrich Han published his later that year, with the catchwords of each double-page specified. *Exposito Psalteri* is dated 4 October 1470, according to him. Schoeffer did not date all of his early works, thus there could have been one that was published earlier. Fust and Schoeffer's editions of Saint Augustine's *De Arte praedicandi*, which can be dated to the early 1460s, according to Hans H. Wellisch (1986).

The boundary between the contents page, a register, and an index was not always evident in the early days of printing. The *indice copiosissimo* (most copious index) is put at the beginning of St John Chrysostom's 1554 *Commentary on the Epistles of Paul*, and there is no contents page. The words suggest that the publishers hoped the index, which is listed on the title page, would be a selling point to entice researchers to purchase the book. The Latin title of the index itself indicates that it is a significant feature. This translates to "the most comprehensive index of all the topics covered in this book".

The alphabetical table of contents in Toscanelli's 1568 commentary on Virgil is as extensive as the previously stated "*Indice copiosissimo*." The table's Italian title is "table gathering up the important substance in this present book of Virgil's remarks." In his 1570 *Theatrum Orbis Terrarium*,

Ortelius begins with an "Index tabularum," which lists the maps alphabetically. For more specific locations, you must consult the gazetteer at the end, which does not provide page numbers but rather the name of the area in which it is located, which is not always related to the maps.

Indexes date all the way back to the 17th century. According to Hilary Calvert, the Gerardes Herbal from the 1590s included several unique indexes. The alphabetical listing in the early ones only went as far as the first letter of the entry, according to Barbara Cohen, and no one thought to index each entry in either letter-by-letter or word-by-word order at first. Peter Heylyn's 1652 *Cosmographie in Four Books*, according to Maja-Lisa, features a series of tables near the end. "Short Tables may not seem proportional to such a long Work, especially in an age when there are so many that pretend to read, who study more the Index than the Book," he writes before the indexes.

In the 18th century, the index entries from the 18th century are quite intriguing. For the fair sex, the ladies magazine or entertaining companion. 1776, Vol. 7. Essays and writing, Poetry, and Births, Marriages, and Deaths all have their indexes. Alexander Cruden (1699-1770), with his famous *A Complete Concordance to the Holy Scriptures*, was an important indexer during this time (1737). He is said to have been so engrossed in creating it, working late into the night, that he failed to realize that his bookshop's stock was depleting and was taken aback by the consequent drop in sales.

In the 19th century, indexing became more professional, although it began with more of the same. The ladies monthly museum was another early nineteenth-century publication. The index for Vol. 6, 1801 is similar to that of the previous issue. Notes and Queries was a publication aimed at artists, antiquarians, genealogists, and writers. The title and headings in the index of Vol. 1, 1849-50 were exactly as they were in the text, resulting in odd entries. *Darwinism and Other Essays*, 1893, was written by John Fiske, a Harvard librarian who may have indexed it.

Mary Petherbridge, 1870-1940, may have been of assistance to these individuals. In 1894, she established a Secretarial Bureau, which provided secretarial and library services, as well as training in those professions and indexing. She wrote a treatise titled "The Technique of Indexing" in 1904. She worked as a freelance indexer for several publishers as well as government agencies, including the India Office. In 1923, she contributed an essay to the journal *Good Housekeeping* titled "Indexing as a Women's Profession." She went over the process of indexing, as well as the different types of indexes, books, and periodicals, as well as document indexing:



However, indexes in the modern sense, which provide precise places for names and subjects in a book, were not created in antiquity, and just a few appear to have existed until the invention of printing. This is due to a number of factors. For starters, there were no page or leaf numbers or line counts as long as books were written in the form of scrolls (as we have them now for classical texts). Even if there had been such number markers, it would have been impractical to append an index with accurate references, because a reader would have to unroll the scroll to the very end and then reroll to the required page in order to examine the index. (Anyone who has tried to read a book that is only available on microfilm, the modern equivalent of the papyrus scroll, knows how difficult and inconvenient it is to go from the index to the text.) Second, even though famous works were printed in large quantities (often hundreds), no two copies were identical, thus an index could only have been established to chapters or paragraphs, not to specific pages.

### **The Origins of Alphabetical Indexing**

According to Rouse & Rouse, subject indexing was invented in the thirteenth century in Paris. (This is hilarious given the lack of indexes in many contemporary French books.) The fact that Gaster's citation index was created in the same century as the first subject indexes, and in the same nation — Avignon — is an interesting coincidence.

According to Wellisch (1994), subject indexing began in the 4th century with the *Apothegmata*, a collection of Greek Church Fathers' sayings. This is an alphabetically sorted tool, rather than a subject index to a narrative text, according to Witty (1973, p. 196). According to Richardson (1939, p. 844), Eusebius' *Onomasticon* (264-340 C.E.) was the first biblical dictionary, though it was not in alphabetical order according to Bacher (1912), Philo Judaeus, who lived in Alexandria from 20 B.C.E. to 40 C.E., compiled a Greek dictionary of Biblical proper names.

## **3.4 Indexer**

An indexer is a person who indexes or prepares indexes. Indexers are known for their meticulousness and orderliness; they are usually orderly oriented with the ability to take pains, have a clear thought process, and are fastidious. An indexer examines a document and assigns subject and other descriptors depending on his or her perception of what a user may look for. They aim to meet the user's needs and work as if their users are present. Indexers are specialists who create indexes based on ethical and professional criteria. Some indexers work full-time, while others work part-time. Some work for companies or organisations, while others operate as freelancers or consultants. Others work at institutions such as libraries, publishing houses, research institutes, and universities. Indexers

are known for their self-discipline and attention to detail, as well as a good memory.

Indexers, regardless of their educational background, should be educated on indexing activities, well-read, patient, and analytical. They should also have inquisitive to learn new ideas and imaginative minds because indexing entails addressing obvious questions regardless of the presence of the indexer, the user should be able to retrieve relevant information needed.

### **3.5 Abstract**

The word “Abstrac”t is derived from the Latin abstractum, which denotes a shortened version of a longer piece of text. An abstract is a concise intellectual overview of a research piece, thesis, dissertation review, conference proceeding, or other in-depth investigation of a certain subject or discipline, as defined by Wikipedia, and is frequently used to help the reader immediately determine the paper's aim. An abstract is always at the beginning of a manuscript or typescript when it is utilised, serving as the entry point for any academic article or patent application. An abstract, according to Encyclopedia Britannica (1964), is a thorough citation, distillation, and summary of essential facts and figures of theories and viewpoints offered in an article or book's content.

An abstract is a brief overview of the contents of a document such as a research paper, journal, article, thesis, review, conference proceeding, or other academic or legal documents, usually between 50 and 250 words long, depending on the size of the document. An abstract is a formal summary of completed works written by writers or abstractors. They are critical tools for information users, particularly as they try to keep up with the proliferation of data. It's a quick objective summary of a book, essay, speech, report, dissertation, or other work's important material that presents the key ideas in the same sequence as the original but has little literary merit on its own. The key elements of a piece of writing should be covered in an abstract, as with other summaries, utilising the same level of language and skill as the article or document being abstracted. It's also a condensed version of a lengthier piece of writing that emphasises the major point covered; it should succinctly convey the writing's topic and scope, as well as provide a summary of the documents' substance.

“Users of abstracts can identify the basic content of a document quickly and accurately, to determine its relevance to their interests, and thus be able to decide whether they need to read the document in its entirety or not,” according to the International Standard Organisation (ISO) (1976), cited in Aina (2004). Abstracts are tools for finding information; they represent the substance of an object using words that are specific to its

searches. They're formal summaries created by abstractors for finished works or papers. Abstracts are crucial tools for consumers and readers because they keep them up to date with today's information boom.

The abstract is the first to appear in the substance of a complete work, yet it is the last to be written. Abstracts are formal summaries of completed works written by writers or abstractors. They are critical tools for information users, particularly as they try to keep up with the proliferation of data.

### **3.6 History of Abstract**

The history of abstracting may be traced back to the need to summarise the contents of documents in order to make the information contained within them more accessible. Clay envelopes used to protect contained cuneiform texts from tampering in Mesopotamia around the early second millennium BCE were inscribed with either the whole text of the document or a summary. Many texts were abstracted in the Greco-Roman world: epitomes were summaries of non-fiction writings, and in many cases, the only information on works that have not survived to modernity comes from their epitomes that have survived. Similarly, many ancient Greek and Roman plays began with a premise that summarised the story of the play. Non-literary papers were abstracted as well: the Tebtunis papyri, discovered in the Ancient Egyptian town of Tebtunis, contain legal document abstracts. The pages of scholarly publications, as well as some manuscripts of the Code of Justinian, featured summaries of their contents as marginalia during the Middle Ages.

The Royal Society would print 'summaries' summarising the delivered papers at meetings in the early 1800s, which may be the earliest usage of abstracts to disseminate research. Three decades later, the Royal Society produced *Abstracts of the Works Printed in the Philosophical Transactions of the Royal Society of London*, a collection of abstracts of earlier papers published in the society's magazine *Philosophical Transactions* from 1800 to 1837. This approach caught on, and other journals soon followed suit. The 1919 paper *On the Irregularities of Motion of the Foucault Pendulum* published in the *Physical Review*, the oldest journal published by the American Physical Society (Musa, Musa & Musa, 2014) may be the earliest example of an abstract bound to the same article, and the journal frequently published abstracts in its volumes thereafter.

### **3.7 Abstracting**

Abstracting is a procedure for guaranteeing that users may access information. It is the process of creating a concise and objective

description of a document's content that allows consumers to swiftly decide whether or not to read the complete text in order to meet their information needs. It entails summarizing or analyzing a document's content and highlighting the key elements so that the user can determine whether or not to consult the text. In essence, aside from providing a summary and bibliographic detail, the abstracting process adds value to texts.

#### **4.0 CONCLUSION**

Users do not need to use the original document once they have found an abstract because it will most likely give all of the information needed by the reader. They are summaries of the original document and serve as a replacement for it. Abstracts' purposes and uses all revolve around supporting and letting users save time and obtain information. Abstracting is defined as the process of compiling or developing a system, whether for monetary gain or not.

#### **5.0 SUMMARY**

Indexers and abstractors are the facilitators of the indexing and abstracting processes, which produce indexes and abstracts. This is the section's main focus. Abstracts describe information material as briefly as possible while capturing the vital elements, whereas indexes provide entries that function as information locators. The Section has covered indexing and abstracting, indexes and abstracts, indexes and the need for indexes, and the necessity for indexes.

#### **6.0 TUTOR-MARKED ASSIGNMENT**

1. Define indexing and abstracting in unambiguous terms.
2. What are the differences between indexes and abstracts?
3. In a literate society, why do we need abstracts?
4. What are the characteristics of an abstractor?

#### **7.0 REFERENCES/FURTHER READING**

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## **UNIT 2 NATURE AND PURPOSE OF INDEXING AND ABSTRACTING**

### **CONTENTS**

- 1.0 Introduction
- 2.0 Objectives
- 3.0 Main Content
  - 3.1 Nature of Indexes
  - 3.2 Purpose of Indexing
  - 3.3 Nature of Abstract
  - 3.4 Purpose of Abstract
- 4.0 Conclusion
- 5.0 Summary
- 6.0 Tutor-Marked Assignment
- 7.0 References/Further Reading

### **1.0 INTRODUCTION**

Indexes and abstracts are information retrieval devices that allow users to access information contained in documents or in an online database. The description or bibliographic details of each document are specified in detail, using the most precise terminology possible. The job of an information professional includes not just indexing and abstracting documents, but also interpreting, evaluating their quality.

### **2.0 OBJECTIVES**

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

- i. Explain the nature of indexes and abstracts
- ii. Identify and explain the goals of indexing and abstracting

### **3.0 MAIN CONTENT**

#### **3.1 The Nature of Indexes**

Indexes are typically constructed from the text of primary publications to introduce the goal of the publication to the user or reader who desires to read the rest of the text. Indexes are examples of tools used to organise literature in specific disciplines, hence facilitating communication and information flow among users such as scientists and researchers. One of the ways that disciplinary literature is organized is by indexing.

In discussing the nature of indexes, Cleveland and Cleveland (2000) suggested that to understand indexes, one should think of abstract

informational spaces, which means that one should think of information items in an abstract space and then indexes in that space. Document space is transformed into index space through indexes. There is a significant reduction in the number of words in the papers themselves for indexing space while constructing indexes. This is to ensure that both spaces are contained within the same topic space. Indexed materials reflect two basic states or dispositions that indexers determine. What items are included in the index, and what items are excluded? Both scenarios may have captured both the meaningful and the insignificant. It's possible that information was left out of indexes. As a result, when critical information is missing, we can deduce that the indexing procedure may have misplaced Information.

An index is more than just an alphabetical list of nouns, words, and phrases. It's not a reorganized table of contents, either. The indexing process entails more than just creating words or concepts and assigning locators to them. It is important to note that this is a separate record with its own validity and consistency. Indexes occur in a variety of shapes and sizes, and they can be used for a variety of purposes such as Name indexes, subject indexes, map indexes, and so on, (Cleveland and Cleveland, 2004). Books, journals, photographs, databases, and other items all have indexes, some of which are prepared manually or electronically. Good indexes are the result of an indexer's knowledge and know-how, regardless of the form, format, or technique of production.

### **3.2 Purpose of Indexing**

The major goal of performing indexing operations is to help users/readers find information in documents or from an information source; specifically, indexes are built for the following purposes, among others:

- Assisting people in becoming familiar with a text or document so that those who wish to use it can do so effortlessly.
- To serve as a selection guide for the content by acting as a summary of the text or document.
- To be used as a document analysis tool.
- To act as a critical link between the source of information or text/document writers and the final users or consumers.
- To assist users in saving time and effort when accessing or locating a topic of interest within a document or set of documents kept in a collection. To maximize the searching success of the user of a document.
- To construct terminology or descriptors for the purpose of describing the intellectual content of a document.
- To be used by libraries, archives, information centres, and documentation centres as information retrieval tools.

- To aid users in selecting the most appropriate terms or words for their language.
- To encourage more people to use the document

### **3.3 Nature of Abstract**

Abstracts, like indexes, allow access to information and documents, but they also provide a succinct and accurate overview of the details of a document. Abstracts are generated to act as a surrogate for the actual material by capturing the essential information and functioning as a representation of it. With abstractions, the user may not need to see or utilise the actual material because the abstract will most likely give him adequate information or act as a substitute for it. Abstracts are used to save time for users who need to read multiple documents.

Users of abstracts are able to identify the basic content of a document quickly and accurately, to determine its relevance to their interests, and thus be able to decide whether they need to read the document in its entirety or not (International Standard Organisation (ISO) 1976), cited in (Aina, 2004). Abstracts are tools for finding information; they represent the substance of an object using words that are specific to its searches. They're formal summaries created by abstractors for finished works or papers. Abstracts are crucial tools for consumers and readers of information because they keep them up to date with today's information flood.

### **3.5 Purpose of Abstract**

Abstracting activities are carried out by information professionals with the primary goal of assisting users/readers in finding information in a document or from an information source, particularly abstracts are supplied for the following reasons:

- Assist readers in deciding whether or not to read the complete article as readers use abstracts to assess if a piece of writing arouses their attention or relates to a project they're working on. Rather than sifting through hundreds of papers, readers rely on abstracts to swiftly determine whether or not an article is relevant.
- Abstracts are also used by readers to determine the sophistication or complexity of a piece of literature. If the abstract is overly technical or simplistic, readers will assume that the article will be similarly overly technical or simplistic.
- Abstracts provide users with a kind of pre-knowledge of the original text or document, allowing them to understand a write-up serving as a pre-read. This will assist readers in anticipating or judging the document's content. When abstracts give users a sneak



peek at the real thing, it not only makes reading the document easier, but it also helps the reader/users read more efficiently.

- Assist readers in deciding whether or not to read the complete document. Abstracts are used by information consumers to judge whether a piece of writing interests them or is relevant to a topic they are familiar with. Readers use abstractions to determine if a document or a write-up is required as quickly as feasible. It should also be mentioned that readers use abstracts to assess the completeness or complexity of a piece of writing or document. In other words, when consumers interact with abstracts, they can tell if a write-up or paper is too technical or advanced and if it is too simple.
- Assist information users in recalling key findings on a topic. Readers frequently keep abstracts after reviewing a document or write-up to remind them of the summary and other details. Because abstracts frequently include entire bibliographical citations, they are required when readers begin writing their own articles or research papers and citing sources of information.
- Allow readers/decision-makers to make quick decisions without getting bogged down in the details. Highly knowledgeable abstract users, such as scholars and policymakers, are known to read only a small portion of the actual text or write-up. They prefer to check report summaries rather than reading the entire document because abstracts give them a clear picture of the content while highlighting the most important facts. This, of course, saves time, allowing them to complete their task or make sound decisions.
- Allow supervisors to go over technical work without becoming caught down in detail. Although many managers and supervisors will prefer the executive summary that is less technical, some managers must stay up with technical tasks. According to research, just 15% of managers read the entire content of papers or articles. As a result, most managers rely on the executive summary or abstract as the most concise explanation of their employees' work.

#### **4.0 CONCLUSION**

Document description and information retrieval would be a fantasy without indexing and abstracting. It has elevated these activities in no small measure such that information users find it easy to access information sources or papers. As can be seen from the foregoing, abstracts and indexes aid in the installation of order and the attainment of correctly structured knowledge. Abstracts and indexes are not the original content, but rather a pointer and substitute for the true data. Because we will continue to live in a world where there is an abundance of

information, effective and efficient use of abstracts and indexes will become increasingly important for discovering information.

## 5.0 SUMMARY

As you can see, indexing and abstracting are by nature intellectual exercises that prioritise flexibility in order to serve as a pointer and proxy for the information contained in texts. The nature of indexes and abstracts, as well as the major reasons why we have these two key retrieval methods, were the subject of this section. Users do not need to use the original document after finding an abstract because it will most likely give all of the information needed, and indexes serve as a pointer to the original content. This has been the main point of this section thus far.

## 6.0 TUTOR-MARKED ASSIGNMENT

1. What is the nature of indexes, and how would you explain it?
2. Provide a summary of the purpose of abstracts in one paragraph.
3. How do indexing and abstracting differ from one another?

## 7.0 REFERENCES/FURTHER READING

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## **UNIT 3      FUNCTIONS OF INDEX AND ABSTRACT IN INFORMATION RETRIEVAL**

### **CONTENTS**

- 1.0 Introduction
- 2.0 Objectives
- 3.0 Main Content
  - 3.1 Information Retrieval
  - 3.2 Functions of Index in Information Retrieval
  - 3.3 Functions of Abstracts in Information Retrieval
- 4.0 Conclusion
- 5.0 Summary
- 6.0 Tutor-Marked Assignment
- 7.0 References/Further Reading

### **1.0 INTRODUCTION**

For scholars and researchers worldwide, indexes and abstracts have functioned as aids for finding information and managing information overload. In academic environments, indexes and abstracts play a critical role in the information retrieval process. They provide quick and easy access to information resources, saving the library user time and directing them to appropriate and timely sources of information.

### **2.0 OBJECTIVES**

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

- explain the meaning of information retrieval
- identify and explain briefly the functions of each index and abstract as information retrieval devices.

### **3.0 MAIN CONTENT**

#### **3.1 Information Retrieval**

Finding material (typically documents) of an unstructured nature (typically text) that satisfies an information demand from vast collections is known as information retrieval (IR) (usually stored on computers or documents). Information retrieval (IR) is concerned with the representation, storage, organisation, and retrieval of data. The information elements should be shown and organized in such a way that the user can easily find the information that he is looking for.

Unfortunately, determining the user's information needs is not an easy task.

The goal of information retrieval is to find materials that are likely to be relevant to a user's information demand as represented in his request. A request is an incomplete description of a user's information demand; only the user can judge if a document provides the information he's looking for. This means that documents are irrelevant to a request; in other words, two users with the same request can be served in different ways. One user may find a document useful while another does not. Relevance is inextricably linked to the concept of "aboutness." The colour or shape of a document has no bearing on its usefulness. It's important since it's about the information you're looking for (Fordjour, Badu, and Adjei, 2010).

Information Retrieval (IR) is concerned with the representation, storage, organization, and retrieval of data. The depiction and structure of information items should make it easy for the user to find the information that he is looking for. The study of searching for documents and information within documents is known as information retrieval. Computer science, mathematics, library science, information science, information architecture, cognitive psychology, linguistics, statistics, and physics are all used in information retrieval. Understanding the information devices for retrieval and provision of information in the proper format and level is required to maximize the value and usability of information resources (Fordjour, Badu, and Adjei, 2010).

### **3.2 Functions of Index in Information Retrieval**

According to Nnadozie (2007), an index can serve as a guide to the contents of a certain library, such as in the case of a library catalogue, which is also known as an index to the library's contents. In general, an index acts as a pointer to the location of an object or document in an information system. It also acts as a reference to what literature exists in a specific topic or by a specific author, and so on, as in a bibliography, which is an index to what publications exist. According to Nnadozie (2007), the most common use of an index is as a reference to the intellectual content of publications or reading materials, which are given as a list of significant phrases, concepts, subjects, topics, and names ordered in a specific order. In libraries and information retrieval systems, indexing serves to indicate the presence or absence of items relevant to a request. It's basically a time-saving device. The following functions of indexing were formally listed by the International Conference on Scientific Information (ICSI) in 1958.

- To keep researchers and information users up to date on current research in their fields.

- To locate information in the subject fields' literature as and when required.
- Librarians and information workers rely on indexing and abstracting journals for day-to-day reference and bibliographical work, but research students also use them extensively.
- If the goal of the indexing and abstracting services is comprehensive coverage, this can be referred to as a retrospective search function; and to enable bibliographical control of literature production either by country, by subject, or by type of materials.
- To obtain correct and complete bibliographical details of particular items of literature when there is any doubt;
- To look for information on a topic that may not have been well covered by books, encyclopedias, etc.;
- To publicize the work of individual scientists or scholars;

### **3.3 Functions of Abstracts in Information Retrieval**

According to Nnadozie (2007), abstracts have the following functions:

- i. The Abstracts add to the worth of the document you're looking for. It will not only provide the paper's bibliographic information but will also provide a summary of the content. This allows the user to assess whether or not the document will be valuable to him or her when it is finally retrieved, saving time.
- ii. Abstracts are current awareness tools because they keep scholars and researchers up to date on the most recent advancements in their fields of research areas, as evidenced by the inclusion of current articles in informative abstracts.
- iii. Abstracts are true bibliographic control tools. They assist researchers in preventing or at least reducing plagiarism by alerting them to the availability of identical works done elsewhere. It also aids in avoiding the needless duplication of already completed work.
- iv. Abstracts allow people who are looking for information to read summaries of papers that they may never have seen the originals of. This service is extremely useful when conducting a literature review in a specific discipline or topic.
- v. The user is directed to the original material by the abstracts. This is accomplished by using the main work's bibliographic details and the reference number, which, if properly read, can lead to the original text.
- vi. Abstracts help to speed up indexing.

## 4.0 CONCLUSION

This section makes it clear that indexing and abstracting are there to help users find information that is otherwise distributed among multiple sources, all with the goal of ensuring that users have access to information. Indexes and abstracts are information finders that librarians and information workers use on a daily basis for reference and bibliographical work, while they are also used extensively by research researchers.

## 5.0 SUMMARY

Information retrieval is concerned with retrieving documents that are likely to be relevant to a user's information need as expressed by his request, and this can only be accomplished with the help of retrieval devices such as indexes and abstracts, which serve as correct and complete bibliographical details of specific pieces of literature. The functions of the index and abstract as crucial retrieval techniques were the emphasis of this section. Users do not need to use the original document once they have found an abstract because it will most likely give all of the information they need, and indexes serve as a pointer to the original content.

## 6.0 TUTOR-MARKED ASSIGNMENT

1. In your own understanding, explain information retrieval.
2. In one paragraph provide a summary of the functions of indexes.
3. In one paragraph provide a summary of the functions of abstracts.

## 7.0 REFERENCES/FURTHER READING

Aina, L. O. (2004). *Library and Information Science text in Africa*. Ibadan: Third World.

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## **MODULE 2      FORMS OF INDEX, TECHNIQUES AND LANGUAGES**

Section 1 Forms of Index

Section 2 Indexing Languages

Section 3 Indexing Techniques

Section 4 Bibliographic Control and Computerised Indexing Systems

### **UNIT 1      FORMS OF INDEX**

#### **CONTENTS**

- 1.0 Introduction
- 2.0 Objectives
- 3.0 Main Contents
  - 3.1 Forms of Index
  - 3.2 Indexing system
- 4.0 Conclusion
- 5.0 Summary
- 6.0 Tutor-Marked Assignment
- 7.0 References/Further Reading

#### **1.0 INTRODUCTION**

An index is a list of entries organized in a systematic way to help people find information in a document. Indexing is the process of building an index, and an indexer is the person who does it. Indexes come in a variety of shapes and sizes. The indexing process begins with an examination of the document's subject. The indexer must then find terms that accurately identify the subject, either by extracting words directly from the document or assigning words from a controlled vocabulary. The terms in the index are then presented in a logical sequence. The number of terms to include and how specific the phrases should be are decisions that indexers must make. This adds up to a lot of indexing depth. As a result, the types of indexes and indexing systems will be discussed in this section.

#### **2.0 OBJECTIVES**

By the end of this unit, you should be able to:  
identify the different types of indexes

describe the various types of indexing systems.

### 3.0 MAIN CONTENT

#### 3.1 Forms of Indexes

According to the Australian and New Zealand Society of Indexers (ANZSI) (2021), there are many distinct forms of indexes, some of which require particular expertise from indexers.

Bibliographic and database indexing (the space between the lines is much)

1. Genealogical indexing
2. Geographical indexing
3. Book indexing
4. Legal indexing
5. Indexing of periodicals and newspapers
6. Indexing of photographs
7. Subject gateways
8. Indexing of websites and metadata

Journal articles, for example, are catalogued by bibliographic database indexers. After then, the database enables online access to a large corpus of material (eg medical journal articles). Citation and subject information are described according to database-specific criteria.

- The goal of a database indexer is to:
- Identify and offer facts on journal articles and other objects, including subject words, usually within a broad subject area, and which may entail the usage of a thesaurus
- Describe a document and include citation details and other information in accordance with database requirements.
- In a written summary, explain the contents of a document succinctly (called an abstract)  
Create a database record for an item that allows users to search a corpus of literature online.

#### **Genealogical indexing**

Users can look up people's names and learn about their personal and family links using genealogical indexes. They frequently do away with the necessity to consult original source materials (eg cemetery inscriptions). Genealogical indexers are experts at gathering and recording information about historical figures and locations.

**Geographical indexing**

Geographic indexers work with maps, atlases, and other cartographic materials to build indexes. Place names, subjects, historical details, mathematical attributes (e.g. scale and coordinates) and artistic aspects may all be included in geographic indexes. Geographic indexers frequently have specialized knowledge or experience in cartography or geography.

**Book indexing**

Book indexers create indexes in order to provide access to detailed information about the contents of books. All types of nonfiction books, including textbooks, multi-volume works, technical reports, and annual reports, have back-of-book indexes. Indexes are also required for online books, PDF books, and ebooks.

**Legal indexing**

Legal indexing is categorising legal information based on its form and content. Legal indexers are knowledgeable about legal principles and classification, and they can transform the classification into a searchable index. Legal indexers specialise in consolidating and updating existing indexes, as well as preparing cases and tables of legislation.

**Periodical and newspaper indexing**

Indexes to individual articles and other items in serialised publications can be found in periodicals and newspapers. Many periodical and newspaper indexes use a regulated vocabulary to ensure that terms are used consistently year after year. Periodical and newspaper indexers ensure that readers can get a quick overview of the issues mentioned during the index's lifespan. Annual and cumulative newspaper and periodical indexes are available.

**Pictorial indexing**

Users can find relevant images in collections of photographs, artworks, videos, and films using image indexes. Pictorial indexers are experts at recognizing and describing images in collections.

**Subject Gateways**

Indexers are also active in innovative electronic indexing techniques. Online information is one area where indexing is becoming increasingly important. On the internet, indexers develop subject gateways that classify links to relevant web pages.

**Website and metadata indexing**

Despite the proliferation of automated search engines, human indexers are still required in a number of ways to improve access to content on the Internet. Website indexes can be constructed in the style of back-of-book

indexes or as hierarchical pages that both link directly to the essential information. They work in conjunction with other navigational tools like site maps and search engines. Metadata indexers use standard elements similar to those found in database indexes and library catalogues to improve the precision of access to web articles via search engines.

In general, indexes have been classified according to their arrangement, purpose, or even specific subject area. Author indexes, alphabetical indexes, categorised indexes, cumulative indexes, faceted indexes, and other types of indexes are available.

### **3.1.1 Author Indexes**

Author indexes are usually alphabetical indexes with the names of the individuals or corporations responsible for the works or documents indexed as headings. Persons, organisations, government agencies, and universities are primarily accountable for the intellectual content of the documents, according to the entry. These entries give users a quick reference to the document or work's title and subject. Author indexes, in effect, serve as a guide to the titles and subjects of papers. Users, as we all know, typically approach literature from the perspective of the authors. This is the information they have about the document that needs to be retrieved. It's worth noting that author indexes should be developed according to some clearly defined guidelines so that key decisions about authorship are made consistently. The number of names allowed per entry in the case of multiple authors, the alphabet titles to be used, and the form of author names (full names or initials, authors' usage of pseudonyms, etc.) are all examples of such decisions.

### **3.1.2 Periodical Indexes (you have treated this under periodical and newspaper indexing)**

Periodical indexes are listings of periodical articles in which citations are entered by subject or in a categorised manner, and sometimes separately or in a single alphabetical order under the author's names. They can be broad, focused on a single academic topic or group of disciplines, or limited to a certain type of publishing. Periodical indexes are tied to journals, as the name implies, and there are two sorts of periodical indexes: individual and broad indexes. Individual indexes are for individual journals, and are prepared by the journal publisher, usually under the direction of the journal editor; broad indexes are for a collection of journals.

### **3.1.3 Alphabetical Indexes**

The single alphabetical index, in which names and subject entries are placed together, is one of the most well-known indexing strategies. Many individuals are familiar with this type of general-purpose and easy index form. The most popular index style is alphabetical indexing, and many index types follow this structure not only because it is straightforward to design but also because it follows a well-known pattern that people are familiar with. According to Cleveland & Cleveland (2001), alphabetical indexes are based on the ordered principle of the letters of the alphabet and are used to organise subject headings, cross-references, qualifying phrases, and primary headings. All of the entries are alphabetised and include subject words, author names, and location names. In order to ensure its successful use, alphabetical index configurations frequently include some aspect of classified order and vice versa.

### **3.1.4 Classified Indexes**

This is an index with items organised into headings that indicate hierarchy divisions and sub-divisions, as well as classes based on the subject matter being indexed. It is not organised in the traditional alphabetical order; instead, it is organized hierarchically, starting with connected themes and working down to the particular. It's a method of organising information by classes or subject titles. Users who are accustomed to using alphabetical indexes find categorised indexes difficult to utilise because the technique arrangement is unfamiliar to them. It is crucial to highlight, however, that for readers who comprehend the hierarchical breakdown of vocabulary provided by classified indexes, searching is easier and more straightforward if users want to conduct general searches because the breakdown of terms is frequently displayed.

### **3.1.5 Faceted Indexes**

A set of sub-classes is created for a major class or subject using faceted indexing based on a single attribute that they all share. For example, the major class or subject area "People" can contain sub-classes based on age, such as "children," "adults," and "elderly." Faceted indexing, in essence, accentuates one side of something that has numerous other sides. According to Cleveland & Cleveland (2001), every subject is not a single Section in faceted indexing, but rather a collection of aspects; consequently, a faceted index attempts to discover all of the individual aspects of a subject and then synthesis them in a way that best describes the subject.

A faceted indexing system is a type of controlled analysis in which concepts are organized into categories by connecting them to other related

fundamental concepts. This means that during indexing, faceted indexes are pre-coordinated. It's a synthesized system that allows for the accumulation of terms.

### **3.1.6 Internet and Multi-Media Indexes**

Although it may be difficult to locate or identify an internet index, they do exist in electronic form, allowing users to search in a non-linear manner. They exist in automatic and implicit forms, rather than in the precise form that we are familiar with. They aren't commonly called indexes, but they perform indexing functions that allow users to go to what they want utilising electronic nodes and links between nodes; online indexes must be further improved due to the vast abundance of internet resources, which is a difficulty. Librarians and indexers have advocated for the structuring of internet resources beyond metadata. Images, audio, and textual elements are all included in the multi-media index. The task of indexing this multi-media information seems insurmountable, however, there is a need to create and refine these media's indexing. The information format of the 21st century is becoming increasingly multi-media, and it is becoming increasingly important in all types of communication systems.

### **3.1.7 Word Indexes**

Word and name indexes, also known as concordances, are indexes to the specific names and words used by the author, and they closely represent the information and concepts that the author had in mind when writing the book (Cleveland and Cleveland, 2001).

The terms employed in word indexes are the specific terms or words that point the user to the subject and its location within the context of a publication. A word index is a collection of terms and names that appear in a work or document, organised alphabetically and with a reference to the page number(s) on which each word or name appears in the text. Aside from the general index or the subject index, not all books or documents have a distinct word index. The word index is part of the back matter of a single volume book, but it is normally found at the conclusion of the last volume in a multi-volume work.

### **3.1.8 Cumulative Indexes**

This refers to indexes that aggregate the entries from two or more previously produced indexes into a single sequence, saving users time when looking for information. A cumulative index is a collection of indices that reflects the essence and impact of gathered data. Over time, it combines set indexes. Journals, as well as big yet essential publications

in discrete volumes, typically use cumulative indexes. Produced by a group of indexers who came together due to the complexity of creating cumulative indexes and the possibility of merging indexes from established works spanning decades.

You have done a lot of work here, but it can still be simplified if you break them down according to:

Type of material indexed, e.g, book, periodical and so on

By physical form e;g, printed, computerised

By arrangement e.g alphabetical and classified.

## **3.2 Indexing System**

There are two different types of indexing systems available, pre-coordinated and post-coordinate indexing. It's worth noting that when concepts are joined or coordinated to generate complicated subjects, the searcher may be the one to do so.

### **3.2.1 Pre-Coordinate Indexing System**

Pre-Coordinate indexing is a method of indexing in which the indexer combines several ideas to construct subject headings or descriptors allocated to documents to aid the retrieval of information on compound subjects. The coordination of entries is done while the index is being created. It is a method of indexing in which an indexer breaks down a complex subject into its constituent parts and then assembles these parts in a predetermined sequence, such as entries in traditional classified and alphabetical subject catalogues. A subject descriptor is chosen to represent a document in pre-coordinated indexing, and it acts as the document's principal term among other terms. One of the terms serves as the lead term, with the others working in tandem with it. Before searching, the user does this coordination; as a result, the user is able to locate materials that are available on a specific subject. It's also a good idea to look for additional topics that are relevant to the one you're studying. The user is given the entire context of a subject in pre-coordinated indexes. The classified catalogue, for example, is an example of pre-coordinate indexing in the field of transportation, motor vehicles, and buses. It's normally arranged in the manner of the scheme used for the Library's shelf organisation strategy.

You can enrich this section by being more practical. E.g, give examples of compound subjects and discuss how the indexer can select a lead among the terms. Boost it up with examples from a subject heading list.

### **3.2.2 Post-Coordinate Indexing System**

Post-Coordinate indexing is a style of indexing in which the subject headings or descriptors supplied to documents represent simple notions that the user must integrate while searching for information on compound subjects. It is an indexing system in which the indexer breaks down a complex subject into its core concepts, but these concepts are not joined until the search step. Out of the constituent concepts, post-coordinate indexes are offered. The user or searcher must do the combination or coordination procedure in accordance with his or her demands at the time. Multiple concepts in a subject are split down into single concepts, which the user or searcher subsequently combines to form the page. In essence, there is no main or lead term because each term stands alone and can be mixed based on the user's or searcher's interests. As a result, coordination occurs at the time of searching.

## **4.0 CONCLUSION**

The extent to which indexes follow this procedure from familiarisation through content analysis and translation could well influence the index's quality. Indexing strategies follow a process that necessitates indexers' professional competence. It is a highly planned process that necessitates the organisation and orderly skills of indexers. The indexing system, on the other hand, refers to the process of assigning subject headings or descriptors to documents. The purpose of a prepared index, whether it uses the pre or post coordinate system, is to ensure that documents are simply accessible and that user frustrations are minimised.

## **5.0 SUMMARY**

The manner of organizing for many types of indexes is alphabetical. Alphabetical indexes are the most popular sort of index, and they provide consumers with an appropriate tidy layout. The alphabetical format is used in books, word and author indexes, and so on. Classified indexes, cumulative indexes, faceted indexes, and periodical indexes, as well as our indexing system, were also described in this section. It's critical that you can tell the difference between the types of indexes that are used.

## **6.0 TUTOR-MARKED ASSIGNMENT**

1. Give a thorough description of Classified Indexes.
2. What is the relationship between author and word indexes?
3. Give an explanation for each of the following:
  - a. Alphabetical indexes
  - b. Internet and Multi-media Indexes
  - c. Faceted Indexes



- d. Periodical Indexes
- e. Briefly explain the types of indexing systems

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## **UNIT 2 INDEXING LANGUAGES**

### **CONTENTS**

- 1.0 Introduction
- 2.0 Objectives
- 3.0 Main Contents
  - 3.1 Nature of Indexing Languages
  - 3.2 Free indexing Language
  - 3.3 Natural Indexing Language
  - 3.4 Controlled Indexing Language
  - 3.5 Purpose of controlled Vocabulary
- 4.0 Conclusion
- 5.0 Summary
- 6.0 Tutor-Marked Assignment
- 7.0 References/Further Reading

### **1.0 INTRODUCTION**

Indexing Language is a set of words used to describe the content of documents or books in order for information users to find documents in a library. Because both the indexer and the user are familiar with the language, they both use it to describe documents. Retrieval becomes easier as a result of this. It is the terminology used in an index to define the subject or another part of the information or document. It's a method of identifying or designating the subjects in a document.

### **2.0 OBJECTIVES**

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

- explain the meaning and nature of indexing language
- explain the following sorts of indexing languages
- natural language indexing
- indexing language for free
- indexing language with constraints
- explain why regulated vocabulary is important.

### **3.0 MAIN CONTENT**

#### **3.1 Nature of Indexing Language**

Indexing Language is a set of words or a set of words used to describe the content of documents or books in order for information users to find documents in a library. It is the terminology used in an index to define the subject or another part of the information or document. There are three

types of indexing languages: free, natural, and regulated indexing. An Indexing Language is more than simply a collection of index phrases or descriptors that information users may understand; it also includes ways for organising and using terms. The use of standalone vocabulary terms might lead to linguistic ambiguity. Language indexing allows users to distinguish between terms, eliminating ambiguity in the language. When the indexer and the user are familiar with the language of the index, it is easier for the user to utilise and manipulate the retrieval system.

### **3.2 Free Indexing Language**

Any word or term that fits the subject of the document can be used as an indexing term in free Indexing Language. The indexer or the computer may assign the term. It's more common when it comes to computers. The words that can be used as index terms are not limited. The indexer can choose the terms to use from the text being indexed, or the computer can choose the terms in an automatic method. In free indexing, the indexer starts from the beginning and builds up the terms. They choose the terms; they have complete freedom to use whatever words they think are required to express the intended meaning and subject content of documents. In terms of the meaning of the words in the text, the indexer's knowledge and background are crucial.

### **3.3 Natural Indexing Language**

The wording of the document is closely followed during indexing. It's a sort of open-source indexing language. The terms are assigned by the indexer/computer depending on the language or title, abstracts, or other information provided to it. The indexer uses the exact words or phrases used by the document's author. This method of indexing, according to Aina (2004), tends to disperse papers on the same subject, especially when the authors use different terminology. The terms are chosen or retrieved from the text with the assumption that the writers used words that are relevant to the subject field; interacting with consumers in a common language.

### **3.4 Controlled Indexing Language**

The indexer is in charge of picking terms and exercising control over the use of words or phrases designated as indexed terms in this form of indexing language. He accomplishes this by attaching accepted index words to terms that have been listed. The terms used are permitted for use in controlled language indexes, as noted in the list. The indexer chooses and assigns terms to documents based on this pre-determined list of terms. These terms are subject descriptors drawn from a pre-determined and standardised collection of terms. To verify that the terms used are

consistent, the indexer reviews this standard list of terms. The topic heading lists and thesauri, which are alphabetical listings and classification schemes that assign notation to subject names, make up the list sometimes referred to as the "Authority List." Indexers select appropriate phrases from the vocabulary store or authority list to establish the topic matter of documents. He chose the subject descriptors from a controlled vocabulary that defined the document's author's concepts.

### **3.5 Purpose of controlled Vocabulary**

Natural or free indexing language allows for a depth of expression that allows for excellent communication, but it also has a semantic complexity that allows for faulty comprehension. The unrestricted use of language creates problems that are not immediately apparent. Because of the wide range of word possibilities, readers may struggle to find what they're looking for. As a result, a variety of controlled vocabularies, such as classification schemes, topic authority files, and thesaurus, have been developed. Controlled vocabulary solves a number of semantic issues and allows for the identification of generic links. It groups related concepts into a single index phrase so that they aren't scattered over the index under several synonyms. According to Cleveland and Cleveland (2001), the controlled vocabulary has the following characteristics since it takes both the indexer and the user to the same location in the system:

- It gives a guide to the index user by re-presenting the general conceptual structure of a subject area.
- The terms are obtained as precisely as feasible from the user's own technical usage, and they closely reflect the literature vocabulary.
- It provides a standard vocabulary by restricting synonyms and near-synonyms to promote consistency, and it uses a large number of pre-coordinated phrases to prevent false drops.
- It clarifies unclear terminology when necessary.
- It enables horizontal and vertical relationships between terms using cross-references.

### **4.0 CONCLUSION**

As a result of the above, you should appreciate the value of free/natural language over controlled indexing language. Both the indexer and the user benefit from indexing languages because both are expected to be fluent in the language. Controlled vocabulary and thesaurus aid in ensuring that indexed terms are constantly consistent and adhere to standardisation.

## 5.0 SUMMARY

The features of indexing languages, the realities of free indexing, and natural indexing languages were all clearly addressed in this section. The importance of controlled vocabulary, which emphasises control over terms chosen as indexed terms, as well as its purpose and qualities, were discussed. Thesaurus construction, its features, and the construction technique were all thoroughly detailed.

## 6.0 TUTOR-MARKED ASSIGNMENT

1. Examine the characteristics of indexing languages.
2. Compare and contrast the characteristics of controlled and natural indexing languages.
3. What are controlled indexing languages and how do you use them?
4. What distinguishes controlled vocabulary from other types of vocabulary?

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## **UNIT 3 INDEXING TECHNIQUES**

### **CONTENTS**

- 1.0 Introduction
- 2.0 Objectives
- 3.0 Main Contents
  - 3.1 The Indexing Process
  - 3.2 Familiarisation
  - 3.3 Content Analysis
  - 3.4 Translation
  - 3.5 Depth of Indexing
- 4.0 Conclusion
- 5.0 Summary
- 6.0 Tutor-Marked Assignment
- 7.0 References/Further Reading

### **1.0 INTRODUCTION**

The indexing techniques are integrated into the stages leading up to the construction of the index, which acts as a pointer to the contents of the documents. When used effectively, the strategies provide index terms or descriptors of topic intent, decreasing the effort or time required by a user to locate information of interest in a document or set of documents.

### **2.0 OBJECTIVES**

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

- explain the significant details of the indexing process
- identify and explain the stages of the indexing process
- explain the exhaustiveness and specificity in the indexing processes.

### **3.0 MAIN CONTENTS**

#### **3.1 The Indexing Process**

The indexing process aims to detect data recorded in a record and organise the links to that data into a searchable file. The indexing process is meticulous and demands time. The process yields an index that lists subjects and their applications for documents. Finally, the index serves as a link to the information in the document. A good index is the result of a professional activity performed by indexers with the necessary training and expertise. It is not a job for the faint of heart. The indexing process

entails processes and techniques that have been fine-tuned and perfected over decades and that can be mastered.

A professional indexer analyses or scans the text of each document to assess its content, after which he selects appropriate headers, such as persons, places, or subjects, to enable retrieval. Synonyms are then used to create cross-references, and the entries are organized alphabetically, numerically, or categorically. This had evolved over time in an open-end index design.

Indexing can be done by a person, a machine, or both. The following is how Cleveland and Cleveland (2001) described the general process or techniques of indexing:

- Determine which themes in the item are relevant to the document's intended audience.
- Determine which subjects best capture the document's information.
- Choose terms that are as close to the terminology used in the paper as feasible.
- Organize references to material that is spread throughout the document's text.
- Create related headings by combining headings and subheadings.
- Use see references to direct users looking for information under terms that aren't being used to terms that are being used, as well as to similar terms with see also references.
- Organize the index into a logical sequence.

Indexing information packages entails a number of procedures. However, Hjørland (1992, 1997, 2007) described some of the mechanisms that are involved in indexing.

- **Subject Analysis**  
The initial stage in indexing is to determine the document's contents. The indexer would assess the subject matter in terms of answers to a set of questions such as "Does the document deal with a specific product, condition, or phenomenon?" when manually indexing. Because the indexer's knowledge and experience influence the analysis, two indexers may examine the content differently and hence come up with various index words. This will have an impact on retrieval success.
- **Term selection**  
The subject analysis is translated into a collection of index terms in the second stage of indexing. Extracting from the document or assigning from a controlled vocabulary are two options. With the



capacity to conduct a full-text search being widely available, many people have learned to rely on their own expertise in conducting information searches, and full-text search has grown in popularity. The importance of subject indexing and its experts, professional indexers, catalogers, and librarians, in the organisation and retrieval of information remains undeniable. These experts are familiar with controlled vocabularies and can locate information that cannot be found by a full-text search. Expert analysis to develop subject indexing is difficult to compare to the expense of technology, software, and manpower to produce a comparable set of full-text, fully searchable documents. Social tagging has grown in popularity, particularly on the web, thanks to innovative web tools that allow anybody to annotate content. Despite the information revolution, one indexing application, the book index, has remained mostly intact.

- **Convert the Key Terms into Thesaurus**

At this stage keywords are converted in thesaurus indicating a relationship among terms:

This might include: Broader Term (BT), Narrower Term (NT), Related Term (RT), Used For (UF). Converting key terms into thesaurus terms is very important in index construction as it allows easy identification and retrieval of terms.

- **Extraction indexing**

The topic of linguistics, according to Paolillo (2010), includes the study of the meaning embedded in natural language expression, as well as the belief that common expressions are often not reflected in their literal meaning. Extraction indexing is the process of extracting words from a document. It makes use of natural language and lends itself well to automated procedures such as calculating word frequencies and using those that exceed a pre-determined threshold as index words. A stop-list with common words like and would be referred to, and such stop words would be excluded as index terms. By indexing single words rather than phrases, automated extraction indexing may result in the loss of meaning of terms. Although it is easy to extract frequently occurring phrases, it becomes more challenging when significant concepts are expressed in words that are inconsistently phrased. Even with the usage of a stop-list to eliminate common terms like "the," automated extraction indexing faces the issue that some frequently used words may not be effective for discriminating between documents. The phrase glucose, for example, is likely to appear frequently in any paper relating to diabetes. As a result, using this phrase will likely yield the majority, if not all, of the

documents in the database. Post-coordinate indexing, in which terms are merged at the time of searching, would lessen this effect, but the searcher, rather than the information professional, would be responsible for linking acceptable terms. Furthermore, concepts that are used infrequently may be quite important. For example, a new medicine may be discussed infrequently, but the novelty of the issue makes any citation essential. A relative frequency approach, in which the frequency of a word in a document is compared to the frequency of the database as a whole, is one method for allowing rarer terms to be included and common words to be rejected by automated processes. As a result, an index term could be a term that appears more frequently in a document than would be predicted based on the rest of the database, whereas phrases that appear equally frequently throughout will be eliminated. Another issue with automated extraction is that it misses when an idea is mentioned but not specified in the text by an indexable term.

- **Index Presentation**

The final step in the indexing process is to arrange the entries in a logical order. It's possible that this will entail linking entries. In a pre-coordinated index, the indexer considers how a user would frame their search when determining the order in which terms are linked in an entry. The entries in a post-coordinated index are given independently, and the user can link them together via searches, which are most typically carried out using computer software. In comparison to pre-coordination, post-coordination results in a loss of precision.

### 3.2 Familiarisation

The indexer must have a general understanding of the document. Indexers familiarize themselves with the material by reading the title, preface, forward, content paper, and so on. They may also choose to browse through the chapters. In the same manner that an abstractor immerses himself in the text, the indexer must be familiar with the topic material of documents. The indexer is curious about the content of the document, and he examines the texts with great care. When he does this, he must also consider the user; he must put himself in the shoes of the users.

Indexers must learn to assess the general purpose, scope, and intended users of documents in addition to generating keywords from the text. Familiarisation entails cognitive processes involving the indexer who generates information and the applications of that information, in addition to understanding the text coverage of surface material.

### **3.3 Content Analysis**

The indexer employs his expertise and judgment to identify the topics covered in the book or document during the analysis step. The stage is mostly determined by the indexer's intuition and experience, as well as the index's anticipated application. The topics chosen should reflect how the index will be used, as well as the document's core focus. The indexer must choose whether or not to index minor or secondary items.

At this point, the indexer is examining the subject. The chosen index terms are thought to be reflective of the original article or work. It is important to note that the amount of time spent on the analysis will be determined by the type of the book or document as well as the indexer's experience. The index adheres to guidelines set forth by the indexer or the organization for which he or she works. These rules outline which content descriptors should be used and which should be avoided. The content examination is made easier by an indexer's familiarity with the discipline in question. In a circumstance where terminology usage is restricted, the indexer will not use the words directly or as a point of access. Rather, the phrases will be converted into the system's indexing language, which is the same language that the indexer and information searcher utilize. The Library of Congress Subject Heading List (LCSH) and the Sears List of Subject Headings are two examples of controlled vocabularies (SLSH).

### **3.4 Translation**

The indexer selects terms from an indexing vocabulary that fit the concepts to be indexed during the translation step. He assigns subject descriptors from a controlled vocabulary or language with which the field's users are familiar. However, if there is no requirement for vocabulary control, such as in book indexing or electronic indexes, the translation stage may not be required. The subject analysis is transformed into a list of index terms. Extracting from the document or assigning from a controlled vocabulary are two options. With the capacity to conduct a full-text search being widely available, many people have learned to rely on their own expertise in conducting information searches, and full-text search has grown in popularity. The importance of subject indexing and its experts, professional indexers, catalogers, and librarians, in the organisation and retrieval of information remains undeniable.

### **3.5 Depth of Indexing**

The two aspects of indexing that are connected to depth are exhaustiveness and specificity. The depth of indexing is a result of these two factors. The phrase "exhaustively" refers to the indexer's use of all possible terms for a given document. Several index words will almost

certainly be assigned to such papers, but it is crucial to note that this does not necessarily imply exhaustiveness. It is widely assumed that if a document is fully indexed, it will be easier to find because it contains a larger number of terms. Index exhaustivity can be affected by a variety of factors, including corporate policy, money, time, and the user's needs.

The term "specificity" refers to how precisely indexers have described documents. The degree to which a topic is pinpointed in a hierarchical tree of terms by a particular term. The more precise a term, the more precise the search result. To put it another way, more of the things returned will closely match the user's query keywords.

#### **4.0 CONCLUSION**

The phases or processes of indexing are referred to as techniques. This Section looked at indexing, which was described as a time-consuming process requiring orderliness and patience on the indexer's part. In the familiarisation stage, the indexer must be acquainted with the document. While content analysis focuses on assigning relevant terms to documents and picking terms that match concepts to be indexed from a regulated language, translation focuses on assigning relevant terms to documents and selecting terms that match concepts to be indexed.

#### **5.0 SUMMARY**

The Section has demonstrated that indexing strategies follow a process that necessitates indexers' professional competence. It is a highly planned process that necessitates the organization and orderly skills of indexers. The extent to which indexes follow this procedure from familiarization through content analysis and translation could well influence the index's quality. Overall, it is critical that the process of indexing documents results in exhaustivity and specificity.

#### **6.0 TUTOR-MARKED ASSIGNMENT**

1. Give a thorough description of the indexing procedure.
2. List the general indexing processes to be followed.
3. Discuss the stages of indexing.
  - Familiarisation
  - Analysis of Content
  - Translation
4. Explain the terms "exhaustivity" and "specificity" as they relate to indexing.

## 7.0 REFERENCES/FURTHER READING

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## **UNIT 4     BIBLIOGRAPHIC CONTROL**

### **CONTENTS**

- 1.0 Introduction
- 2.0 Objectives
- 3.0 Main Content
  - 3.1 Bibliographic Control
  - 3.2 Functions of Bibliographic Control
  - 3.3 Types of Bibliographic Control
- 4.0 Conclusion
- 5.0 Summary
- 6.0 Tutor-Marked Assignment
- 7.0 References/Further Reading

### **1.0 INTRODUCTION**

A bibliography is a list of reference materials (including any type of information; text, music, paintings, video, etc.) that elucidates the type, nature, and other detailed information based on the materials' name, date, location, and genre. The process of creating, exchanging, preserving, and using data on information resources is known as bibliographic control. The organizing of library items to enable discovery, management, identification, and access is known as bibliographic control. Bibliographic management is as old as libraries, and our contemporary practices are direct successors of 19th-century librarianship. Formal bibliographic control has existed for thousands of years, but it was only in the 19th and 20th centuries that modern approaches were established and implemented. This time was defined by a set of cataloguing codes. These codes governed the construction of library catalogues, which were first printed in books, then on cards, and lastly in electronic formats, such as Machine-Readable Cataloging (MARC). The introduction of shared cataloguing programs during this time allowed for the development of resource-saving copy cataloguing processes. Cataloguing networks such as OCLC and RLG facilitated the growth of such programs. The notion of bibliographic control advanced during the 20th century, culminating in the early 21st century Statement of International Cataloguing Principles and IFLA's Functional Requirements for Bibliographic Records, which included the 1961 Paris Principles (FRBR). Bibliographic control began to be applied to newly invented electronic media as "metadata" toward the conclusion of the century. The current trend is for collaborative and multinational approaches to bibliographic control to continue to grow.

## 2.0 OBJECTIVES

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

- explain the meaning of bibliographic control
- identify and explain the areas of concern for bibliographic control
- explain the functions of bibliographic control.

## 3.0 MAIN CONTENT

### 3.1 Bibliographic Control

A bibliography is a list of reference materials (including any type of content; text, music, paintings, video, etc.) that elucidates the type, nature, and other detailed information based on the materials' name, date, location, and genre. Bibliographic control comes in a variety of forms. The organising of library items to enable discovery, management, identification, and access is known as bibliographic control. Bibliographical control is a broad phrase that encompasses a variety of bibliographic tasks, such as standardising bibliographic descriptions and distributing union catalogues (Keenan, 2000). It is the process of identifying, describing, analysing, and classifying books and other communication materials so that they may be efficiently organised, kept, retrieved, and used as needed (Infoplease, 2009). Bibliographic control, on a national level, is a system that allows for the identification and placement of information sources within a country's borders (Snyman, 2000; Retha, 2000).

If we can quickly locate complete and correct information on all the items that may be requested for any distinctive body of printed literature of theme, or a physical or literary form - we say that the bibliographic control for that collection of documents is good. However, even when applied to a subject with a limited extended range, bibliographical control is rarely perfect in reality. It would be tough enough to maintain bibliographic control if it just applied to writings that were printed as separate entities. It also applies to articles in journals and chapters or sections of books with many contributors that are released as distinct publications. These hidden contributions to knowledge may thus be really valuable, but they may be disregarded when they would be especially useful if bibliographers did not take the initiative and work so hard. The mastery of written or published records, which is and for the offered by purpose bibliography, is referred to as bibliographical control. The term "bibliographical" refers to the use of bibliographies to gain access to information. Bibliographical control is concerned with the location of information sources or items, as well as the speed with which they can be found. As a result, librarians

should have access to comprehensive records of human civilisation and culture, as well as the ability to efficiently organise them for use. In order for national bibliographic control to be effective, the following requirements must be met:

1. A depositing rule.
2. Supporting committees and investigations
3. A regulatory, controlling, and advisory body
4. Supporting committees and investigations
5. A diverse set of bibliographic resources addressing many aspects of the nation's recorded heritage
6. Adherence to national and international regulations, as well as technical advancements (example, computerization, use of the internet)
7. Institutions, consortia, professional organizations, interest groups, and competent and devoted individuals at a national level
8. Research initiatives and programs
9. National bibliographic control literature reporting

If we can find comprehensive and complete knowledge about a country, a subject, or a physical or literary form in any distinctive body of printed materials, we can claim that the bibliographical control of that set of papers is very good. However, bibliographical control of all forms of materials is quite difficult in practice, as we are dealing with not only published or printed materials, but also parts of materials, journal articles, and any other type of published or unpublished material. Only after World War II did bibliographical control become effective or apparent, thanks to UNESCO's efforts to encourage all countries around the world to publish national bibliographies. The formal event that is regarded as a watershed moment occurred in 1974 when the International Federation of Library Associations (IFLA) declared Universal Bibliographic Control as one of its key programs. Some of the constraints of bibliographical control have been overcome in the last decade or two thanks to the usage of online computerised bibliographic records. Subject, form (physical and literary), place, period, breadth (a bibliography can be selective or thorough), and the quantity of data provided in individual entries are all important aspects in bibliographic control. If all of the subject areas are taken into consideration, the number of bibliographies will be enormous. However, in fact, this must have some restrictions because otherwise, its usage would be impossible. As a result, concise bibliographies on a wide range of topics are generated for use purposes, making the publications more accessible.



## 3.2 Functions of Bibliography

Rogler (1983) stressed that bibliographic control has six major functions:

1. Recognising the existence of a variety of information resources as they become available. Before an information resource can be found, its presence and identity must be known.
2. Identifying the works that are contained within or as part of such information resources. Multiple works may be stored in a single package, or one work may span multiple packages, depending on the level of granularity necessary.
3. Collecting these knowledge resources in libraries, archives, museums, and internet communication files, among other repositories, in a systematic manner. In other words, putting these items into collections so that they can be useful to the user.
4. Creating a list of various information resources that follows standard citation guidelines. Library catalogues, indexes, and archival finding aids are examples of retrieval aids.
5. Providing access to various information resources by name, title, subject, and other relevant information. There should be several access points if there are different methods to find an item. There must be sufficient metadata in the surrogate record for users to locate the information resource they want. The consistency of these access points can be achieved by authority control.
6. Providing a mechanism for locating or copying each information resource. The Online Public Access Catalogue (OPAC) at libraries can direct users to information (such as a call number) and indicate whether such an item is available.

## 3.3 Types of Bibliographic Control Tools, Include Databases, Indexes and Catalogues

### 3.3.1 Bibliography of Bibliographies

These are bibliography lists that assist users in selecting bibliographies. They assist with the tracing of bibliographies. Bibliographic control of bibliographies is problematic for a variety of reasons. The key reason is that there are a large number of usable bibliographies. Aside from that, it can be difficult to determine whether a bibliography on a given topic exists and is appropriate for a specific user, as well as whether it is worthwhile to obtain it if it is not in stock. The final factor is the expense, as major bibliographies are costly to purchase and store. As a result, bibliographic management of bibliographies is spotty. A well-known publication *The World Bibliography of Bibliographies* by Besterman is currently out of date. As a result, the user's only option is H.W. Wilson's half-yearly *Bibliographic Index 1937*. Walford's *Guide to Reference*

Materials and Sheehy's Guide to Reference Books contain many of the main bibliographies now in use. Many of our bibliographical queries may be fully supplied by internet databases in the near future.

### **3.3.2 Universal Bibliographic Control**

At the worldwide level, document bibliographic control has always been a challenge. Librarians have been concerned about this problem, which has gotten worse over the previous five decades as the volume and variety of publications has increased dramatically. The initiative to compile a Universal Bibliography was previously noted. As a result, there are no known universal bibliographies. However, following WWII, UNESCO took the initiative and underlined that if all countries maintained their current national bibliographies, it may lead to globally effective control of publications. Despite the passage of time, nothing solid has resulted from this. The IFLA-sponsored Universal Bibliographic Control (UBC) program, which began in 1979, emerged to be far more authentic because it was based on the recognition that efficient bibliographic control must begin within individual nations and that the transfer of bibliographic information on them is fostered by treaty on bibliographical depiction.

### **3.3.3 History of Bibliographic Control**

The concept of bibliographic control as we know it now is quite new. Libraries in the Middle Ages retained records of their holdings, and ancient civilisations inscribed lists of books onto tablets. Multiple copies of a single book could be printed fast after the printing press was invented in the 15th century. A German librarian named Johann Trithem was the first to construct a chronological bibliography with an alphabetical author index. In the next century, Konrad Gesner followed in his footsteps by publishing an author bibliography and subject index. He added an alphabetical list of authors with inverted names to his bibliography, which was a novel method. He also mentioned different spellings of author's names, which was a predecessor of authority control. Andrew Maunsell further changed bibliographic control by proposing that a book be searchable by the author's surname, the book's subject, and the translator. Sir Thomas Bodley was interested in a catalogue organised alphabetically by the author's last name as well as subject listings in the 17th century. In 1697, Frederic Rostgaard proposed subject divisions based on both chronology and size (whereas previously, titles were sorted just by their size), as well as a subject and author index by last name, and the preservation of word order in titles based on the title page.

France's government was the first to issue a national code giving rules for classifying library collections following the French Revolution. Anthony Panizzi produced his "Ninety-One Cataloging Standards" (1841) at the

British Museum Library, which effectively served as the foundation for cataloguing rules in the 19th and 20th centuries. ISBD and Dublin Core are both based on Panizzi's "91 Rules." Charles C. Jewett employed Panizzi's "91 Rules" at the Smithsonian Institution, bringing Americans into the field of cataloguing, which had previously been dominated by Europeans.

#### **4.0 CONCLUSION**

Bibliographies are useful tools for tracking down and identifying diverse publications. They also aid in the discovery of data in publications. Bibliographies are expensive because they need a significant amount of effort, time, and money to prepare. This has additional impact because, by their very nature, they tend to attract primarily institutional buyers.

#### **5.0 SUMMARY**

The Section has demonstrated that bibliographic control is critical for library work and for research scholars to complete their studies. They can also be used to identify papers, determine their presence, and choose content for libraries. As a result, they must be comprehensive and available in a variety of formats, including universal, national, trade, and subject bibliographies.

#### **6.0 TUTOR-MARKED ASSIGNMENT**

1. Give a detailed account of the bibliographic control.
2. Describe the six most important roles of bibliographic control.

#### **7.0 REFERENCES/FURTHER READING**

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## **MODULE 3      COMPUTERISED INDEXING SYSTEMS**

### **CONTENTS**

- 1.0 Introduction
- 2.0 Objectives
- 3.0 Main Content
  - 3.1 Concept of Computerised Indexing
  - 3.2 Automated Method of Index Production
  - 3.3 Computers as Indexing Tool
  - 3.4 Indexing Using a Computer
  - 3.5 Indexing Software
  - 3.6 Internet and Indexing
- 4.0 Conclusion
- 5.0 Summary
- 6.0 Tutor-Marked Assignment
- 7.0 References/Further Reading

### **1.0 INTRODUCTION**

Computerised indexing is the process of indexing information resources using electronic equipment, specifically computers. Computers are being used for indexing more and more these days. Today's indexers are well-versed in the most up-to-date software and gear. The relevance of computers and other technology in the indexing process is now recognised by indexers. This section covers automated indexing methods, computer use as a tool for indexing, various indexing software, and the impact of technology on indexing.

### **2.0 OBJECTIVES**

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

- identify and describe automated indexing methods
- discuss the use of computers as an indexing tool
- develop skills for computerised indexing
- identify indexing software
- describe how the internet affects indexing.

### **3.0 MAIN CONTENT**

#### **3.1 Concept of Computerised Indexing**

Automated indexing is the use of computer other related technology in indexing activities. Computerised indexing is the process of using a

computer to process natural language text extraction that is already in machine-readable form in order to assign indexing terms to its content without the need for direct human interaction. This development has brought a lot of transformation into indexing activities and practice.

### 3.2 Automated Method of Index Production

Automated indexing is the use of computer other related technology in indexing activities. This development has brought a lot of transformation into indexing activities and practice. There are computerised indexes for keywords in context (KWIC) and keywords out of context (KWOC) under the automated indexing method. Permuted indexes are another name for them. These are non-traditional indexing techniques; the more common ones include classification schemes and subject headings. The concept behind keyword indexing is that specific keyword are good tools for accessing information. The essential assumption is that indexing can be done using words rather than concepts. It also operates on the concept that keywords can be created from abstracts or taken from book or document titles. The substance of a keyword aids in defining or explaining its application in order to direct searchers to the correct article or paper. The KWIC index is most commonly used with titles, although it can also be used with abstracts or older texts, as well as manually with word additions and deletions. The following are KWIC's advantages: Putting objects into the system requires very little or no mental effort. All that is required is for the titles to be produced in electronic form so that the machine can develop and print appropriate entries quickly.

You can give an example of a KWIC index and that of KWOC, so that students can easily differentiate them. E.g.

KWIC index

Why my **horse** doesn't **drink** (full title)

Doesn't **drink** why my (Index terms highlighted in the middle)

Why my **horse** doesn't

KWOC index

Keywords	Title
<b>drink</b>	<b>Why my horse doesn't drink</b>

<b>horse</b>	<b>Why my horse doesn't drink</b>
--------------	-----------------------------------

Works by separating the keyword from the title

Example-Title: Computerisation of Libraries in India

FORMAT 1

COMPUTERISATION Computerisation of libraries in India 1289

INDIA Computerisation of libraries in India 1289

LIBRARIES Computerisation of libraries in Indian 1289

FORMAT 2

COMPUTERISATION

Computerization of libraries in India 1289

INDIA

Computerisation of libraries in India 1289

LIBRARIES

Computerisation of libraries in India 1289

These entries are then filed in an alphabetical sequence in the file of the KWOC index.

Quick indexes are simple and affordable to create thanks to the usage of computers. Aside from efficiency and speed, In what is known as enriched KWIC or KWOC indexes, additional phrases are included to give more index entries, and KWIC indexes may be easily updated with new contents. It's simple to use; some users prefer an alphabetical list of terms because it's a faster way to find articles than the traditional topic heading index, which alphabetises articles by the author within subjects. The following are KWIC's subject merits: It indexes titles as the primary or single source of information. For example, in Science and Engineering, article titles commonly indicate the substance, whereas content is revealed less frequently in nontechnical subjects.

When producing articles or documents, authors are urged to include at least six significant words or keywords, as well as indexing terms. The indexer can only be as specific as the author allows, and many titles only give a basic overview of the articles' subject matter. In the preparation of the KWIC index, each document is given a code number, which may be an accession number, journal code, or the authors' name. Indexers are limited in terms of exhaustivity by the extent to which the author includes details in the title. The data is subsequently entered into a computer, together with the code number and bibliographic reference information. The indexer reads all of the titles and tags each significant term, allowing the computer to produce an entry for each tagged word in one of two ways. By providing a stop list of terms to the computer, the computer understands that it will not index the words in the stop list (insignificant

words as in the stop list). After that, the computer creates an index for every word that isn't on the stop list. It also arranges the entries alphabetically before printing them with their code number and bibliographic reference. Consider the following title: Resource Centre Facilities for Visually and Print Impaired People in Nigeria. The terms for and in are used as stop words. Resource Centre, Facilities, Visually/Print Impaired, Nigeria are the keywords extracted. The term is printed in context, making it easier for the user to locate.

### **3.3 Computers as Indexing Tool**

For years, the indexing community has debated whether computers can perform the duties of an indexer. People have questioned whether a machine could be an effective indexer. What is known is that the computer is a human creation, and its effectiveness will be determined by the human mind's ingenuity. The text of the paper had been successfully transformed into machine-readable form, and all that remained was to program the computer with the right rules in order to achieve the indexing of our dreams. The computer is, without a doubt, an effective indexing tool for the following reasons: – Computers are fast, and one of their selling points is their speed. Is it possible for the human mind to work as quickly as a computer? The computer's speed allows it to complete tasks that would be impossible to complete manually. The computer's speed has made it simple to complete potentially dangerous tasks. It has been claimed that a computer can finish a task in 15 seconds or less that would take a human eight or nine months to complete if the person worked 24 hours a day, seven days a week, using paper and pencil (Cleveland and Cleveland, 2001).

Computers are programmed to carry out tasks in a logical order and are meant to follow instructions automatically. programs are stored in the computer, which then executes the instructions one by one. Humans simply need to enter data into the computer when it is required, and it will then carry out its tasks without human interference. Computers are precise machines that make few errors. It rarely makes a computation error, regardless of how large the data is. It is a trustworthy gadget that can be used by anyone. When people provide the computer with incorrect or erroneous data or instructions, the computer will process the information according to the data provided. The computer encourages rigorous problem study and will only work on a problem that has been meticulously analyzed and mapped out. The computer, on the other hand, malfunctions when programmers fail to comprehend the problem at hand. Before installing a computer, it is critical to have a thorough understanding of the problem or the system being automated. Online database searching, indexing, the construction and maintenance of



thesauri, general reference service, cataloguing and categorising labour, and other duties have all been made easier by computers.

Indexing has benefited from the use of computers. The indexer looks for surrogates that represent the information in the indexed document. But how effective is a machine at indexing a document with a lot of information? A computer can make judgements in the areas of number comparison, character comparison, and machine system testing, according to Cleveland and Cleveland (2001). Its most basic capacity, and the limit of its intellectual ability, is to make a judgment based on the relative magnitude of two integers. The capacity of a programmer to use a computer's simple, logical ability determines the computer's decision-making power. In this analysis, it is appropriate to state that computers cannot index on their own, but that they can easily construct a concordance, which is a list of words or phrases and where they appear, but you will agree with me that this is not an index and may not be useful for someone funding information. No indexing software can index books because book indexing requires the manipulation and structuring of concepts and information contained in documents, which the computer cannot and will likely never be able to achieve for many years.

When the text of a document is saved to a computer disk, however, the indexing features of applications can easily manage page numbers and sorting. The main indexing labour will still be done by a human, but his job will be made easier by the use of software that helps with index sorting, editing, and formatting. Because human indexing is a costly endeavour, indexers' attention has shifted to the use of computers for indexing. Computers, on the other hand, have shown to be a poor substitute for the human brain. Programs that can understand natural languages have yet to be written by programmers. Human judgments are still relied on by computers; no computer has this competence, and certain value judgments are essential in indexing and abstracting.

### **3.4 Indexing Software**

The following are the general categories of indexing software as defined by Cleveland and Cleveland (2001):

- \* Computer-assisted Indexes
- \* Embedded Software
- \* Stand-alone Software
- \* Automated Indexing Software ( would be nice to explain the points outlined by Cleveland 2001 by taking them one after the other)

The embedding program inserts indexing codes into electronic texts and enables text updates as needed. When the file changes, the tags change to

the terms, and the indexer tags the texts with terms. The indexer can work independently of the publication or document being indexed with stand-alone software. It is employed in the indexing of books. By searching the content of documents, the automated indexing program creates a list of words. Machine-assisted indexing software differs from automated indexing software in that it allows humans to undertake the real intellectual work of indexing while the computer takes care of the boring stuff. A human scans a document and marks the places that need to be indexed, such as the title, methodology, results, first and final sentences in paragraphs, and so on. The document is entered into the computer, which creates words using typical automatic indexing procedures. After that, a person edits and makes adjustments as needed, while the machine finishes the task by doing the necessary manipulations. The PRECIS system is a good example of this type of system. Automatic formatting style, entering and edition entry techniques, sorting order printing effects, and merging index capability are some relevant recommendations for evaluating indexing software, according to Fetters (1994) referenced in (Cleveland & Cleveland 2001).

### **3.5 Internet and Indexing**

The internet has given us tremendous access to endless information, but it has also brought with it a slew of challenges and issues. One of the most serious issues for librarians and indexers is how to arrange the vast amount of information available on the internet. For indexers and abstractors, the internet has also proven to be a useful communication tool. They use the internet to discuss their activities and job since it is quick, inexpensive, and convenient. The lack of a unified standard for knowledge organisation, browsing methods, and other protocols has been recognised as making internet use and search relatively challenging.

Conservative indexers found the internet to be unappealing since using regulated languages for search can result in a small number of hits compared to using free languages. Search engines are programs that scan web pages in order to index them for use in a search engine. They are also known as web indexes since they search the content of web pages. They go to websites to pick and detect information updates, but they frequently fail to find what they're looking for. The search engine compares user queries to likely terms from its database of websites, then presents the searcher with an ordered list based on a ranking algorithm. Because the information on online pages is continually changing, search engines that use a searching mechanism called a robot, spider, or crawler may not be able to retrieve what is needed. Low recall, uneven quality, large variances in indexing depth, and a lack of advanced searching capabilities are some of the flaws of web crawling robot indexes. A web index has the same purpose of finding information as a search engine, but it directs you

to millions of files. The internet can be thought of as a massive database of information, some of which is untrustworthy, provocative, and deceptive. The information on the internet is never organised in the same way that it is in an online catalogue database. In essence, there is no standards or bibliographic control on how the material is organised on the internet. The internet is complicated and chaotic information and knowledge repository.

#### **4.0 CONCLUSION**

From the foregoing, it is clear that automated indexing systems have their advantages; yet, the fact that the human mind aids the computer in the indexing process suggests that the computer may not be capable of producing good indexes on its own. Human intelligence is essential for good indexing, and we must develop computers and software that will allow us to minimize our indexing responsibilities to those that the machine can handle. The computer is a product of human ingenuity.

#### **5.0 SUMMARY**

Keywords in context and keywords out of content systems are used to illustrate the benefits and drawbacks of automated indexes in this section. Computers are also used to teach the KWIC preparation process. The section went on to highlight the relevance of computers as indexing tools and why they would continue to be beneficial for indexing in the future. It also briefly explains how indexing is done on computers, the different types and classes of indexing software, and the relationship between indexing and the internet, at least from the perspective of librarians and indexers.

#### **6.0 TUTOR-MARKED ASSIGNMENT**

1. Describe the following: Keyword in Context (KWIC) and Keyword out of Context (KWOC) are two automated indexing approaches (KWOC).
2. What are the KWIC system's advantages and disadvantages?
3. What are the advantages of using a computer for indexing?
4. How important are computers in indexing compared to humans in which areas?
5. What types of indexing software are there?
6. What are the internet's inadequacies when it comes to indexing?

#### **7.0 REFERENCES/FURTHER READING**

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## **MODULE 4      TYPES AND TECHNIQUES OF ABSTRACTS AND ABSTRACTING**

Unit 1	Types of Abstract
Unit 2	Evaluation of Abstract and Index
Unit 3	Abstracting Techniques
Unit 4	Computerised Abstracting Systems

### **UNIT 1      TYPES OF ABSTRACT**

#### **CONTENTS**

1.0	Introduction
2.0	Objectives
3.0	Main Content
3.1	Informative Abstract
3.2	Indicative Abstract
3.3	Other types of Abstract
3.4	Functions of Abstract
4.0	Conclusion
5.0	Summary
6.0	Tutor-Marked Assignment
7.0	References/Further Reading

#### **1.0      INTRODUCTION**

An abstract is a concise summary of an information package. This can be books, journals, dissertation, thesis, conference proceedings and so on. The essence of an abstract is to help patrons capture or understand the central idea or purpose of the document. An abstract generally comes at the beginning of an information package serving as the entry point. Most abstract services in academic disciplines aimed at accumulating a body of literature in related fields. The goal of abstracting services for various academic fields is to compile a body of literature for that subject. This workshop will cover the two most common forms of abstracts: indicative and informative. Other kinds of abstracts

#### **2.0      OBJECTIVES**

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

- define what is informative and indicative abstract
- differentiate between informative abstract and indicative abstract
- identify other types of abstract
- state the functions of abstract.

### 3.0 MAIN CONTENT

#### 3.1 Informative Abstract

An informative abstract provide a detailed information about an information package. The length of the abstract may range from 100 to 200 words to a page or more in length. However, the length may vary based on the document type. For example, for thesis and dissertation the abstract may range up to 500 There are several forms of abstract in use depending on the aim in which they are provided. The indicative abstract on the other hand is fairly short ranging from 50-100 words. This type of abstract essentially summaries the content of a document within each paragraph. Looking at the detailed nature of informative abstract it can serve as a substitute to the original document. Informative abstract by its nature provides a detailed summary of an information package both in terms of quality and quantity, reporting findings of empirical studies, reports and so on. Hence, it is an abridged version of the original document that captures all the major ideas and facts.

It communicates the document's substance without requiring the reader to read it. You'll create an informative abstract if you're writing an abstract for a rigorously structured document like an experiment, study, or survey. The reason for the experiment or inquiry, as well as the key objectives of the experiment or research, should be stated in the purpose part of an informative abstract. An informative abstract's purpose section may additionally provide the experiment's hypothesis. The strategies employed in conducting the experiment should be described in the methodology part of an informative abstract. This section should only provide as much information as is required to comprehend the experiment; the abstract should not be solely focused on research methodologies unless it is the primary emphasis of the original article. The observations and/or data acquired during the experiment should be described in the results part of an interesting abstract. Only the most important results should be given in this part, which should be brief and useful. The evaluation or analysis of the experiment results should be stated in the conclusion part of an informative abstract. It should also mention the ramifications of the findings. This section of the conclusion could potentially state whether the experiment's central hypothesis was correct.

##### 3.1.1 Component of informative abstract

- The objectives of the work: this form the central goal or idea of the research or document
  - The methodology: this covers a “contextual framework' for research, a coherent and logical scheme based on views,

- beliefs, and values, that guides the choices researchers [or other users] make". In specific terms, it covers the population of the study and the area covered by the study
- The finding or result: the report the outcome of the study based on the objective that was set out for the study
  - Conclusion and recommendation: this reports the final judgement or decision reached as well as possible suggestions and solution to the identified problem

**A good informative abstract should have the following characteristics.**

Structured – Usually 250 words or above.

The structure of the abstract is title-introduction-methodology-body-conclusion.

It includes the information and arguments offered in the text.

Due to its quality and quantity, it tends to be longer than other forms of abstracts.

This is sometimes referred to as a situation-problem-solution-evaluation paradigm in engineering.

Reports on the structure of the paper – Reports on the paper's purpose/objectives, method, findings, and conclusions.

Connected — Makes logical links between the abstract's components.

Adds nothing new — This section summarises the study and does not include any new information or analysis.

### **3.2 Indicative or Descriptive Abstract**

Indicative abstract indicates the salient point of an information package. (unnecessary details are avoided in all types of abstracts) It reports a precise and straightforward summary of a document. An indicative abstract cannot serve as a substitute for the original document. The purpose of indicative/descriptive abstracts is to inform the user or reader about the presence of documents. They are usually short and objective. Indicative abstracts define the kind and form of the abstracted work, identifies the principal topics covered in the work and gives a brief overview of how the facts and concerns were treated. It does not attempt to summarise or analyse the content. An indicative abstract identifies the kind of document that is being abstracted. Indicative abstracts are often brief, written in general terms, and do not provide a step-by-step narrative

of the document's production to the reader. It summarises the content of document so that the reader may decide whether or not to read it. The table of contents page can be compared to an indicative abstract in some aspects. On the contrary, an indicative abstract highlights the salient point contained in the document. Hence it cannot replace reading the actual material. Indicative abstracts are less prevalent since they do not meet the critical aims of abstracts unlike the informative abstract. Because indicative abstracts rarely reveal the true substance of documents, they cannot be utilized as a substitute for the original. They merely tell users what they can find in documents, not the actual data or information they contain.

The rationale for or key objectives of the inquiry should be stated in the purpose section of an indicative abstract. A suggestive abstract's goal section may additionally include the experiment's hypothesis. The strategies employed in performing the inquiry should be described in the methodology part of an indicative abstract. This section should only provide as much information as is required to comprehend the experiment; the abstract should not be solely focused on research methodologies unless it is the primary emphasis of the original article. Unlike informative documents, the reader/user cannot grasp the content of the message provided by the document until he/she reads the entire document.

### **3.2.1 Components of the Indicative Abstract**

The following items are included in the content of the indicative abstract:

- The work's purpose (objectives)
- The method utilized
- The scope of the work

For example:

- Ahmadu Bello University resumes for 2019/2020 academic session
- Campaign guidelines for 2023 are outlined.
- NPA director-general suspended

### **3.3 Other types of Abstract**

Indicative and informative abstracts are the main types of abstracts frequently used by scholars, librarians and professional abstractors. However, there exist other types of abstract which include but are not limited to critical abstract, mission-oriented abstract and subject-oriented abstract



### 3.3.1 Critical Abstract

A critical abstract could be defined as critical analysis and evaluation of information material. It is essentially the condensation or distillation and critique of the most important components of a document. In this regards, the abstract analyses and evaluate materials and makes comparison with other works in the same subject area. Therefore, a critical abstract is a “condensed critical review”. This means that a critical abstract is a form of an intellectual summary of a document aimed at evaluating the strength and weaknesses of documents mostly by comparing them with other works in similar areas.

The objective of the critical abstract is to make a value judgment on a document. It could also be a paper's editorial comment. The content of the text is reflected in the critical abstract, which indicates its depth while also commenting on various parts of the material. As a result, the abstractor is a subject expert with a thorough understanding of the document's content. Despite the fact that some abstractors believe that a good abstract should avoid the bias and critical comments that characterize critical abstracts, it is still a powerful and efficient tool. Its strength is that the abstractor is sufficiently aware of the paper's or document's subject areas, techniques, and other essential areas to make value judgments.

According to Cleveland and Cleveland (2001), critical abstracts are typically used o in general articles with broad overviews, reviews, and monographs, but they can also be used for single papers. It's vital to note that the content of a document, as well as the users of the document, are the factors that go into determining which type of abstract to employ.

### 3.3.2 Discipline Oriented Abstract

A discipline-oriented abstract is one that is focused on a single field of knowledge or discipline, and it is concerned with abstracting papers in that field. As an example (chemical Abstracts, Library and Information Science Abstracts LISA). The Chemical Abstract is dedicated to the field of chemistry, whereas the Library and Information Science Abstract is dedicated to the domain of Library and Information Science.

### 3.3.3 Mission Oriented Abstract

This is a form of abstract that aims to support a particular project or research or assignment that may be disciplinary based or multidisciplinary in nature. This form of abstract dwells more on a subject area or discipline. E.g. child abuse, environmental degradation etc.

### **3.3.4 Statistical /Numerical/Tabular Abstract**

They're a way of summing up numerical data. Original data is not tampered with by the abstractor. He or she summarises information for presentation or decision-making purposes. Selecting meaningful data from the original data necessitates skills and ability.

### **3.3.5 Highlight abstract**

This simply attracts or draws readers' attention to articles or titles; they function similarly to running titles. They are significantly lengthier than indicative abstracts and appear in primary journals or conference proceedings.

## **3.4 Criteria for Selecting Articles to be Abstracted**

Before beginning any form of abstracting service, some criteria must be created to select documents or articles to be abstracted. There are numerous information sources available nowadays that are irrelevant to users.

1. Documents that are relevant to the users' interests.
2. Compile a list of contributions that are unique. It contains components of knowledge contribution.
3. A final document that contains information that maybe difficult to get, such as foreign documents, internal reports or memoranda, and other limited-circulation documents.
4. A final research report or other reports that include well-supported, sound methodologies and persuasive evidence.
5. Sources in a certain publication or report published by a particular organization, such as the Nigeria Library Association, the Nigeria Medical Association, and so on.

## **3.5 Functions of Abstracts in Information Retrieval**

The following serves as functions of abstracts as proffered by Nnadozie (2007):

1. An abstract serves as a guide to the reader of a document and helps him decide either to read the full document or not by providing value-added service; bibliographic details and an intellectual summary of the information package. This allows the reader to ascertain whether the full material is relevant to his information need or not, thus saving his time.
2. An abstract can serve as a current awareness tool which keeps users; researchers, scholars abreast of current trends and progress

in their research focus area. This kind of information is primarily available through the informative abstract.

3. An abstract assists in bibliographic control. This is possible through the identification and documentation of various existing information sources, together with their detailed bibliographic information. By implication, it assists in preventing duplication of research effort, waste of time and resources.
4. An abstract give information users the privilege to read summaries of works or research conducted across the globe; when they have access to the original document. This serves as a valuable resource in the review of related literature across diverse disciplines.
5. Abstracts can facilitate indexing efficiency by grasping the central focus of a document at the initial stage of indexing.
6. . Abstracts are true bibliographic control tools. They assist researchers in preventing or at least reducing plagiarism by alerting them to the availability of identical works done elsewhere. It also aids in avoiding the needless duplication of already completed work.

### **Dos And Don'ts in Abstracts**

When creating descriptive and informative abstracts, there are a few frequent mistakes to avoid:

- Don't repeat the paper's title because it's already in the title (and the more you repeat the title, the more boring it gets and the more space it wastes).
- Don't include any literature references (e.g. Bloggs, 1999).
- Figures and tables should not be included in the abstract.
- Avoid as much as possible incorporating ideas outside the original document. The title of the work should serve as an independent unit that may be used in an indexing and abstracting services like Compendex or Science Citation Index.
- Avoid citation to sources from literature in the abstract (Caron 2021) (repeated point)
- Always avoid inclusion of figures, Charts and tables in the abstract (repeated point)
- Avoid using ambiguous acronyms and abbreviations. Always try to defined acronyms in your text.

## 4.0 CONCLUSION

The indicative abstract is among the major types of abstracts commonly used. The indicative abstract always provides the reader with a document with salient points. This limits the indicative abstract's ability in reporting detailed information about the original document or serve as a substitute. On the other hand, informative abstracts, include enough information to be considered a substitute for the original material, despite the fact that it is not. It tries to capture as much of the content of documents as feasible. Critical abstracts not only represent the content of a document, but also make observations or judgments about it.

## 5.0 SUMMARY

In this unit, the importance of discipline-specific and mission-specific abstracts was discussed. Abstract writing is more than just a creative endeavour; the writer is always seeking methods to improve and polish the abstract to correspond to the original document's substance. Abstracts have also been highlighted as having the following functions: saving the user's time, serving as current awareness tools, serving as bibliographic control tools, leading the user to the source work, and improving indexing efficiency. This is why informative abstract covers as much as possible the detailed and comprehensive narration the contents of the document. Also, the unit covers disciplinary and mission-oriented abstracts as other distinct forms of abstracts. Similarly, functions of abstracts were identified to include: saving the user's time, serve as current awareness tools, serve as tools for bibliographic control, lead the user to the original work and improve indexing efficiency. Noteworthy is the fact that writing a good abstract requires paying attention to details and creativity.

## 6.0 TUTOR-MARKED ASSIGNMENT

1. What is your understanding of informative and indicative abstracts?
2. Differentiate between informative abstract and indicative abstract
3. State the functions of an abstract

## 7.0 REFERENCES/FURTHER READING

- Aina, L. O. (2004). *Library and Information Science text in Africa*. Ibadan: Third World.
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## **UNIT 2 EVALUATION OF ABSTRACT AND INDEX**

### **CONTENTS**

- 1.0 Introduction
- 2.0 Objectives
- 3.0 Main Content
  - 3.1 Abstract Evaluation
  - 3.2 Quality of Good Abstract
- 4.0 Summary
- 5.0 Conclusion
- 6.0 Tutor-Marked Assignment
- 7.0 References/Further Reading

### **1.0 INTRODUCTION**

The goal of abstract evaluation is to determine an abstract's efficacy or value. You can use evaluation to determine whether your abstract is good or awful. We assess abstracts to determine their quality. A good or terrible abstract is determined by a number of elements that will be discussed in this session. The quality of an abstract is measured by how well it represents the source document. Is it possible to substitute it with the original document?

### **2.0 OBJECTIVES**

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

- identify the criteria for evaluation of an abstract
- define the term "abstract evaluation."

### **3.0 MAIN CONTENT**

#### **3.1 Abstract Evaluation**

Abstract evaluation, according to experts, might be extremely difficult to achieve. The quality of an abstract determines how good it is. To enumerate abstracts, Cleveland and Cleveland (2001) suggest using a variety of error direction methods such as correct citations, factual description, and deletion of crucial topics.

- Diction and Grammar
- Redundant phrases
- Obscure writing
- Conformity to abstracting policy and rules

- Promptness in publication
- Cost • Quality supportive indexes
- Authoritativeness
- Brevity is another criterion used to evaluate abstracts.

A good abstract should also represent what the object is about, be error-free, and be free of unnecessary material. It needs to be readable. Users of abstracts typically do not require access to the original document; instead, they require a proxy of the original, which the abstract provides.

### **3.2 Qualities of Good Abstract**

- A quality abstract should precisely adhere to the conventional checklist of abstract preparation procedures or methods. It should follow the introduction, methodology, findings, conclusion, and recommendations style, which presents and convey the intended message to readers base on the set goal, results, conclusion, and recommendations of an article, paper, or report in that order. This is critical for the marketability of your abstracts, as it serves the demand of the customer.
- A decent abstract should adhere to the typical checklist of procedures or methods for preparing an abstract. It should follow the introduction, methodology, findings, conclusion, and recommendations structure, which presents the goal, results, conclusion, and recommendations of an article, paper, or report in that order. This is critical for the marketability of your abstract, since it allows you to meet the needs of your readers.
- It must be well-written and logical; scientific methods should be combined with a summary to repackage a multi-page material into a paragraph. It must be well-developed. For readability, this is required
- An excellent abstract should collect details, ideas, or opinions from works and precisely duplicate them without ambiguity.
- A good abstract should utilise technical language at the same level as the paper or article.
- It should assist the reader in deciding whether or not to read the original content.
- It should aid in the comprehension of the original work. It should serve as an excellent pre-reading outline of the paper's main ideas.
- It should aid in the comprehension of the original work. It should serve as an excellent pre-reading outline of the paper's main ideas.

## SELF-ASSESSMENT EXERCISE

- i. Identify the Criteria for evaluation of an abstract
- ii. State the qualities of abstract
- iii. Explain the meaning of abstract evaluation
- iv. Explain the criteria for evaluating an index

## 4.0 CONCLUSION

Evaluation of abstracts and knowledge of the attributes of a good abstract is critical for information retrieval and utilisation. Abstracts are important to librarians, and a good abstract ensures document accessibility.

## 5.0 SUMMARY

In this section, we've focused on the methods for evaluating abstracts, specifically the parameters that can be used to evaluate if an abstract is excellent or terrible. Librarians know the importance of abstracts and that a quality abstract ensures accessibility to documents. This unit focused on the means of abstract evaluation, the parameters for determining if an abstract is good or bad. Also highlighted are the specific points to look out for in an abstract to determine its quality. Index evaluation is done so that its effectiveness and efficiency can be put to test.

## 6.0 TUTOR-MARKED ASSIGNMENT

Why is abstract evaluation critical to both the audience and the abstractor?

## 7.0 REFERENCES/FURTHER READING

- Aina, L. O. (2004). *Library and Information Science text in Africa*. Ibadan: Third World.
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- Osarome, O. (2017) History and Types of Indexes. Accessed via <https://osarome.blogspot.com/>

## **UNIT 3     ABSTRACTING TECHNIQUES**

### **CONTENTS**

- 1.0 Introduction
- 2.0 Objectives
- 3.0 Main Content
  - 3.1 Abstracting Techniques
  - 3.2 Writing an Abstract
    - 3.2.1 Reviewing an Abstract
    - 3.2.3 Editing an Abstract
- 4.0 Summary
- 5.0 Conclusion
- 6.0 Tutor Marked Assignment
- 7.0 References/Further Reading

### **1.0 INTRODUCTION**

The essence of any type of abstract is to guide the users essentially on the information contained in a document by understandably providing a summary. This helps users to have a glimpse or clue about the content of the document, saves their time, and most importantly, enables them to decide whether to read the full content or not. This process involves the identification, analysis and reporting theme, focus, or central idea of a document. Therefore, the preparation of an abstract involves techniques and guidelines to assist the abstractor. Abstracting is the process of creating a concise and objective description of a document's content that allows consumers to swiftly decide whether or not to read the complete text in order to meet their information needs. It entails summarizing or analyzing a document's content and highlighting the key elements so that the user can determine whether or not to consult the text. This preparation entails techniques and recommendations that will aid and guide the abstractor in reaching his goal in the most efficient and effective manner possible.

### **2.0 OBJECTIVES**

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

- identify the techniques for abstracting
- state the reason we revise abstracts
- identify areas covered by editing.

## **3.0 MAIN CONTENT**

### **3.1 Abstracting Techniques**

Abstracting techniques are styles and guidelines adopted by abstractors to arrive at a meaningful and comprehensive summary useful for their audience. It is an intellectual activity that requires expertise and follows some guidelines or styles. After the initial writing, the abstract needs to be revised and edited. Revising entails going over the abstract again and reading it extremely carefully in order to identify errors and make corrections. Editing is a process that should be done with great care because abstracts might contain omissions and flaws that render the abstract ineffective.

#### **3.1.1 Writing an Abstract**

Abstract writing requires an adequate understanding of the document, the right form title, the structure of the document and the central theme or message that the document intends to pass across to the audience. Without a good knowledge of the document, the abstractor may not likely produce a good abstract. The abstractor, therefore, requires the needed set of skills such as the terminologies used in the document and the ability to transmit the intended message across the users in a clear, precise and concise manner.

Here are some helpful suggestions for creating abstracts:

- Highlight or copy sentences summarising the entire paper or individual sections as you read through a paper to be abstracted.
- Write a sentence that encapsulates the key idea.
- Include summary sentences for each section.
- If you're writing an indicative abstract, you can start rewriting now.
- If you're writing an informative abstract, look over the manuscript for important findings and major conclusions.

You might also use this writing method or style:

- After reading each paragraph, write one phrase or sentence that encapsulates the core of it.
- Examine this list of sentences or phrases to see if there are any connections between them. Are there any links between the sentences?
- You should have a suggestive abstract after refining your outline to four or five general themes.

- For insightful abstracts, fill in the important elements regarding the paper's substance.

Whatever method you use to write your abstract, it's critical to be brief and accurate in stating the document's essential points. The abstract usually begins with a one-sentence overview of your paper's key point, and it frequently introduces the paper's problem. You must be careful not to narrow your emphasis too much, and you must test your abilities to determine how concise your one-sentence summary is.

### **3.1.2 Revising an Abstract**

Revising an abstract is very important and central to the production of a good abstract itself. Revising simply means reading the abstract to ensure that it captures the central themes and ideas as appropriate. The process looks simple but very sensitive as it requires a high level of attention and rigour. During this process errors; wrong spellings, disjointed ideas are identified, unnecessary wording are rectified.

We are frequently requested to write an abstract with a modest word count; a thorough re-read of your abstract might help you achieve this. The writer wants to make sure that each sentence in your abstract flows easily into the next with proper revision. It's possible that the writer may need to add or change words or phrases, as well as repeat keywords. He may also be required to combine terms so that the relationships between ideas are presented in a logical manner. Finally, the writer must verify that the abstract is readable.

### **3.1.3 Editing an Abstract**

Abstracts must be edited for a variety of reasons. Before being published, all literary work goes through an editing procedure, and abstracts are no exception. The following items are addressed in the abstract:

- Omissions
- Reference errors
- Poor diction
- Meaningless abbreviations
- Poor grammar
- Punctuation errors, and so on.

When done properly, abstract editing examines the content of the article, as well as the content analysis and general quality of the abstract. To establish abstract quality, the abstract editor must essentially work directly with the original document. The editing process begins with a comparison of the reference section to the source content. The editor double-checks that the abstract carry accurate information correct as

contained in the original document without any misleading information. The process of editing begins with a comparison of the reference section to the original document. Author names, titles, journal names, sources, and journal volume and issue numbers are all examined. The editor double-checks them for accuracy. Numerical data is double-checked to ensure that it matches what's in the paper. The editor ensures that all terms in the text comply with the rules provided to the abstractor. When necessary, the editor corrects the grammar, abbreviates words, eliminates repetitions, removes extraneous topics, and corrects diction problems.

#### **4.0 CONCLUSION**

Abstracting is the process of creating a concise and objective description of a document's content that allows consumers to swiftly decide whether or not to read the complete text in order to meet their information needs. Abstracting Techniques are the styles and rules that an abstractor uses to provide a relevant and thorough summary for their audience.

#### **5.0 SUMMARY**

In this unit, we learned that producing techniques for abstracts include highlighting sentences that summarise the entire article or sections, writing a sentence that highlights the main point, adding phrases that summarise sections, checking the paper for specifics of significant findings and major conclusions, and then modifying. Also, we discussed that editing work takes care of many types of errors. It ensures that the content of abstracts is correct and fit for purpose, while revising work involves a full examination of the abstract, deleting unneeded items, words, and phrases, and ensuring that it is easy to read and understand.

#### **6.0 TUTOR-MARKED ASSIGNMENT**

Identify the areas of interest in revising and editing of abstract.

#### **7.0 REFERENCES/FURTHER READING**

Aina, L. O. (2004). *Library and Information Science text in Africa*. Ibadan: Third World.

Bennett, D. B., & Williams, P. (2006). *Name Authority Challenges for Indexing and Abstracting Databases. Evidence-Based Library and Information Practice*, 1(1), 37-57.

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## **UNIT 4      COMPUTERISED                  INDEXING                  AND ABSTRACTING SYSTEM**

### **CONTENTS**

- 1.0 Introduction
- 2.0 Objectives
- 3.0 Main Content
  - 3.1 Use of Computers in Indexing and Abstracting  
(Individual or Group Assignments)
- 4.0 Conclusion
- 5.0 Summary
- 6.0 Tutor-Marked Assignment
- 7.0 References/Further Reading

### **10 INTRODUCTION**

Information and communication technology (ICT) has touched nearly every aspect of our lives, including information organisations, access and retrieval. The world is shifting from the manual method of information creation and repackaging. This development leads to the emergence of automated indexing and abstracting. Automation is the process of scanning, identification and assigning key terms from a large volume of information against control vocabulary without human intervention. This development no doubt enables the indexer to index large volumes of information with little difficulty. There are four different approaches to automated indexing. The statistical approach, the syntactical approach, the semantic approach, and the knowledge-based system are all viable options.

#### **2.0 OBJECTIVES**

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

- describe the use of computers in relation to indexing and abstracting services.

#### **3.0 MAIN CONTENT**

##### **3.1 Use of Computers in Indexing and Abstracting**

Over the last two decades, automated indexing has continued to grow in an accelerated way. Computers and related technologies are used by large organisations to index valuable information in their everyday operations. This has no doubt increased their efficiency in information retrieval and

access. Automated indexing is possible through the use of the computer to identify, capture, assigned and arrange index terms to a document without human interference. Sheth (2004) and Obaseki (2010) argued that automated indexing is fast and cost-effective. Automated indexing uses an algorithm system. This system works in a database where keywords or bibliographic records of documents are embedded to enable users to search at the point of retrieval. Despite the advantages of automated indexing over manual indexing systems, some scholars argue that manual indexing is still relevant in the information age.

Tulic (2005), for example, supports human indexing by stating that “to date, no one has found a method to give computer programs the judgment, competence, intelligence, or audience awareness that is required to construct usable indexes.” Until it happens, automated indexing will remain a pipe dream”. However, there are several companies engaged in the business of online indexing and abstracting. Some of these companies include but are not limited to ERIC, and OVID Within their time frame of operations, different indexing and abstracting software was produced, this includes INSPECT (for engineering), Biological abstract etc. At the initial stage, these products were offline and made available in CD-ROM format. But today, these services are available online, and the providers are now highly engaged with large volumes of works for their customers.

### **SELF-ASSESSMENT EXERCISE**

Describe the use of computers in relation to indexing and abstracting services.

## **4.0 CONCLUSION**

As a result of the advent of various types of indexes, citation indexes were the result of earlier work, and computer-aided indexing made it feasible to offer an index to words, author names, journal titles, citations, and many other things. Libraries were able to access indexes through the internet thanks to library automation.

## **5.0 SUMMARY**

The unit emphasised the technological revolution brought about by information and communication technologies in indexing and abstracting. There is no doubt that the use of computers and other related technologies has had a great impact on indexing and abstracting activities. Besides, there are numerous advantages of automated indexing and abstracting over manual which includes speed, accuracy among other advantages.



## 6.0 TUTOR-MARKED ASSIGNMENT

The invention of the computer is a blessing and a curse. Discuss for or against the motion.

## 7.0 REFERENCES/ FURTHER READING

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## **MODULE 5      PRACTICUM ON INDEXING AND ABSTRACTING**

Unit 1	Indexing
Unit 2	Abstracts Guides and Practice
Unit 3	Thesaurus Construction and Use

Module 5 is comprised of 3 units which are centered on carrying out practical exercises on indexing, abstracting and thesaurus construction. You are also encouraged to visit your centre library with your ID showing that you are a student of Library and Information Science from this University for the Centre Librarian to allow you to use the hard copies of these to practice.

### **UNIT 1      INDEXING**

#### **CONTENTS**

1.0	Introduction
2.0	Objectives
3.0	Main Content
3.1	Book and Periodical Indexing
3.2	Indexing a Document, Some Indexing Rules, and Principles
4.0	Conclusion
5.0	Summary
6.0	Tutor-Marked Assignment
7.0	References/Further Reading

#### **1.0      INTRODUCTION**

The process of index production looks simple but is a very herculean task as it requires attentiveness and high-level critical thinking and reading. The process usually begins with the identification of terms and keywords that constitute the major themes within the document, extracting the identified terms and assigning terms from a controlled vocabulary tool. The terms in the index are then presented in a logical sequence. The number of terms to include and how specific the phrases should be are decisions that indexers must make. This adds up to a lot of indexing depth. As a result, this session will cover book and periodical indexing, document indexing, indexing principles, and indexing rules.

#### **2.0      OBJECTIVES**

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

- define book and periodical index
- list the steps in indexing a document
- outline some of the principles of indexing.

### **3.0 MAIN CONTENT**

#### **3.1 Book Index**

Book indexes are collections of entries, frequently organized alphabetically, that help users find the information they need within books. It's also known as the back of the book index, and it gives book or document users quick access to information by using a list of index terms carefully chosen from the book or document itself. The book index is a well-known index among book readers. Situated at the back of books, the book index provides an alphabetical listing of words and phrases, as well as the position of the page where the words or phrases appear in the book. A list of names linked with each term can also be found in book indexes. A book index directs the user to where the necessary information may be located, saving the reader from having to read or re-read the entire book. It's crucial to remember that the index isn't a replacement for the content in the book; rather, it's a guide to the information being sought.

The index is one of the factors used to assess a book's quality. It is critical that books contain indexes so that their content may be accessed quickly and comprehensively. A book without an index, or one with a poor index, is not only incomplete but also inferior because readers expect an index to be included in the text. The book index, in particular, will highlight essential topics in a book that are captured within large chapters that the indexer determined to be important to the user. It also includes a list of people's names, corporate names, and geographical names, as well as their page addresses. The indexer utilizes a natural indexing language rather than a regulated indexing language; he uses the author's terminology. For synonyms and abbreviations, he also employs the “see” and “see also” references.

A book's indexer is thinking about the reader, and he understands that every word, concept, term, or name in the book should be indexed. Some words or concepts have little or no meaning, hence they should be excluded from the index. In this case, the indexer is led by two logical rules. To begin, indexed phrases should be those that are likely to be searched for by a user, and they should also contain enough information within the text or book.

The step in book indexing are highlighted as follows:

- 1- Take the time to read the book. The first step may seem self-evident, but it's critical to go through each book thoroughly before beginning the indexing process. Even if you've already read the book casually, you should still read it entirely while indexing.
- 2- Use indexing software to help you. On simple word processors, there are numerous good indexing software packages. If you're new to indexing, it may be a good idea to use indexing software to make the process easier.
- 3- Make a note in the book. You should mark up the text as you look for key terms and possible section headings, whether you're using a paper copy or reading an ebook or pdf. Make a list of all the themes you want to include in the index, and keep track of comparable items on index cards or a computer document.
- 4- Questions about formatting should be addressed. Decide how you'll format cross-references and page numbers before diving into the actual index entries. Looking at various indices and speaking with colleagues might help you become more aware of different types and determine which ones you favour. A style guide for the design and appearance of a book index, such as the Chicago Manual of Style, is frequently included.
- 5- Fill in the indexes. It's time to build your index after you've read through the main text thoroughly and taken copious notes of your primary headings and subheadings. Make sure your final index includes everything you've indicated in your text and that you're using a consistent style.
- 6- Sort the index entries in a logical order. Because all indexes are sorted alphabetically, make sure your entries are in alphabetical order.
- 7- Make changes to your index. It's time to undertake some copyediting when you've finished the initial draft of your index. Make sure there is no redundancy in subentries and subheadings, and that you haven't forgotten anything before submitting your final index.

### **3.1.1 Periodical Indexes**

Periodical indexes are indexes that refer to a journal or a group of journals. Individual indexes and broad indexes are the two types of indexes. It's critical to comprehend the importance of journal literature to science and study. Journals are essential for intellectual communication; many experts have praised the journal as a beautiful development because it serves as a repository for research findings and new ideas. It is also the source of the majority of information that eventually finds its way into books. Because the periodical index is a list of authors and subjects that describe the content of research reports, it is important to scholarship and knowledge in general.

Index terms are taken from the titles of individual journal articles; there is no need for regulated vocabulary in this case, and a thesaurus may suffice. However, because there are many journals with diverse words, styles, and disciplines, it may be important to employ controlled indexing language for a collection of journals in a certain field of study. In contrast to books with one or two authors, a periodical index may have thousands of authors. Periodical indexes present indexers with a variety of challenges due to their broad scope. Periodical indexes are open-ended; they are created by a group of people over a long period of time, incorporating indexers' differing subject views as well as their indexing goals. A periodical index should be aware of these anomalies and strive to bring the organisation to the index construction.

Since this is the practical section, you can at least show the readers what a periodical index looks like, identifying the components for ease of assimilation.

### **3.2 Indexing a Document**

The capture of bibliographic characteristics of documents is the initial step in the process of indexing a document. It is critical that the entries are consistent. First and foremost, the indexer reads the document as a whole fast to have a thorough comprehension of the document's major theme or subject matter. When doing so, the indexer makes notes on a piece of paper, attempting to identify significant words in the document as well as major ideas in the text. The indexer must determine the locations of all significant words.

Finally, the indexer looks over the document's abstract. This would be done with great care in order to find important keywords.

The indexer will then scan the document's section headings. This is also done to make a list of important words. At this point, all other meaningful terms that have been listed previously are removed. Following the scanning of the section headings, a comprehensive review of the document's text is required. Additional keywords and phrases are extracted from the text by scanning through it. The newly discovered significant words are added to the general term list. Words that have previously been collected are excluded, and inappropriate terms are deleted.

The indexer scans the references after scanning the text; he looks for keywords in the names of the references as well, as the references are thought to indicate what the document is about.

The indexer can now demonstrate his comprehension and understanding of the document thus far by adding terms that he believes are acceptable to fill in the gaps between natural language content and the list of captured significant words. The indexer also adds terms at this stage, with an awareness of who the index's users would be. In other words, indexers understand that words from the text alone will not be enough to express the complete meaning of natural language. Additional words or phrases are added as a result of this.

Finally, the final list of relevant words is cross-checked against a thesaurus to get a broad sense of what has been accomplished. This action effectively aids the indexer in visualizing the index, allowing him to generate broader, narrower, and related terms alternatives. The page is now indexed with a thesaurus, and the list is converted into a controlled vocabulary. The indexer compares each phrase to the thesaurus, reads the scope notes, and analyses broader, narrower, and related terms before deciding on the terms that best reflect what was read in the text and what the user would think about it. Thesaurus is a mental tool used by indexers to make decisions. The document's final exhaustive and particular index words are then generated.

You can put all these together in a neat step-by-step of how to index generally before looking at different types of indexes such as book index/periodical index and how to prepare them

### **3.2.1 The Indexing Rules**

The following are some key rules to remember when indexing documents:

- i. Include all index terms or entries in one alphabetical sequence and index everything useful in the document.
- ii. Unless a special audience is addressed, use popular headings with references to their equivalents. Be consistent in your spelling choices. Make use of a common dictionary.
- iii. Use the most precise phrases that accurately describe the indexed items.
- iv. Consistency in the use of singular and plural nouns is important.
- v. If required, combine the words with the action that describes it.

When required, invert terms to bring important words to the fore.

Make a list of synonyms and references for each term.

Include an identifying phrase in brackets where concepts with the same spellings have different meanings.

Wherever feasible, give the complete names of those mentioned in the text.

All proper names should be written in capital letters.  
Wherever feasible, subdivide terms by aspect alphabetically.  
Substitute chronological sub-divisions for alphabetical sub-divisions in historical or bibliographical works.  
All symbols and abbreviations must be spelt out.  
Avoid employing words in bold type.

### **3.2.2 Principles of Indexing**

The fundamentals of indexing are listed below:  
The use of correct and proper spellings of terms, as well as the presentation of words in the index, must be adhered to at all times.  
Because indexing systems differ, indexing should be uniform and consistent. Indexers must maintain consistency in their indexing.  
The indexer must guarantee that the bibliographic data of the document is complete.

Subject headers and index words must be specific and simple, and the indexer must describe them properly.

The indexer should be careful about the wording he uses. He must make certain that the potential user's language is taken into account favourably.

## **4.0 CONCLUSION**

Book indexing offers or pinpoints the page position of information needed by a user within the book, saving the user the time and effort of having to go through the text to discover it. Because a book is only as good as its index, this is a handy tool for information seekers. Periodical indexes, whether produced for a single journal or a set of journals, allow systematic and orderly access to the names of writers and the topic matter of articles. Its prominence in scientific communication has not waned. Likewise, index creation for a document begins with the recording of bibliographic details of documents. It concludes with the comparison of the final list of relevant words to a thesaurus, giving a general sense of what was accomplished. The indexer can come up with options for the index that are broader, narrower, and related phrases. In addition, the unit covered practical guidelines and concepts that can be used as a guide for indexers to create successful indexes.

## **5.0 Summary**

The book index, in particular, will highlight essential topics in a book that are captured within large chapters that the indexer determined to be important to the user. It also includes a list of people's names, corporate names, and geographical names, as well as their page addresses. The

indexer utilises a natural indexing language rather than a regulated indexing language; he uses the author's terminology. For synonyms and abbreviations, he also employs the “see” and “see also” references.

## 6.0 TUTOR-MARKED ASSIGNMENT

1. What is your understanding of a book index? Avoid asking two questions in one.
2. Describe the periodical index (You can put the question as desired).
3. What are the steps in indexing a document.
- 4.. List some of the principles of indexing.

## 7.0 REFERENCES/FURTHER READING

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## **UNIT 2     ABSTRACTS GUIDES AND PRACTICE**

### **CONTENTS**

- 1.0 Introduction
- 2.0 Objectives
- 3.0 Main Content
  - 3.1 Guide to Writing an Abstract
  - 3.2 Reason for Writing an Abstract
  - 3.3 Consideration for Writing an Abstract
  - 3.4 Sample of an Informative Abstract
- 4.0 Conclusion
- 5.0 Summary
- 6.0 Tutor-Marked Assignment
- 7.0 References/Further Reading

### **1.0 INTRODUCTION**

Document abstracting is a time-consuming technique that necessitates the abstractor's expertise in summarising the actual substance of a document or paper. To abstract a document, the abstractor must follow a set of processes that will result in a "Good" Abstract. It's worth noting that no matter how "excellent" an abstract is, it can't replace the original document; it's merely a substitute. Abstracts are created and used for a variety of reasons. This session will go over how to write an abstract, why it's written, and some things to think about when writing one.

### **2.0 OBJECTIVES**

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

- state the steps to follow while writing an abstract
- list the reasons for writing an abstract
- write good abstract of whatever type and convert the informative abstract to an indicative abstract.

### **3.0 MAIN CONTENT**

#### **3.1 Guide to Writing an Abstract**

To abstract when you are working on a document, the first thing you should do is read it over and figure out what the document is all about. To fully comprehend the paper's core idea, you will need to read it numerous times. When you have finished reading, you should be able to state in one sentence what the paper is about. Following that, the references to the

authors of the original document's works are scanned. After you have written this statement, you should highlight any new ideas you come across in the document, which will allow you to expand the first broad sentence. Then you record the rest of the information. In abstracts, details should be used sparingly. The number of facts described depends on the type of abstract you are writing (informative or indicative), the difficulty of the article you are abstracting, the word limit, and the goals you think your abstract's readers will have for reading it.

The ideal technique to produce an excellent abstract, according to San Francisco Edit (2010), is to start with a draft of the entire book and follow these ten steps:

1. Determine the main goals and conclusions.
2. Look for sentences that contain keywords.
3. Determine the most important findings from the discussion or results section.
4. Put what you have learned thus far into a single paragraph.
5. In the first sentence, state your hypothesis or method.
6. Leave out background information, a study of the literature, and a full description of the methodology.
7. Remove any unnecessary words or phrases.
8. Rewrite the paragraph so that the abstract only contains the most important details.
9. Check to determine if it adheres to the journal's requirements, in case you are writing for a particular journal.
10. Show the abstract to a co-worker (ideally one who is unfamiliar with your job) and ask whether it makes sense.

### **3.1.1 Important Points to Consider When Writing Abstracts**

These are some of the most important considerations while creating an abstract:

- A succinct, accurate statement of the main idea
- Sub-point organisation
- Revising and editing
- Using details

### **3.2 Reason for Writing an Abstract**

The abstract is a crucial instrument. However, the primary purpose for abstracts:

- Abstracts have become crucial tools nowadays as a result of the world's paradigm change from collecting to access.

- Abstracts take pride of place in the scientific literature; they are read far more frequently than those who listen to or read the whole document or paper.
- While writing an abstract might be tiresome, it is appealing to readers who are looking for information in abstracts, resulting in a higher effect for the writer.
- In today's electronic documented scholarly environment, keywords are critical for information retrieval.
- They can be used in libraries and information centres to provide current awareness services.
- Abstracts can assist in answering questions and conducting desk research, which can help meet the needs of information seekers.
- An abstract can assist in the preparation of briefings and report writing.
- Abstracts are an important component in the building of databases all around the world.
- Managers and senior executives who need to quickly ingest documents and review them in reports will benefit from abstracts.

### **3.3 Some Points to Keep in Mind When Writing Abstracts**

- Considering these factors will help you write a strong abstract.
- Abstracts should be a self-contained description of documents; they must stand on their own for their users and for themselves. You must also make sure that your abstract does not exceed the word limit. The size of the text should be lowered. You must also ensure that your abstract has a sufficient number of phrases and keywords for search engines to find when browsing for papers. The search terms will appear at the top of the results page.
- The goal of abstract writing is to explain what you accomplished in the paper in the most straightforward and informative way possible.
- Your abstract isn't a story or a tale, and users won't be interested in reading it. They want rapid and relevant information, and they may decide to read on for further details if they get it.
- You must make sure that your abstract's introduction and conclusion are well-written and presented in order to lure the reader to read the details. These sections should be considered as an instance – of your abstract.
- It's critical that you focus on the substance rather than the goal. You should summarise the original document's content rather than the author's wishes. Only the most important points from the document should be included in your abstract.
- ❖ The main objectives and scope of work should be expressed in the abstract for a research article.

- ❖ Methodology
- ❖ Results and
- ❖ Conclusions
- Assume that the reader is knowledgeable and understands the work while writing your abstract. Write a good explanation of the important points based on the content of the document after thoroughly reading it. After reading the document, the abstract should be written last.
- Use active terms in your abstract, avoid passive words, and avoid conflicts between intent, content, and superfluous words.
- Make sure your abstract is short and to the point. Your abstract should be one paragraph long, not several. A user can easily read a short abstract. In other words, your abstract does not need to be any longer than it needs to be. • It is preferable to make quantitative rather than qualitative claims in your abstract, as this indicates the inclusion of unneeded words, phrases, and ideas.
- In your abstract, avoid using mathematical notations or formulae. Your abstract needs to be self-contained. Give equations and mathematical symbols names.
- Finally, keep in mind that the purpose of the abstract is to present the substance of a document in a concise and direct manner. It should pique the interest of both the casual and serious reader. Your abstract serves as a marketing tool.

### 3.4 Sample of an Informative Abstract

The purpose of this study was to investigate the impact of information and communication technology (ICT) on knowledge sharing among academics in Nigeria's northern states. The study's goals were to determine the types of knowledge that academics shared in Northern Nigerian universities, the types of Information and Communication Technologies (ICTs) that academics used for knowledge sharing in Northern Nigerian universities, and the level of ICT literacy competence among academics for knowledge sharing in Northern Nigerian universities. the impact of academics' use of information and communication technologies (ICTs) on knowledge sharing in universities in Nigeria's northern states, as well as the challenges of academics' use of ICTs on knowledge sharing in universities in Nigeria's northern states.

Quantitative research methodologies, notably a survey research design, were used in the study. Academics from Ahmadu Bello University in Zaria, the Federal University of Technology in Minna, and Umaru Musa Yaraduwa University in Katsina made up the populace. The population consisted of 3,260 academics, of whom 326 were used as samples. The instrument for data gathering was a questionnaire. The acquired data were analysed using descriptive and inferential statistics. Knowledge of my

discipline, knowledge of new technologies, knowledge of current and ongoing research, and knowledge of research supervision was among the key categories of knowledge shared among academics, according to the survey.

Computers, printers, Internet, projector, PowerPoint, Email, CD-ROM, handheld devices, and other ICTs are used to share knowledge among academics. Among all three levels of academics, the Lecturer I-Assistant lecturer cadre possessed the highest ICT literacy. Lack of ICT skills, network fluctuations, technophobia, an unsubscribed database, and an inconsistent power supply were some of the issues affecting the usage of ICTs for knowledge sharing in the universities investigated. The study found that the most advanced ICTs, such as smart boards, E-books, teleconferencing, and video conferencing, should be introduced in the selected universities to provide proper training for the use of these facilities in knowledge transfer. The study recommended that academics be supplied with information literacy skills, with an emphasis on knowledge sharing strategies, as well as training and retraining on how to use these facilities, so that the universities surveyed can keep up with worldwide trends in terms of teaching and research.

#### **4.0 CONCLUSION**

The work of abstracting a document entails several steps, and the abstract writer must be aware of the rationale for these steps, and guarantee that the considerations outlined are taken into account when composing his abstract. When these considerations are followed, the writer will be able to produce an 'Excellent' abstract.

#### **5.0 SUMMARY**

An abstract is a summary of the entire manuscript that includes as much new material as feasible. The ideal technique to produce a successful abstract, according to San Francisco Edit (2010), is to start with a draft of the entire paper and then identify the principal aims and conclusions, as well as phrases with keywords in the methods section.

#### **6.0 TUTOR-MARKED ASSIGNMENT**

1. What is the procedure for writing an abstract?
2. Change the sampled abstract from informative to indicative

#### **7.0 REFERENCE/FURTHER READING**

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## **UNIT 3      THESAURUS CONSTRUCTION AND USE**

### **CONTENTS**

- 1.0 Introduction
- 2.0 Objectives
- 3.0 Main Content
  - 3.1 Meaning of Thesaurus
  - 3.2 Importance of Thesaurus
  - 3.3 Guide to Constructing Thesaurus
  - 3.4 Sample of Thesaurus
- 4.0 Summary
- 5.0 Conclusion
- 6.0 Tutor Marked Assignment
- 7.0 References/Further Reading

### **1.0 INTRODUCTION**

Thesaurus emerged as a result of a concerted effort to address the issues connected with the usage of essentially uncontrolled free vocabularies. In essence, thesauri, like categorisation schemes and subject headings, were created to govern terminology. In a thesaurus, the relationship between terms is more specific; descriptors/terms are dependent on these more particular terms and must be coupled with other terms, unlike in topic headings and categorization schemes. As a result, this lesson goes through the definition of a thesaurus, its importance, and how to build one.

### **2.0 OBJECTIVES**

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

- define Thesaurus
- state the importance of thesaurus
- identify the guide to constructing thesaurus (construct a thesaurus)

### **3.0 MAIN CONTENT**

#### **3.1 Meaning of Thesaurus**

Cleveland and Cleveland (2001) define thesaurus as "a particular language with words, relationships between words, and its own grammatical norms of usage." It is a subset of natural language that is regulated and collected. Its goal is to make indexing and searches more consistent.

A thesaurus is a "managed and structured vocabulary in which concepts are represented by terms, ordered so that links between concepts are made obvious, and favoured phrases are followed by lead-in entries for synonyms or quasi-synonyms" (International Organisation for Standardisation 2011, 2013).

Thesauri are important and useful tools for content discovery, information organisation, and retrieval, for many disciplines, including cultural heritage, higher education, commerce and enterprise. Information professionals can use the thesaurus to describe documents in a consistent way, making it easier for researchers, employees, and the general public to find them.

Knowledge organisation systems (KOSs) and knowledge representation systems come in a variety of shapes and sizes. Different systems are used to define and describe terms and concepts, as well as organise knowledge for improved search and retrieval, ranging from controlled vocabularies to authority lists, categorisation schemes to taxonomies, thesauri, and ontologies. In practice, terminology like controlled vocabulary, taxonomy, thesaurus, and ontology are used interchangeably to describe similar applications and knowledge organising activities across areas.

According to Hedden's *The Accidental Taxonomist* (2010), the term "taxonomy" can refer to a variety of knowledge organizing methods other than standard hierarchical classification (Hedden 2010a). The parallels and contrasts between controlled vocabularies, taxonomies, and thesauri have been examined by a variety of writers (Garshol 2004; Hedden 2010a; Leise and Fast 2002; Pidcock 2003; Taxonomies and Controlled Vocabularies Special Interest Group of the American Society for Indexing, n.d.). The following are their most essential characteristics: (what are the characteristics?)

### **3.1.1 Controlled Vocabulary**

This is a limited collection of terminology that can be used for names, locations, and subjects, as opposed to concepts. A controlled vocabulary does not require a framework, though one may be present. Equivalence terms like USE and Use For (UF) can be used as see reference types, and every term in a restricted vocabulary should ideally have an explicit definition, although this isn't often the case. Authority lists, taxonomies, and thesauri, such as the Library of Congress Subject Headings and The Getty Research Institute's Art & Architecture Thesaurus, are examples of controlled vocabularies (AAT). Site maps and navigation menus are also included.



A regulated vocabulary is used to ensure uniformity throughout searches and to avoid overlooking non-preferred terms. When individuals, places, things, genres, forms, and subjects are described using controlled vocabularies, all relevant records are found or collated under a single term. Controlled vocabularies also eliminate ambiguity in search results and increase precision. For example, if a full-text keyword search for the term "roses" was conducted on a database, the results would include some material containing Shakespeare quotations, which may or may not be desirable:

'What does a name mean? that which we refer to as a rose  
It would smell as lovely under any other name;'

A search for the controlled vocabulary phrase 'roses', on the other hand, would only return documents that had the subject heading 'roses' indexed or tagged.

### **3.1.2 Taxonomies**

A taxonomy is a structured vocabulary organized into a hierarchical tree using parent/child, whole/part, or instance links. To describe these relationships, taxonomies use broader words (BT) and narrower terms (NT), as well as equivalence terms. The term taxonomy has taken on a broader meaning in recent years, notably in business and corporate information management, and it now refers to a variety of vocabulary, including controlled vocabularies, authority lists, thesauri, and ontologies. Taxonomies will be used in this document to refer to the simpler hierarchies that do not have associative links, however, they can be built similarly to a thesaurus. Internally or as a navigational menu on a website, taxonomies can be used for organization and navigation. They can also be a type of classification in which a child node has several of its parent node's features or attributes. The taxonomy tree helps search in both scenarios by allowing users to browse for terms further up or down the hierarchy.

### **3.1.3 Thesaurus**

A thesaurus, like a taxonomy, is a regulated vocabulary with more sophisticated relationships. Hierarchical relationships such as BT and NT, see also, and equivalence relationships, as well as associative relationships such as related terms, are examples of these interactions (RTs).

A thesaurus is a networked collection of terminology in which all terms are related to one another and which helps users not only discover information but also interpret it. ISO 25964 is the most recent

international standard for the production of thesauri. In 2011 and 2013, thesauri and interoperability with other vocabularies were provided in two sections. This document contains suggestions for the creation and management of information retrieval thesauri, as well as their interoperability with other vocabularies.

### **3.2 Importance of Thesaurus**

The major purpose of most thesauri and other controlled vocabularies is to improve a user's ability to discover the information they need quickly and simply, and the ISO standard specifies how they do this.

- Thesauri are tools that allow indexers and researchers to use the same terminology to describe the same themes or concepts, making search and retrieval easier.
- they help with information indexing, retrieval, organising, and navigation (Hedden 2010). A thesaurus' relationships guide users to more general or specialised concepts by helping them to navigate through the lexicon and select the most appropriate phrases for their content. Thesaurus navigation lets a user traverse a subject domain or website, making it far more helpful than a simple regulated list of terms— Thesaurus can be sorted alphabetically by terms or used as a navigational aid and domain map by displaying a systematic framework of hierarchical or categorised relationships.
- In a thesaurus, associative associations can lead a user to similar terms, allowing them to make connections they may not have considered before.
- A thesaurus can be utilised as a source of metadata for subject cataloguing (Broughton 2006) because it can connect diverse items together and improve material discovery and access by utilising all of the above features.
- • Thesaurus are useful in the workplace. Employees waste a lot of time and money hunting for stuff on an intranet that they can't access quickly or easily. Indeed, in certain circumstances, they are unable to locate the information they require. When a customer can't find what they're looking for on a website, they go somewhere else, usually to a competitor (Stewart 2011).
- Many websites now use a type of faceted navigation in which products are organised by their attributes or division principles; for example, shirts can be organised by colour, material, or size.

### **3.3 Guide to constructing a Thesaurus**

Cleveland & Cleveland (2001), listed the following characteristics of a user-oriented thesaurus:

- Contains a glossary of all terminology used in the database.
- Carefully separates terms that are used in a database from those that aren't.
- Provides scope notes for difficulties that end users are likely to encounter.
- Uses self-explanatory names for topics and relationships, as well as a large entry vocabulary tailored to the needs of end-users. This is a highly significant feature.
- Tools such as categorization schemes and subject headings, review articles, monographs, and fundamental reference tools such as dictionaries, handbooks, encyclopedias, and others that deal with terminology in subject fields are utilized in the building of a thesaurus.

Cleveland and Cleveland (2001) recommend the following stages for creating a thesaurus:

- Determine the field of study. The topic field's boundaries should be clearly specified.
- Determine the type of material that will be indexed. Is it mostly journal articles? Is it books, reports, conference papers, and so on? Is it historical or current?
- Determine who the users are and what information they require. Will they ask a general or a specialised question?
- Determine whether the system will be pre-coordinated or post-coordinated.
- For a raw vocabulary, consult published indexes, glossaries, dictionaries, and other resources in the topic areas. This will improve the thesaurus designer's knowledge of the field's terminology and semantic relationships.
- Arrange the terms in a cluster.
- Develop long-term relationships.

Tijjani (2019) also provides the following steps for thesaurus construction:

- Analyse copies of documents related to the field in question.
- Arrange terms into categories.
- Decide which terms will be authorised and which will serve as cross-references
- Organise the result into an alphabetical thesaurus with appropriate notes.
- Use the thesaurus to index a set of documents

### 3.4 Sample of a Thesaurus Entry

#### Term Relationships

- Uniformity
- Ranking
- Broader term (BT) Example; Games
- Narrower terms (NT) Example; Football

Example; Games (BT)

Example; Football (NT)

- Colligation
- Related term (RT)

#### USE and Use For

- Use (USE)
- It is used for the description of a term or a concept that can be used instead.
- Is the inverse of a USE FOR (UF)
- Use for (UF)
  - Concentrate on synonyms or variations of the desired term.
  - Can also be used to direct the indexer to a broader term.

USE and UF examples

- Mango Branch
- USE Branch
- Branch
- UF Mango Branch
- EMPLOYMENT REGULATION

UF Automatic Employment

- Automatic Employment
- USE EMPLOYMENT REGULATION

Sports

UF	games
RT	Athletes
NT	Football
	Joggers
	Judo
	Squash
	Polo
	Table tennis

### 4.0 CONCLUSION

Knowledge organisation systems (KOSs) and knowledge representation systems come in a variety of shapes and sizes. Different systems are used to define and describe terms and concepts and organise knowledge for improved search and retrieval, ranging from controlled vocabularies to authority lists, categorization schemes to taxonomies, thesauri, and

ontologies. Controlled vocabulary and thesaurus aid in ensuring that indexed terms are constantly consistent and adhere to standardisation. Thesaurus construction, its features, and the construction technique were all thoroughly detailed.

## 5.0 SUMMARY

Thesauri are important and useful tools for content discovery, information organisation, and retrieval, which are activities that are prevalent in many disciplines, including cultural heritage, higher education, and commerce and enterprise. Information professionals can use the thesaurus to describe the contents of documents in a consistent manner, making it easier for researchers, employees, and the general public to find them.

## 6.0 TUTOR-MARKED ASSIGNMENT

1. What is a thesaurus?
2. List the importance of a thesaurus.
3. What are the steps in constructing a thesaurus?

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