

Instructions for the Portfolio¹ as part of the Core Elective Module *BIO 368 Scientific Information Literacy*

In the portfolio document the various work processes that you learn in the core elective module *Scientific Information Literacy*. Try to write the documentation in parallel with the lectures.

Select a topic from your field of study which you are dealing with or which you want to investigate. Please advise Brigitte Schubnell of your topic by **Monday, 18th March 2013** by e-mail: brigitte.schubnell@hbz.uzh.ch.

Format requirements for the portfolio are:

Font Arial, font size 10 pt, line spacing 1.5, and 12 pt spacing between paragraphs.

Send the portfolio in the form of a single Word or PDF file and the XML file of the exported references from the reference manager software until **Sunday, 16th June 2013** to the above e-mail address. Please note that the names of both attachments must contain your last and first name.

Document Structure

1. Title Page

Contains the following information:

- a) Module (*Scientific Information Literacy*)
- b) Research topic
- c) Author
- d) Place and Date

2. Contents

With page numbers

3. Topic

Define and formulate the topic and the goal of your bibliographic search. Consider the time required for research and the expected number of relevant literature. (Length: approximately ½ A4 page)

4. Determine Appropriate Search Terms and Resources

- a) Identify the concepts relevant to the topic and state the source from which they originate.
- b) List information resources (literature databases, catalogues, internet search engines, and specialised journals) which you want to use for your research. Justify your choice.
- c) List the information resources according to relevance. Include your reasoning.

For research in various information resources, it may, under certain circumstances, be necessary to expand or narrow your topic. This should be documented and justified.

For example: You need information about a specific *enzyme*. In biomedical databases you would be sure to find relevant literature. For a library catalogue, however, this topic might be too specific. You would then need to expand your topic to *enzymes in general*.

¹ Following a manual for a Research Portfolio of the University of Konstanz

5. Search in Specific Sources of Information

a) Library Catalogues:

Use the Swiss meta-catalogue swissbib (<http://www.swissbib.ch>) for your research. Using the *Previous Searches (Suchhistorie)* function, include a copy or a screenshot of the search history in your portfolio.

- Did you find results relevant to your topic?
- Define the word meta-catalogue? What sources are simultaneously searched in swissbib?
- Evaluate the search options (not the content) in swissbib compared to the bibliographic databases learned in class. What are the strengths and weaknesses of swissbib?

Note that you should be less specific in the formulation of your query in the library catalogue in order to find books giving an overview of the broader topic. It is possible that you will find something to your specific search terms, as swissbib does not only search library catalogues (see question about sources).

b) Bibliographic Databases:

Research your topic in the three most important databases (see point 4c). Review your search strategy and adapt it accordingly. Copy a screenshot of the search history in your portfolio and justify your choice of search strategy and the adjustments you made.

The appropriate search strategy can vary from database to database. Consider these options:

- Simple Search, Basic Search, Advanced Search etc.
- Application of search options
- Theme search using the databases' thesaurus (if available)
- Linking completed search steps (search history, previous searches etc.)
- Limitations on database specific criteria

Evaluate the effectiveness of your search: have you found all possibilities (recall), ratio of relevant and irrelevant results (precision).

c) Google Scholar:

Using your search terms, search Google Scholar.

- Create a comparison between the search options in Google Scholar and the three bibliographic databases you have chosen.
- Assess the quantity and quality of the results in Google Scholar.
- Did you find relevant results in Google Scholar that were not found in the bibliographic databases? What could the reasons for this be?

d) (Electronic) Journals:

Name three (electronic) journals important to your topic. Why do you classify these as important? Are the relevant results you found in the search of the bibliographic databases also included in the journals you have selected? Do you retrieve additional relevant literature when you are searching articles according to your topic in the journals themselves?

e) Subject portals, Websites:

Describe two subject portals or websites that are relevant to your topic. Rate these in terms of scope and content, authorship, target group, etc.

6. Reference Management (with Mendeley), Citation und Plagiarism

- Create a bibliography in your portfolio consisting of 30 references (relevant results of your previous bibliographic search) in a chosen style. The following publication types should be included: books or chapters, journal articles, websites.
Check and if necessary, correct the references which you have imported from the databases into your reference management software!
- In addition, insert in your portfolio the bibliographies of the two styles required for the following journals *Nature* and *PLOS ONE*.
- Make the references available for the lecturers using the export function of the reference management software. Choose the file format *Endnote XML* and name the file as followed: **last name_first name**. Submit the XML file additionally to the Word or PDF file to brigitte.schubnell@hbz.uzh.ch
- Take a critical position on plagiarism. (Length: approximately ½ A4 page)

7. Bibliometrics

- From the bibliography choose five articles from different journals und determine the ISI Journal Impact Factor 2011 of the respective journals. What position (ranking) do the journals occupy within their respective field of expertise?
- Choose one of the leading scientists in your topic and make a statement on his/her reputation using Web of Knowledge databases and Scopus:
 - o Include their name and the institution the scientist is at employed at today.
 - o Determine how many publications are indexed in Web of Science and Scopus in total.
 - o Assess the reputation of the journals in which he/she has published.
 - o How often have the articles been cited in Web of Science and in Scopus? How many are not self-citations?
 - o Determine her/his Hirsch number (h-index) in Web of Science and Scopus.
- Take a critical position on the bibliometric indicators as impact factor, number of citations and h-index, which are often used in the natural sciences. (Length: approximately ½ A4 page)

8. Open Access

Complete the following points:

- For each of the five chosen articles (see Point 7) answer the following questions:
 - o Which publishing house does each of the journals come from? The 5 journals should come from different publishers, if not choose new journals.
 - o Is the journal subject to licence conditions or is it open access?
 - o Is there an embargo period, after which the licenced journals become open access?
- For each of the five journals, explain the rights of the authors to deposit their work in a University repository. For each journal answer the following questions:
 - o Can the paper be entered in a university repository with open access?
 - o Can the paper only have open access after an embargo period?
 - o In what form can the paper be deposited (accepted manuscript, publisher's PDF or other form)?
- Indicate alternative journals with open access for your chosen topic or in your field of expertise.
- In which databases or websites have you found the information needed to answer the above points?