



University of Mosul
College of Art
Dept. of information and knowledge
Techniques

Course Name: Processing Subjective Data
Stage / Second
Lecturer Name: Prof. Rafal N. A.
School Study: 2025-2026

Subject Cataloging

Introduction

The fundamental features of the information revolution that our contemporary world is experiencing are evident in the proliferation of intellectual output, the multiplicity of forms of information containers, the diversity of their levels and the languages in which they are published, as well as the emergence of precise scientific specializations, the multiplicity of subject relationships, and the needs of users. In the face of all these givens, libraries and information centers are confronted with major challenges in dealing with the reality resulting from this complex situation. Therefore, these institutions have endeavored to do everything within their power by providing all possible technical, material, and human requirements necessary to organize information containers and facilitate the ease and speed of their utilization and access.

Facilitating user access to all the materials they need in the library, by all possible means, represents a vital objective of the library. This means that the search process in the library's catalogs must be conducted through all the access points provided by the catalog, especially subject access points.

Studies conducted on user behavior in using the library catalog confirm that subject access points are of greater importance to users, particularly in academic libraries, and especially among researchers in scientific and technological fields. The majority of catalog users in these libraries prefer to search for unknown materials through the subject approach, while a smaller proportion search for known materials through the various other access points combined. Therefore, the subject aspect is considered the most important aspect of the bibliographic preparation process for information containers.

Despite the importance of accessing materials by subject, the subjects addressed by these materials are often complex and unclear, to the extent that it is frequently difficult to find appropriate terms that precisely express those subjects. This is in addition to the difficulty of establishing standardized rules for the selection and formulation of subject headings that ensure subject control over materials. Our Arab libraries suffer greatly in this area, which negatively reflects on the performance of their subject catalogs and their ability to retrieve the information needed by users.

The efficiency of the subject headings used in the subject catalogs of our libraries is linked to several factors, the most prominent of which are: the difficulty of accessing international standards for updating



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the subject headings used in the catalog, and the extent to which standardized rules for the selection and formulation of subject headings are applied.

Subject headings used in scientific and technological fields constitute a broad arena and a spacious domain in which vision becomes clear, movement becomes easier, and sometimes clear and decisive results can be reached. This is due to a main reason: the features of the information revolution—whose givens, challenges, and complexities we have pointed out—are more evident in scientific and technological subjects and appear more pronounced than in other non-scientific fields, especially when it comes to information containers in the English language.

The Concept of Subject Cataloging

The subject aspect is considered one of the most important and simultaneously most complex aspects of the bibliographic preparation process for information containers. It is embodied in the process of subject cataloging, which is concerned with selecting and formulating the subject heading, and focuses on determining the subject content of the cultural material. Accordingly, subject cataloging can be defined as: one of the technical library operations carried out on information sources to determine the intellectual content of those sources, by selecting one or more words that express the subject under which, in the catalog, all entries for materials dealing with that subject can be gathered.

The process also includes selecting the appropriate number of subject headings in a standardized manner, relying on a specific subject heading list. What matters here is the idea of the book and the treatment of its intellectual content. What is meant by the intellectual processing of a document is the process of analyzing not the form of the document, but rather its subject content or the idea it presents—even though form often constitutes the final formulation of the subject heading. Analytical subject cataloging is what brings out that idea in concise and expressive words.

The importance of subject cataloging lies in analyzing the many questions and inquiries received by the library concerning materials dealing with a specific subject, which the subject catalog—containing all subject entries in alphabetical order—answers.



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Objectives of Subject Cataloging

Subject cataloging has specific objectives, both practical and theoretical, that may be limited to a particular collection or library. From a practical perspective, sources agree that subject cataloging aims to identify what the library or information center holds on a specific subject, in addition to other materials related to that subject. From a theoretical perspective, subject cataloging has other objectives, which Wynar identifies as follows:

- A. To provide access to all materials needed by the user through their subjects.
- B. To provide an appropriate entry point for any subject field, at any level of subject analysis, from the most general to the most specific.
- C. To provide a terminological description of the subject content of any bibliographic unit using the most concise possible terms.
- D. To standardize references for materials dealing with the same subject, regardless of terminological differences among subject specialists or those arising from the changing nature of concepts within the subject field itself.
- E. To provide access through any terms commonly used by any significant group of users, whether specialists or non-specialists.

Accordingly, we can conclude that subject cataloging is not a simple process, as it requires complete knowledge of the book's subject so that it can be analyzed properly and appropriately, and placed under the designated and commonly used subject headings.

Since it is often impossible to consult subject bibliographers and subject specialists in all libraries and under all circumstances, the catalogers themselves—those with knowledge of both the humanities and sciences—usually perform this function at an acceptable level from the experts' point of view. However, this does not mean that every cataloger can practice cataloging in their own way; subject entries should be prepared according to the rules governing their selection, style, and terminology. Therefore, the researcher believes that failing to adhere to these rules may lead to the preparation of a subject catalog



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full of contradictions, which would negatively impact the catalog's efficiency and effectiveness in retrieving required data and serving the user.

Forms of Subject Description of Materials

It is well known that subject headings are one of the forms of information representation. By information representation is meant:

Selecting a specific formula or form to represent the information contained in the content of any material. This formula or form may be a single word or several words. These words may be controlled terms or terms taken directly from the document itself; natural language may also be used in subject representation. On this basis, subject representation can be divided into the following forms:

A. Subject Headings

A subject heading can be defined as an indication, consisting of one or more words, that refers to the subject under which—whether in catalog cards or a bibliographic list—all materials related to that subject are gathered. The term "subject heading" consists of two elements:

- **Heading:** This is the literal translation of the word "Heading." Its terminological use in Arabic corresponds to its concept, which resembles a human head at the top of the body, through which a person's features and personality are identified and distinguished from others. Similarly, the subject heading appearing at the beginning is the prominent part or the word that appears at the start of the entry, providing an access point through which the subject of the item is identified and distinguished from other subjects. The heading can also be defined as the name appearing at the beginning of the entry to indicate a specific aspect of the book's subject.
- **Subject:** This is terminologically known as the intellectual content or the ideas addressed by the book, whether mentioned in the title or not. Some define it as the idea and its subdivisions, while others view it as a specific segment of linguistic material expressing a particular concept into which the content of the classified library material is translated. The usefulness of subject headings lies in the fact that they break



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down human knowledge into small, precise particles, assign standardized names to these particles, and then arrange them alphabetically, resulting in a list of subject headings.

B. Keywords

Keywords—also called indicative words—are names, words, or terms with specific connotations that can be used as access points to information. The fundamental difference between keywords and subject headings is that keywords are free terms chosen as they appear somewhere within the document. They may also include terms that come to the researcher's mind and are used by them, whereas a subject heading is a controlled term selected from an official list of subject headings.

C. Descriptors

Descriptors, on the other hand, are also controlled terms consisting of a single word or a clear phrase that can be used as an indexing term. Mahmoud Atim defines them by their function as "the terms used to translate from the natural language of documents or the language of indexers or users to the system's language. Structurally, they are controlled, dynamic vocabulary of terms connected semantically and generically, covering one of the fields of knowledge." Alongside terms and subject concepts, descriptors also represent terms or other data such as numbers, symbols, geographic names, personal names, corporate bodies, etc.

Although descriptors were originally designed as an indexing language—especially for coordinate indexing—they are selected from the main vocabulary of a given natural language, based on rules artificially controlled for synonymy, polysemy, and homography through references and notes. Therefore, they are specifically designed for information retrieval.

D. Bibliographic Citation



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This refers to the reference citation mentioned in a document or a group of documents. If the same citation appears in a number of documents (i.e., is cited), it indicates a relationship between these documents. If a particular bibliographic reference is used as an access point for retrieving publications containing it, those publications will be retrieved based on the assumed relationship between them due to the shared references. In this respect, it resembles using a specific descriptor or keyword.

E. Natural Language

This refers to the language of communication in all subject fields—the language used by authors in their writings and in all forms of communication among themselves. It brings us back to the document as prepared by its author.