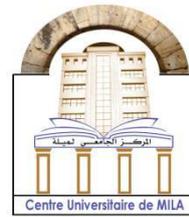


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Introduction to Bibliographic Research



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Chapter I - Bibliographic Research

1.Introduction

Bibliographic research is the first step in any research or scientific writing project. It is the process of carrying out a relevant research of useful information, about a scientific subject, that are available in the various sources of literature. In fact, this activity begins even before the conception of the project or the writing, and continues throughout all the stages of their realization.

Bibliographic research mainly aims to establish a "literature review", to have clear insight on the state of the art on what has been done or written on a given subject. Moreover, it also allows the analysis of the results obtained by others and their comparison with own results, to have an idea on the techniques and methods used to deal with a given question, and to have the conclusions of other researchers about the treated topic. Consequently, it must be undertaken in a methodical manner to be effective, and with a good knowledge of bibliographic research tools.

1.1.Bibliography ‘Literature’

Bibliography refers to the set of information sources such as books, journals, articles, etc., published on a subject, presented in different conventional forms. From this definition, the bibliography is synonymous with what is commonly called "Scientific Literature", often abbreviated in "Literature".

Scientific literature comprises scholarly and academic publications that report original empirical and theoretical work in the natural and social sciences, and within an academic field. Academic publishing is the process of contributing the results of one's research into the literature, which often requires a peer-review process to be accepted and published.

1.1.1.Types of Bibliography (Literature)

Bibliographic sources can have several forms, the most known are:

Articles (scientific papers, scholarly articles): they are scientific writings that are published in scientific journals. Different types of articles can be defined: Original articles (research articles) which are considered as the highest level of scientific writing, Review articles (synthesis articles), Short communication, Notes, Scientific letters, etc.

- **Books:** (sometimes called monographs) they are scientific publications that differ from others in volume, content and structure. They present a synthesis of knowledge in a given topic, field or discipline, and they can be of different forms (Books, textbooks, Manuals, etc.)

There are popular scientific works geared towards a wide audience (books for the general public), books for students (teaching materials) and others for researchers and specialists.

- **Conference proceedings, abstracts and reports:** they present interventions as well as discussions in a conference between scientists whether it is a congress, seminar or others. A conference article is similar to a scholarly article insofar as it is academic.

- **Thesis and dissertations:** they are scientific reports that are prepared in the end of academic cycles (graduation and post-graduation). Theses and Dissertations contain extensive bibliographies and can present original research; they provide inspiration for the formatting and presentation of ideas, graphs, charts, and other components of a document.

- **Grey literature:** The term grey literature refers to research that is either unpublished or has been published in non-commercial form. Examples of grey literature include: Researchers notes or communications, research reports, government reports, etc.

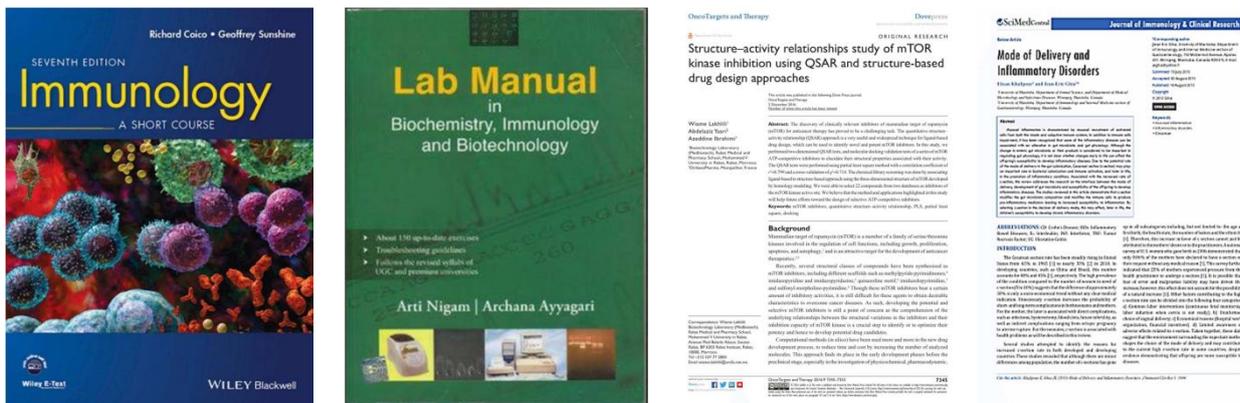


Figure 1. Example of some bibliographic sources.

Scientific literature is also classified on the basis of the originality of the approached topic or question, we note:

- **Primary literature:** Results from research conducted by an individual scientist or collaboration by a group of other scientists. Most primary literature is published in scientific journals. Original scientific research published for the first time, patents and technical reports, for minor research results and engineering and design work; are all considered primary literature.

- **Secondary literature:** is a type of literature that relies on primary sources of information (primary literature). Its objective is to summarize and synthesize information in a specific area. These publications include reviews, books (whether monographs, textbooks or handbooks) and manuals. They are particularly useful for having a general overview over a topic.

- **Tertiary literature:** emerges from primary and secondary scientific literature and aims for a more lay-audience or researchers in completely different fields of knowledge. These publications are written in a more simplified and popular-language format versus a scientific style. Tertiary sources might include encyclopedias and similar works intended for broad public consumption.

1.2. Bibliography, References and Citation

The **bibliography** (or List of Bibliography) is also defined as the list of sources (books, articles, scientific notes, scientific reports, governmental reports, etc.) **consulted** for the development of a work (thesis, internship report, article, synthesis, etc.) that they may or may not be cited in the body of the work. By this definition, the bibliography is in some way synonymous with “**References**”. However, Bibliography is larger in meaning than References (or **List of References**) which is defined as the list of sources (books, articles, scientific notes, scientific reports, governmental reports, etc.) **used** for the development of a scientific work, and which should be **cited** in the body of the work.

The sources used to elaborate a scientific work (writing) are first “**cited**” every time that they are used in the body of the work, then they are all listed generally in the end of the work (writing) as Liste of Bibliography or List of References. **Citation** and **References** are made up of bibliographical referencing which is a set of elements that describe a given source (author, title, publisher, year, pages, *URL*, etc.) and which allow it to be identified.

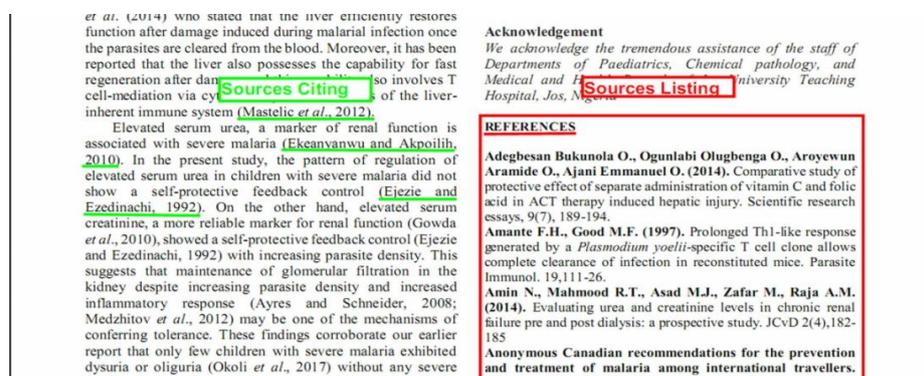


Figure 2. Citing and listing sources in scientific writing (image taken from Okoli et al., 2019).

1.3.Importance of Bibliography

- The bibliography is a key tool for work and reflection in scientific research. It presents an essential support for the construction of scientific work or writing projects.

- It allows collecting information around a theme to be developed, and to have a background on what to do and what remains to be done in this theme.

- It allows synthesizing knowledge on a given scientific subject, which facilitates the understanding of scientific themes and allows their progression.

-It allows having an insight on the techniques and the strategies used to treat the different scientific questions, as it allows the comparison between the different results obtained by different researchers about a given question.

- The bibliography allows also giving more credibility and value to the work, and to show respect for the researchers in the different field of science.

2.2.Resources of Bibliographic documents

Bibliographic documents can be searched in different resources, which can be grouped in two categories:

2.2.1. Academic Libraries

Classic resources of documents found in universities, institutions, colleges and research centers; they contain books, Manuals, journals and reviews in their original format (paper format).

However, these documents are not accessible all the time; their accessibility depends on the availability of the document and the opening hours of the library. Bibliographic documents of libraries are generally listed in Catalogs that can be consulted in library and sometimes on the website of the institution, in order to facilitate the search. Catalogs allow identifying the document, its biographic parameters, writing its reference correctly and locating it.

2.2.2. Internet resources

Internet resources of bibliography are multiple and of various types. These resources may be, data banks or research engines, specialized or general, open access or with fees. In contrast to library resources, internet resources are digitized (in electronic format), and are available on the internet all the time which makes them easier to consult at any time.

We can distinguish the following types:

a. **Bibliographic databases**

A database (or data banks) is a Data set relating to a defined area of knowledge and organized to be offered to users.

A bibliographic database is a database of bibliographic records, an organized digital collection of references to published literature, including journal and newspaper articles, conference proceedings, reports, government and legal publications, patents, books, etc. In contrast to library catalogue entries, a large proportion of the bibliographic records in bibliographic databases describe articles, conference papers, etc., rather than complete monographs, and they generally contain very rich subject descriptions in the form of keywords, subject classification terms, or abstracts.

A bibliographic database may be general in scope or cover a specific academic discipline like Biomedical science. The database is:

- produced by an institution, a commercial company or a documentation service;
- stored on a server;
- and displayed to users in response to a request.

Bibliographic Databases offer:

- *Abstracts*: almost bibliographic databases offers abstracts of journal articles plus the citation information (e.g. author names, the journal title, volume, and page numbers).
- *Full-text articles*: bibliographic databases can also offer free access to complete articles.

Table I. Some scientific Databases (Barton and Trawick, 2004)

Resource	Produced by	Examples of access	Free access*	URLs
PubMed/MEDLINE	The National Library of Medicine (NLM)	PubMed	Yes	http://www.pubmed.gov
		BioMedNet	Yes	http://research.bmn.com/medline
		Ovid	No	http://www.ovid.com/
		BIDS	Yes	http://www.bids.ac.uk/
ISI Citation Database (Web of Science)	Institute for Scientific Information (ISI)	Web of Science	No	http://www.isinet.com/isi/journals/
Current Contents®	Institute for Scientific Information (ISI)	Current Contents Connect	No	http://www.isinet.com/isi/journals/
		Ovid	No	http://www.ovid.com/
BIOSIS Previews® (comprising biological abstracts and biological abstracts/RMM®)	BIOSIS	BIOSIS	No	http://www.biosis.org/
		Ovid	No	http://www.ovid.com/
Pascal	Institut de l'Information Scientifique et Technique	BIDS	Yes	http://www.bids.ac.uk/
EMBASE	Elsevier Science	EMBASE.com	No	http://www.embase.com/
		Ovid	No	http://www.ovid.com/
The Cochrane Reviews (abstracts)	The Cochrane Library	The Cochrane Library	Yes	http://www.update-software.com/abstracts/crgindex.htm

*In cases where access to the database is not free, consult your library for subscription information.

Example of Databases:**PubMed/MedLine** (*pubmed.ncbi.nlm.nih.gov*)

PubMed is one of biggest databases offered for biomedical sciences. It was developed at the National Center for Biotechnology Information (NCBI), within the National Library of Medicine (NLM), USA.

MEDLINE includes over than 32 million abstracts in, and currently covers about 8,500 journals from at least 90 countries, dating back to 1966. MEDLINE abstracts have a controlled vocabulary associated with them known as **Medical Subject Heading (MeSH) terms**. Several terms are assigned to each MEDLINE abstract, and are used for indexing articles to provide a consistent way to retrieve information. As well as enabling bibliography searches, PubMed offers the following additional functions:

- 1- Links to biological sequences information, including data such as GenBank protein and nucleotide sequences, and macromolecular structures.
- 2- Links to the full-text of journal articles (about 8,500 journals are currently linked in this way). Whether the full text can be viewed without purchasing the journal depends on the journal policy.
- 3- Links to ‘Related articles’. For each abstract, similar articles in the database have been identified, based on a statistical analysis of words and phrases found in the abstract text. This is an easy way to expand on a PubMed search when a useful abstract has been found.
- 4- Links to resources outside of the NLM. The ‘LinkOut’ feature allows other providers of information, such as organism-specific databases like FlyBase, to link to related abstracts.

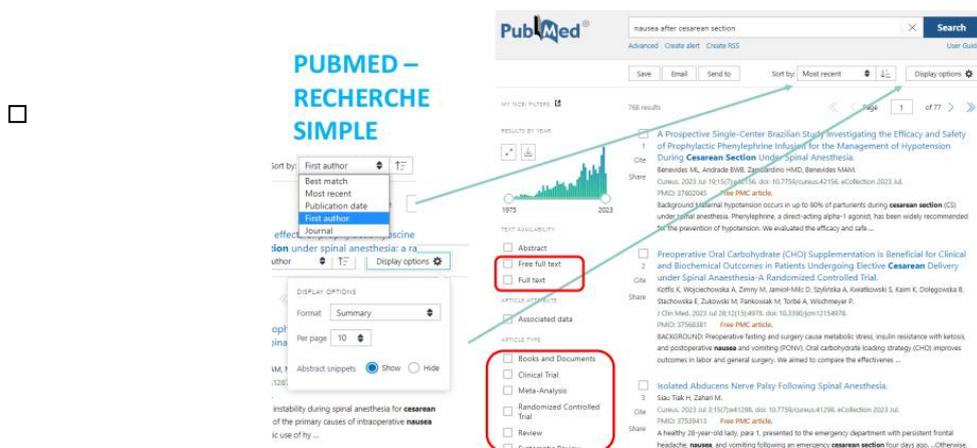


Figure 3. Homepages screenshots of PubMed.

b. websites

Currently, most *scientific journals* (reviews) have their own websites, on which researcher can find all the published volumes and issues of the journal with the possibility of carrying out searches on the site for a given article or for a given issue of the journal.

Examples: Nature review (www.nature.com), Science journal (www.sciencemag.org)

Journals packages are a collection of electronic journals posted online, whether they already exist in printed form or not. They can be of the same editor or not, private or public, with free or paid access.

Example: ScienceDirect which is an online service from the publisher of scientific, technical and medical journals and books, Elsevier-Masson. It offers more than 3,200 French and English journal titles.

Science Direct is accessible on the link: www.sciencedirect.com , it offers multiple research options (Keywords, Authors, Titles, Books, etc.) and advanced research option. However, most of its services are with charges (must pay).

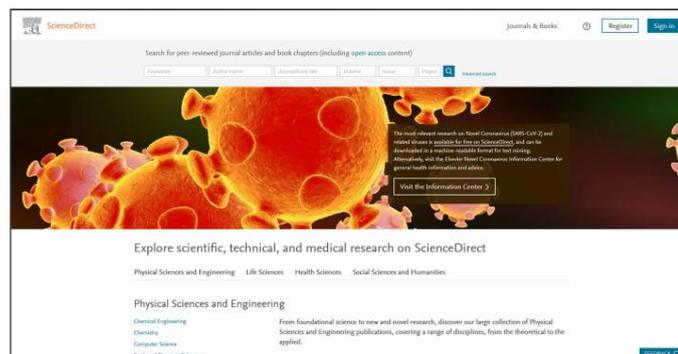


Figure 4. Homepage screenshot of ScienceDirect website.

c. Search Engines

Search Engines are research tools which make it possible to carry out research on scientific articles approved or not by peer-reviewed committees, university-type theses, citations or even scientific books. Specialized Search Engines indexes contain most of the online journals submitted to review committees, journals from major publishers of scientific literature.

Examples : Google Scholar : scholar.google.com

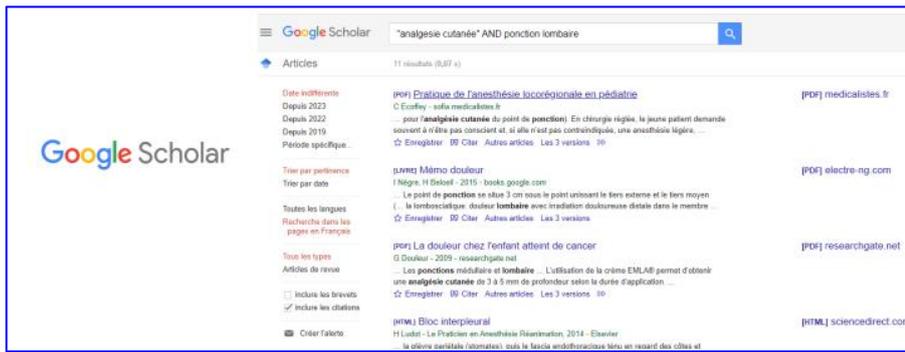


Figure 5. Homepage screenshot of Google scholar website

3. Referencing a document

Referencing is an author-date system used in the academic community to indicate the source of ideas, theories, quotes, facts and any other evidence and information used to undertake an assignment or thesis or paper. Bibliography is a list of authors and their contributions used in the study. It enables the readers to find out the original items.

4. Some questions to help you evaluate documents:

- Who is the author of the document?
- Who is the publisher?
- What is the institution that publishes or hosts the site? Is it a university, a research center, a private Internet service provider?
- What is the status of the document? Is it a scientific article, an opinion piece, or a commercial offer?
- What is the date of the document?
- What are the sources of the information disclosed?
- If it is an electronic publication of a document published elsewhere, what is the print edition?
- If it is an electronic publication, what is the expected longevity of the site? Readers who want to check the secondary data in your publication should not be directed to a 404 error page. The longevity of a website can be estimated based on the credibility of the organization hosting the site, the date the site was created, and whether the publication is included in national or international databases.

5.How to write a bibliography

1.Book

Last name, Initial. (Year). Title and subtitle of the book in italics (Translated by Initial. Last name) (10th ed.). City: Publisher.

Example:

Auteur :	Birch, Barbara M.
Titre :	English L2 reading : getting to the bottom / Barbara M. Birch.
Éditeur :	Mahwah, N.J. : Lawrence Erlbaum Associates, 2002.
Collection :	ESL and applied linguistics professional series
Sujet(s) :	Anglais (Langue)--Étude et enseignement--Allophones Langue seconde--Acquisition. Lecture--Compréhension.
Description :	xii, 200 p. : ill. ; 23 cm
ISBN :	0805838996 (alk. paper)
No de la notice :	i0805838996

Birch, B. M. (2002). English L2 reading: getting to the bottom. Mahwah, NJ: Lawrence Erlbaum Associates. 200 p.

2.Illustrated work:

Last name, First initial. (Year). Title and subtitle of the book in italics (Ill. by Initial. Last name). City (place of publication), Publisher. Pagination

Auteur :	Champagne, Claude, 1966-
Titre :	Effrayons les monstres! / Claude Champagne ; illustrations, Alexandre Girard.
Éditeur :	Montréal : Québec Amérique jeunesse, c2008.
Collection :	Marie-Anne ; 2 Bilbo jeunesse ; 172.
Sujet(s) :	Marie-Anne (Personnage fictif)--Romans, nouvelles, etc. pour la jeunesse Fantastique--Romans, nouvelles, etc. pour la jeunesse Peur--Romans, nouvelles, etc. pour la jeunesse Monstres--Romans, nouvelles, etc. pour la jeunesse Animaux en peluche--Romans, nouvelles, etc. pour la jeunesse Squelette--Romans, nouvelles, etc. pour la jeunesse Vampires--Romans, nouvelles, etc. pour la jeunesse
Description :	148 p. : ill. ; 18 cm.
Public cible :	Enfants de 8 à 9 ans
Contenu :	➔ Résumé
Autre(s) Auteur(s)/Titre(s) :	Girard, Alexandre, ill.
ISBN :	9782764406403 (br.)
No de la notice :	i9782764406403

Champagne, C. (2008). Effrayons les monstres! (Ill. by A. Girard). Montreal: Quebec America Youth. 148 p.

3. Book chapter:

Last name, Initial of the author of the book chapter. (Year). Title of the book chapter. In Initial. Name of the book author (abbreviation of the author's contribution: dir., ed., coord.), Title and subtitle of the book in italics (pp. X-Y) (Trans. by Initial. Name) (10th ed.). City: Publisher.

Fayol, M. (1996). The production of written language. In J. David and S. Plane, Learning to write from elementary school to middle school (pp. 9-37). Paris: Presses universitaires de France.

4. Journal article:

Last name, Initial. (Year). Title and subtitle of the article. Title of the periodical in italics, Volume in italics (Issue), Page(s) of the article.

If the periodical does not have a volume, but only a number, write the number in italics.

5. Manual/course guide

For this type of document, use the template provided for books.

Example

Joly, J. et al. (2009). Guide d'accompagnement et de rédaction du mémoire de fin d'études (AIP 342 et AIP 452). Sherbrooke: Université de Sherbrooke, Faculté d'éducation.

6. Power point document

Author's name, Initial. (Year). Title of PowerPoint document (PowerPoint document).
Document available on the University of Sherbrooke's Moodle site at <URL address of the PowerPoint **document>**.

Lorrain, I. (2010). Document available online ;http://www.usherbrooke.ca/biblio/fileadmin/sites/biblio/documents/doc-ppt/sci-hum/citer_bibliographie_2010web.pptx>.

7. Audiovisual document:

Name, initial of the author or director. (Year). Title and subtitle of the document
(Document format). City: Publisher.

Germain, C. and Leblanc, A. (197?). Reading is choosing: novels (1 videocassette). Paris: Les Amis de la joie par les livres.

8. Website:

University of Sherbrooke. (2006). Center for Research on Educational Intervention. Website accessible at < <http://www3.educ.usherbrooke.ca/recherches/cric/>>. Accessed October 8, 2009

9. Citing an online article:

Last name, Initial. (Year). Title and subtitle of the article. Title of the periodical in italics, (online) Volume in italics (Issue), date of consultation (URL).

10. Thesis and dissertation

Last name, First initial. (Year). Title of the thesis or dissertation. Type of document; specialty, place of defense: university of defense, number of pages.

Benkenana N. (2006). Biosystematic analysis, ecology, and some aspects of the biology of locust species of economic importance in the Constantine region. Master's thesis. Mentouri University, Constantine. 154 p.

Example of a bibliography

Aiouaz, M., Boufersaoui, A. (1973) Life cycle and morphometric growth of *Pamphagus elephas* (L.). *Bulletin of the Natural History Society of North Africa*, Algiers, 64: 39-50.

Benfekih, L. (1998) *Preliminary data on the bioecology of the Moroccan grasshopper Doclostaurus maroccanus* (Thunberg, 1815) (Orthoptera, Gomphocerinae) in the *Ain Boucif* region. Master's thesis in Agronomy. El-Harrach National Agronomic Institute, Algiers.

Eades, D.C., Otte, D., Cigliano, M.M. & Braun, H. (2011) Orthoptera Species File Online. Version 2.0/4.0. Available from <http://Orthoptera.SpeciesFile.org/> April, 2011.