Searching for scientific information and citation basis - Design Project

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Learning Objectives

- Build an information retrieval strategy
- Get familiar with some of the EPFL Library information resources
- Distinguish document types: take the quiz
- Break – 15 min
- Avoid plagiarism by citing correctly: take the quiz
Information retrieval strategy

- Define the topic in the form of a question
- Pull out the main concepts, keywords
- Think of synonyms and related concepts
- Write a search equation
- Use multiple resources
Define the topic in the form of a question

*Develop a methodology to reduce the concentration of micropollutants in wastewater.*

*How to treat wastewater to remove micropollutants?*

Pull out the main concepts, keywords

*Wastewater / Micropollutant / Treat / Remove*

- Think of synonyms and related concepts
- Write a search equation
- Use multiple resources
Boolean operators and more

**AND** to combine key concepts

**OR** to add key concepts

**NOT** to exclude concepts

() * « »
Information retrieval strategy

- Pull out the main concepts, keywords
  \textit{Wastewater*}/ \textit{Micropollutant*}/ \textit{Treat*}/ \textit{Remov*}

- Think of synonyms and related concepts

- Write a search equation
  \((\textit{Process* OR Method*}) \ AND \ ("\textit{Wastewater treatment}" \ OR \ "\textit{Wastewaters treatment}" \ OR \ \textit{Wastewater*}) \ AND \ \textit{Micropollu*}

- Use multiple resources
Choosing information resources

- Use scientific resources
  - Encyclopaedies
  - Books
  - Articles
  - Conference papers
  - Thesis
  - Patents
  - [https://www.epfl.ch/campus/library/collections/](https://www.epfl.ch/campus/library/collections/)

- Web of Science™
- BEAST discovery tool
  - [https://go.epfl.ch/beast-catalog](https://go.epfl.ch/beast-catalog)

- Cross-check information
- Is the information reliable, valid, objective and accurate?
  - ✓ Is the information up-to-date?
  - ✓ Who is the author?
Take the quiz

Types of documents
Quiz

1. Access https://responseware.eu
2. ID session: formations

Test yourself with 11 questions about Citation
Copyright...

... applies automatically (no need to ask)

... comprises, in Swiss and European law, the moral right which is inalienable (recognition of authorship, integrity of the work) and the property rights which are transferable (diffusion, commercial use)

... protects the form, and not the idea!

... provides, conditionally, some exceptions. In particular, those related to education and to citation (LDA art. 19 al. 1b et art. 25)
1. Why should you cite when you write a report?
(several answers may be correct)

A. Assign the ideas/words to their author
B. Reuse what was already done
C. Help the reader who wants to know more
D. Write a longer document
E. Avoid plagiarism
Citing enables you to...

... make the difference between your own AND new input and the one that comes from previous publications;

... add credibility to your work (you have read what was published in your domain and you know what you are talking about) ;

... replace your work in its context and demonstrate the originality of your input;

... provide the reader with the references that were useful to you in case she or he would like to know more ;

... reuse an extract of a document as it is.
Not citing means...

claim someone else’s work for yourself

OR

present as new something that is not new

⇒ this is what we call plagiarism

⇒ no matter if it is intentional or not
2. How to insert a section borrowed from another document? (several answers may be correct)

Highlight the borrowed section...

A. in italics
B. in bold
C. with quotation marks
D. in a separate paragraph

Borrowed sections should be highlighted no matter how
Example 1:
In his article *The biology of dying democracies*, Kováč (2019) states that «Marxist communism became a gigantic experiment in the 20th century to test the European rationalism. The experiment failed.»

Example 2:
The approach chosen for this article is the one presented by Kováč in *The biology of dying democracies* (2019), described as follows:

Humans are controversial beings, an inconsistent mixture of nature and culture and dominated by both. Biological hominization was followed by cultural humanization. So far, biologists mostly tended to conceive the biological individual as a Darwinian unit communicating with another individual in interest of one's own Darwinian fitness. Signals should serve to modify the behaviour of the receiver to benefit the signaller.
Example 3:
Experts believe that information literacy knowledge helps students to judge the appropriateness of information (Smith, 2016, McDowell, 2018 and Alhazmi, 2012).

OR

Experts believe that better information literacy knowledge will help students to judge the appropriateness of information[1-3].
Example 4 – Paraphrasing

The original:

▪ « A variety of evidence points to the existence of dark matter in the universe. As it is not directly observable with conventional astronomical techniques, we must rely on computer modules to guide our understanding. »

The paraphrase:

▪ Research about the universe suggests that dark matter exists. However, scientists must use computer models to learn about it because dark matter can’t be studied directly (Lanzel and Barnes, 2009)

3. What should I do to borrow a section from someone else’s work?

A. Highlight the borrowed section
B. Ask the permission to the author
C. Cite the original source

Copy-Paste
+ Highlight of the borrowed section
+ Indication of the source
4. If I use a document that has not been published (yet) I need to cite it.

A. True
B. False

Always cite your sources.

Anyway, it would be better not to use documents that are inaccessible to the reader, such as confidential or internal documents.

**Pre-prints:**
Not always accessible for the reader
Various versions
5. I have to cite a document that I published previously.

A. True  
B. False

Reminder
Citing enables you to make the difference between your own AND new input and the ones that come from previous publications.

SELF-PLAGIARISM is also plagiarism
6. I have the right to adapt a quotation.

A. True
B. False

Highlighting modifications

"As [John Smith] commented in the 1st chap. of his book [Introduction to statistics], statistics hide sum and substance. [...] therefore one should not forge [sic] that interpretation leads to bias."
7. In the bibliography, I have to mention everything I have read to write my article/report.

A. True
B. False

cited references ➔ bibliography
other interesting references ➔ separate list
8. To reuse an image or a graph found in another document, I have to: (several answers may be correct)

A. Copy-Paste  
B. Obtain the author’s permission  
C. Cite the source

Image = integral work  
Graph = protected layout  
cite (correctly) the source  
+ Ask explicit authorization from copyright owner
Tips

Image:
Freely usable images under Creative Commons licenses

➢ Cite the source
➢ Search one of these sites:
  • https://www.pexels.com/fr-fr/
  • https://www.flickr.com/
  • https://commons.wikimedia.org/wiki/Accueil

Graph:

Recreate the graph yourself
• Cite the source
9. You consult an article [1] in which a section from another article [2] (that you haven’t read) is cited. You would like to insert this section from article [2] in your report. Which source do you cite?


Do not cite a document that you have not consulted!
In the text
Kim S. (2004) suggests that the technique described by Zaldivar J. (2001) as « being by far the most efficient on most continents » is not the only way to follow for the development of the bioethanol production.

In the bibliography

OR

10. To cite a webpage, it is enough to simply indicate the URL

A. True
B. False

URL is useful but not enough, because
- not permanent

Reference to a webpage:
page title, author, website title, URL, consultation date (or time)
+ any piece of information that may help to identify the source
11. Which reference is correct?


You
Check that the collected information is correct and complete.

Tip: use a reference manager software
like Zotero to create a bibliography according to the chosen citation style.
To know more about citation...

Refer to our Rational Bibliographic guide to create and verify your references: go.epfl.ch/guide-bibliographique
Contact us

- Valérie Charbonnier – Liaison Librarian for Environment
  - valerie.charbonnier@epfl.ch
  - Weekly duty period
  - Library page for Environment

- EPFL Library Teaching team
  - Formations.bib@epfl.ch
  - Book a librarian
Thanks!