

ZHAW University Library Wädenswil

Welcome to the workshop

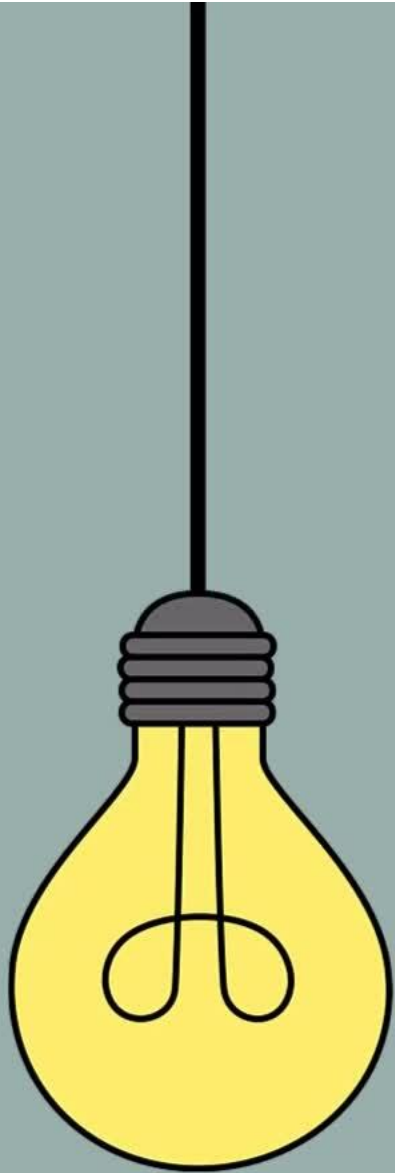
«Literature research, literature management, literature evaluation»

Dieter Sulzer

Carina Burch

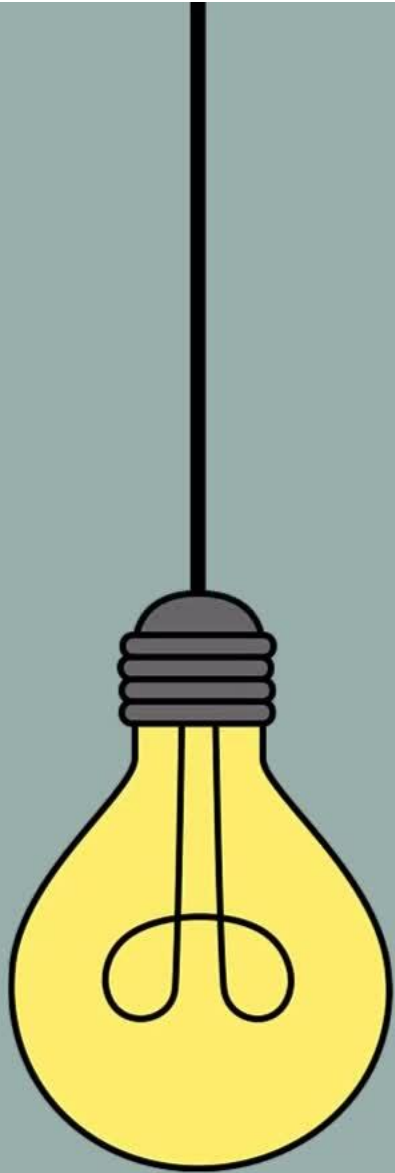
[2025 / waedenswil.hsb@zhaw.ch](mailto:2025/waedenswil.hsb@zhaw.ch)





Today's programme:

1. **Kickstart your research: Find first sources and refine your focus – with Dieter**
2. **Master your research: Search, organize and cite effectively – with Carina**
3. **Evaluate your research: Check your sources and your search – with Dieter**



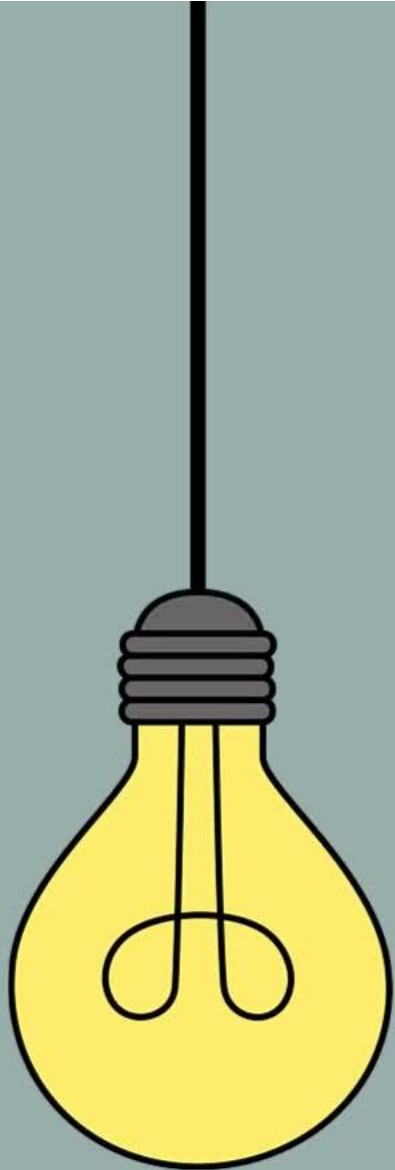
Kickstart your research: Find first sources and refine your focus

- Search strategies
- Search tools (ZHAW swisscovery, databases, AI tools)
- Search techniques

Your experiences and expectations?



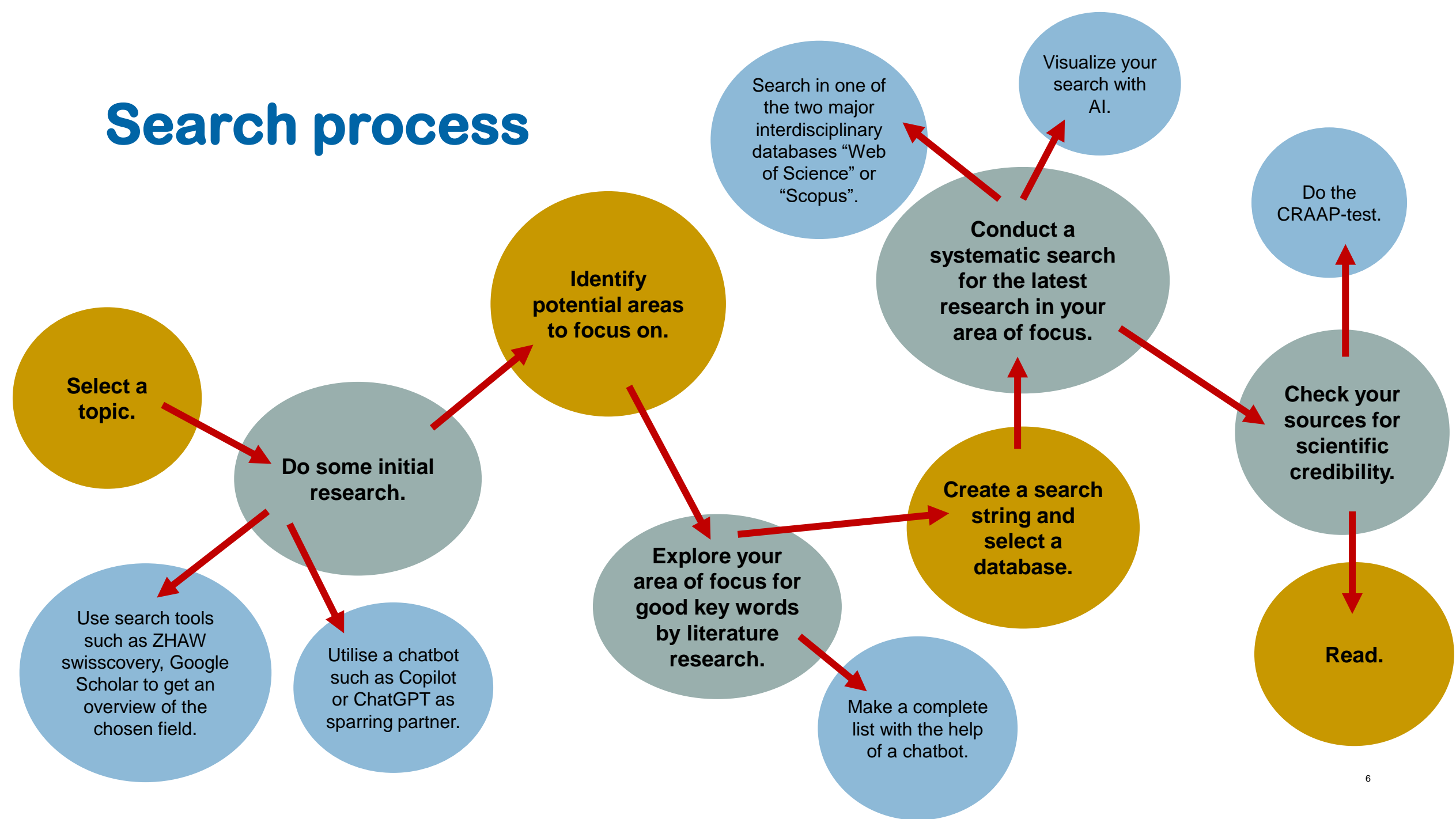
→ [menti.com](https://www.menti.com)



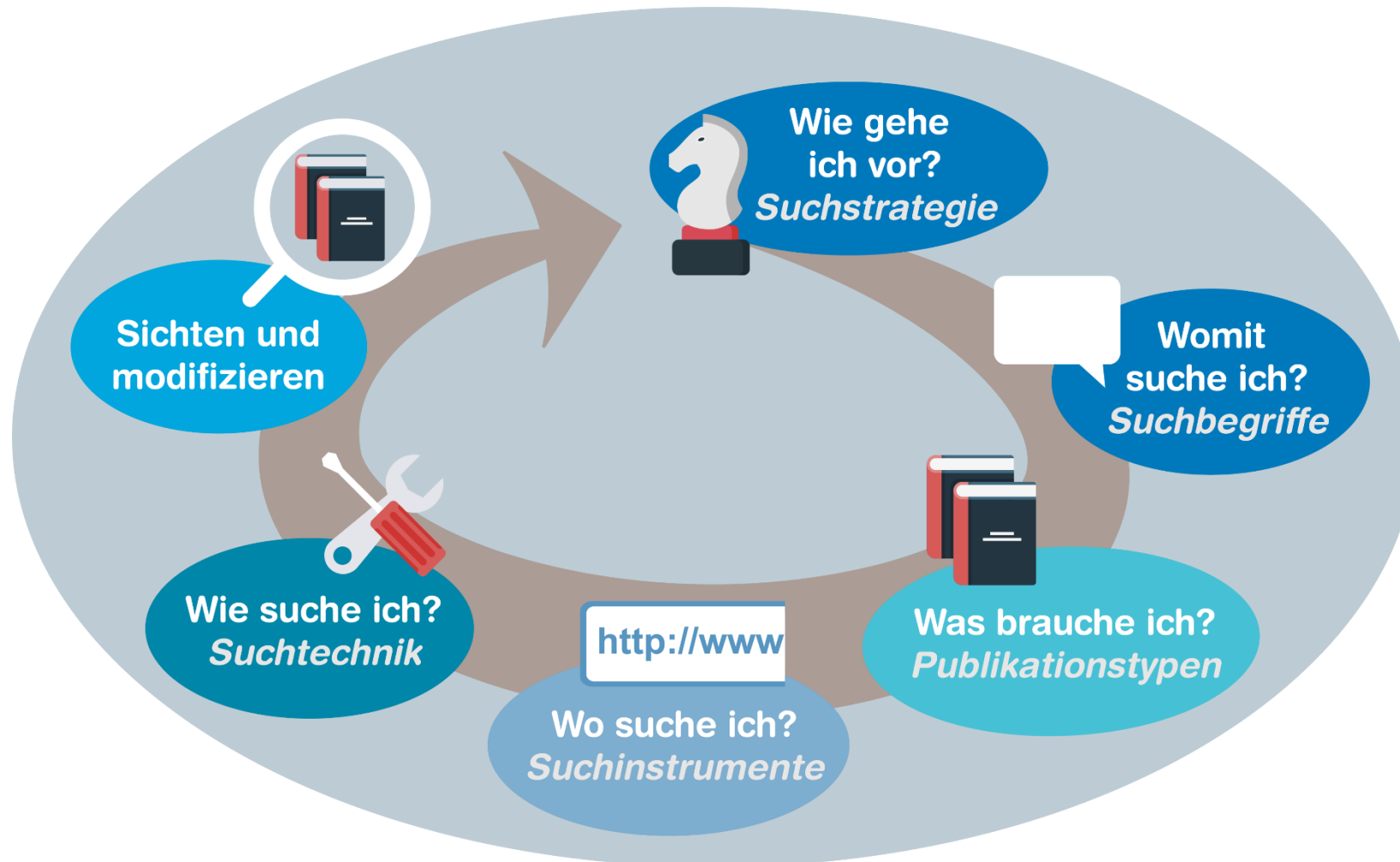
Successfully finding good literature

Search strategies & (specialised) databases

Search process



Literature search as an iterative process



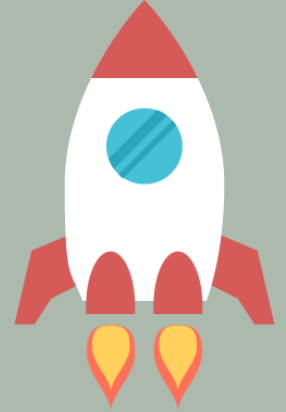
1. Get an overview: Entry search

“I know nothing/little about the topic and am looking for literature to familiarize myself with it.»

- **Initial situation:** A topic to be worked on.
 - **Goal:** To gain an initial overview, familiarise yourself with specialised terminology and identify key research areas.
 - **Search tools:**
 - ZHAW Swisscovery
 - Google, Wikipedia, AI Chatbots
 - introductory literature & textbooks
- AI tools can be used as brainstorming partners to support the identification of topics at the beginning of the research process.

5 min – Assignment:

Identify your research interest



1. Use Copilot or ChatGPT as a sparring partner. Ask questions as:
 - Identify the current trends, developments, and future directions in [topic]?
 - What are the emerging trends in the literature on [topic]?
 - I want you to act as an expert academic researcher in [main topic] and suggest five pivotal research questions that address [area of focus]
 - Are there any gaps or areas of controversy in the literature on [area of focus] that need further exploration?
1. Search ZHAW swisscovery for books that introduce your topic to get an overview of your chosen field. Think about what you want to demonstrate, answer or discover in your presentation.
(Given its length & the available time you have).

2. Know the most important terms: Explorative Search

"I have familiarized myself with my topic and am gradually defining a concrete research question, as well as identifying and understanding my research focus."

- **Starting Point:**

A general overview of the topic area exists.

- **Goal:**

Define the research question or focus and identify its key aspects using relevant search terms. This is necessary in order to formulate a specific search query in the third step of the research process.

Search tools for exploratory searches

ZHAW Swisscovery

- Publications acquired by the university library for ZHAW
- Media holdings from over 500 Swiss (university) libraries with → courier orders possible
- Lots of Open Access titles, journals
- ZHAW Open-Access-Repository: Publications of the ZHAW

Google Scholar

- Freely accessible and multidisciplinary
- Some publications not listed in library catalogues and academic databases

Internet search engines such as Google Scholar have the disadvantage that we do not know what is actually being searched (lack of transparency) and whether publications fulfil scientific standards (lack of quality control). Always search in ZHAW swisscovery as well.

...and what about AI tools?

- There are many AI tools for literature research. These offer different functions. (Here is a complete overview, be sure to follow the instructions)

- Chatbot: e.g. ChatGPT or Microsoft Copilot

Caution: Literature can be invented.

- Scientific search engine: e.g. Consensus

→ Semantic search: "Natural" language is accepted as input and attempts are made to capture the semantics of a question.
(as opposed to searching with search terms and research techniques)

- Literature mapping: e.g. ResearchRabbit

→ Identification of further relevant articles based on an existing literature list - or so-called "seed papers"

- Literature Review: e.g. Elicit, Scispace

→ Analyzing Literature

The use of AI tools requires prior knowledge and a great deal of assessment skills.

Use the snowball sampling!

"I have found a particularly suitable text on my topic and use it as a starting point for further literature."

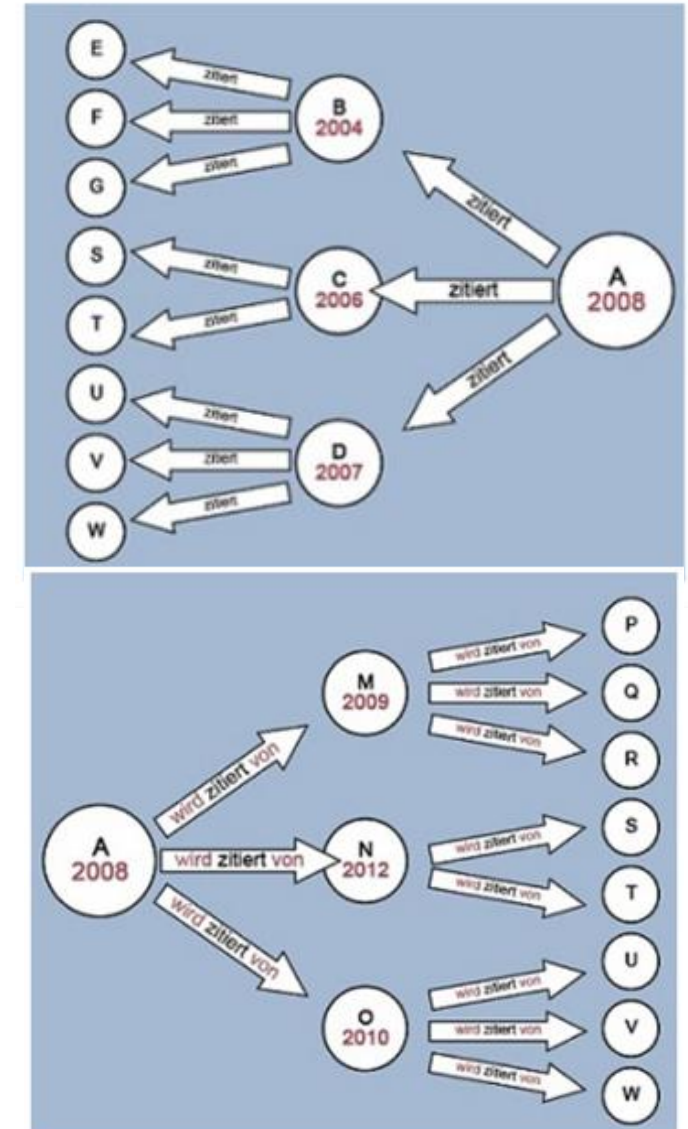
Backward-looking search

Search for relevant **sources** in the bibliography of a suitable text.

Often found in specialist databases under the indication "Cited References" or "References".

Forward search

Various databases indicate how often a publication is **cited** in recent literature; often found under the indication "Times cited", "Cited by" or "Citations", e.g. in Web of Science (interdisciplinary database) or Google Scholar



3. Finding the latest research findings: Systematic search

"I have defined my question and want to find as many relevant texts as possible to my question."

- **Initial situation:**

A research question to be answered

- **Goal:**

Find key words, use search techniques and relevant and up-to-date research findings

- **Search tools**

(Subject)Databases

For in-depth research, we recommend querying databases. These are bibliographies on a specific subject / research area.

Or even: "Googling is like fishing in murky or troubled waters. A database search is a targeted treasure hunt."

Collect search terms on an ongoing basis...

In order to be able to systematically search for relevant texts, the "right" search query ("search string" = searchable format of the question / focus) is required. This is made up of search terms for the central aspects of the topic or the question.

Define search terms with the help of dictionaries, introductory literature or thesauri:

- [OpenThesaurus](#)
- [Reference works](#)
- [Oxford Reference](#)
- Search titles, tables of contents and abstracts of texts already found by search terms

10 min – Assignment: Find your key words



1. Write your focus in a lexical field. Think about which thematic components are important for finding literature that provides answers. Since a systematic literature research requires a combination of terms ("search string") to explore the current state of research, it's important to find keywords for each component, including synonyms and different spellings. 🙌 You should review the titles and abstracts of literature you've already found to identify good terms.
2. Use Copilot or ChatGPT to list keywords. Use prompts as:

Assume the role of an academic researcher in the field of [topic]. Your task is to carry out a thorough and systematic review of the literature. List the most important keywords for [area of focus / research question]. Find synonyms and related terms for each key term and present them in a table (one column for each block).

...word field documentation

Download the word field

Wortfeld

Fragestellung:	
-----------------------	--



Hauptaspekte / Kernbegriffe des Themas				



- Synonyme
- Oberbegriffe
- Unterbegriffe
- Verwandte Begriffe
- Abkürzungen
- Übersetzungen
- weitere Suchbegriffe (aus bereits bekannten Artikeln, Klassifikationen in Datenbanken...)

Word field documentation

Fragestellung: How does soil temperature affect plant growth?

AND

Hauptaspekte / Kernbegriffe des Themas				
<ul style="list-style-type: none"> • Synonyme • Oberbegriffe • Unterbegriffe • Verwandte Begriffe • Abkürzungen • Übersetzungen • weitere Suchbegriffe (aus bereits bekannten Artikeln, Klassifikationen in Datenbanken...) 	«Soil temperature»	«Plant growth»		
	«Ground temperature»	«Vegetation growth»		
	«Earth temperature»	«Flora development»		

OR

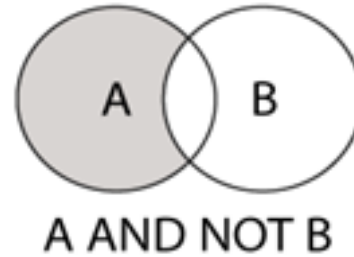
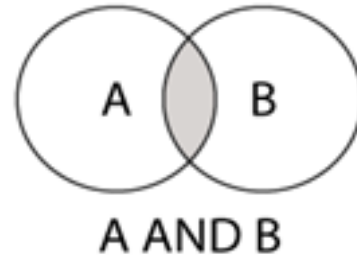
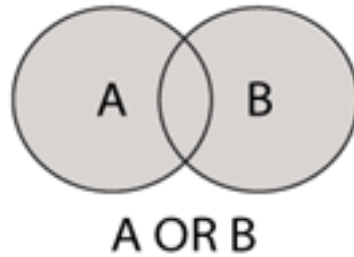
Search techniques

BOOLEAN OPERATORS

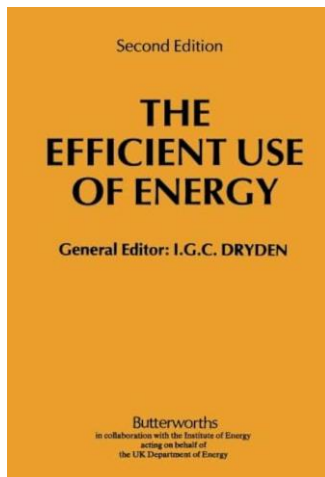
AND

OR

NOT



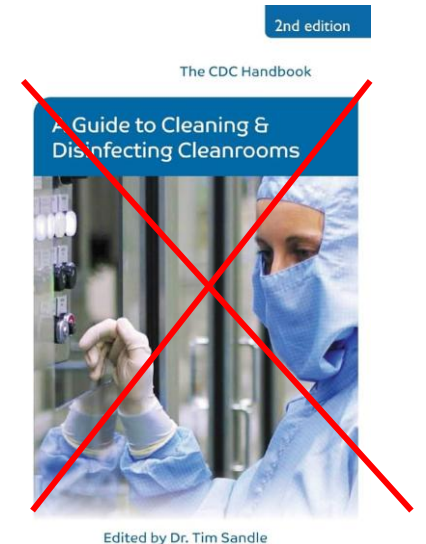
Energy **AND** Efficiency



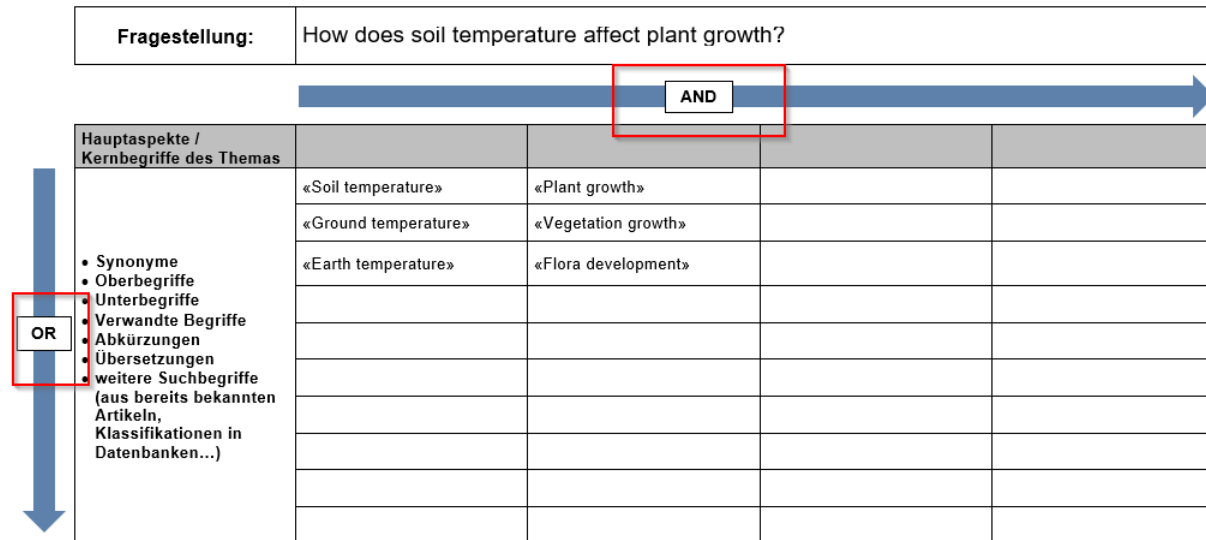
Bacteria **OR** Virus



Cleaning **NOT** Disinfection



Word field documentation



(«Soil temperature» **OR** «earth temperature» **OR** «ground temperature) **AND**
 («plant growth» **OR** vegetation growth» **OR** flora development»)

Search techniques

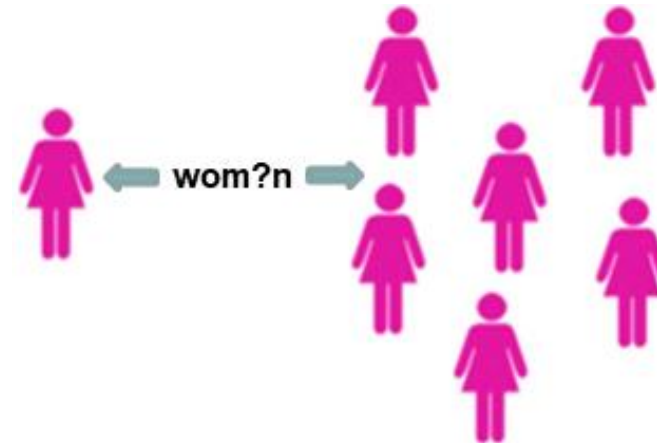
TRUNCATION AND WILDCARDS

Scien*

→ science, sciences, scientific

Wom?n

→ woman, women













«QUOTATION MARKS» SPECIFIC PHRASE

«environmental policy»

«climate change»

The latest findings in a subject area

Systematically listed

Looking for...	Find in...
 Books Journals  E-Books E-Journals  Audiovisual media	<p>ZHAW swisscovery</p> <p>verschiedene Suchbereiche:</p> <ul style="list-style-type: none"> «ZHAW»: search within ZHAW «swisscovery»: nationwide search 
 Scientific articles (Studies, Reviews, Working Papers, Preprints etc.) Chapters in edited collections 	<p>ZHAW swisscovery</p> <p>Search for the title of the article or essay. If there are no hits or only without full text: Search for the title of the publication containing this text (journal or book title)</p> <p>data base </p> <p>Google Scholar </p>
 Newspaper article, formula collections, norms, patents, statistics, pictures, maps	<p>ZHAW swisscovery</p> <p>data base </p>

(Subject) Databases

Subject databases list publications on a specific subject area, regardless of the holdings of individual libraries. In particular, they also include conference papers, case studies, reports and individual articles from journals and anthologies.

- Great topicality: the current state of research is presented.
- Quality / Scientificity: Articles must meet certain qualitative and scientific criteria.
- There is not ONE database that always fits. Selection depends on the topic / the question.

→ Multi-disciplinary data bases, e.g. Scopus

→ Data bases Chemistry and Life Sciences, e.g. Web of Science, FSTA - Food Science and Technology Abstracts

15 min – Assignment:

Find good sources in a database



As scientists usually publish their new research data as articles in journals, it is advisable to search bibliographic databases for good sources/literature. Since these databases contain as many articles, conference proceedings and research reports as possible on a given subject, you will usually find literature that is not included in general search engines such as ZHAW swisscovery or Google Scholar.

- Scopus: Abstract and citation database for the natural sciences, humanities and social sciences
- Web of Science: Literature with a focus on art, humanities, social sciences, medicine, natural sciences and technology

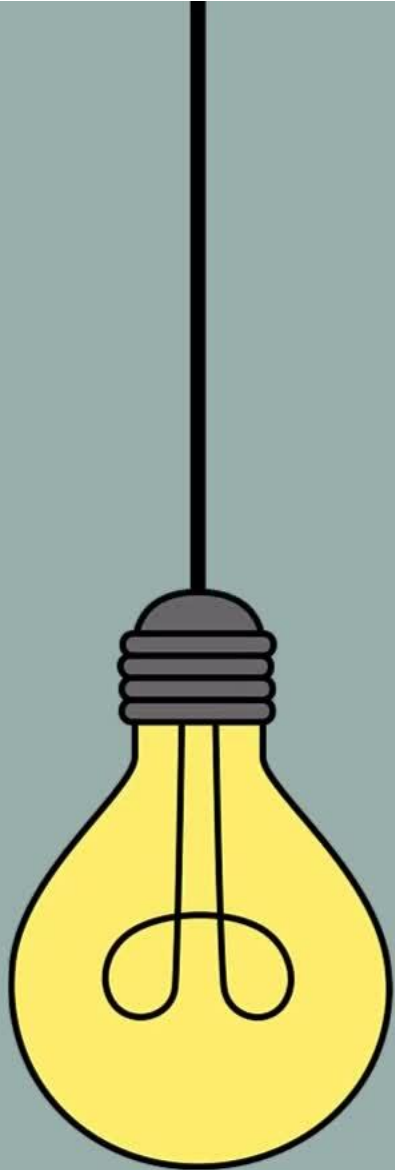
And a few helpful links

[Moodle-Course Zotero](#)

[Moodle-Course Literature Research](#)

[Courses ZHAW University Library](#)

[AI tools for literature research \(in German only\)](#)



**Master your research: search,
organize and cite effectively**

**Have you documented
your search and search
results in any way?**

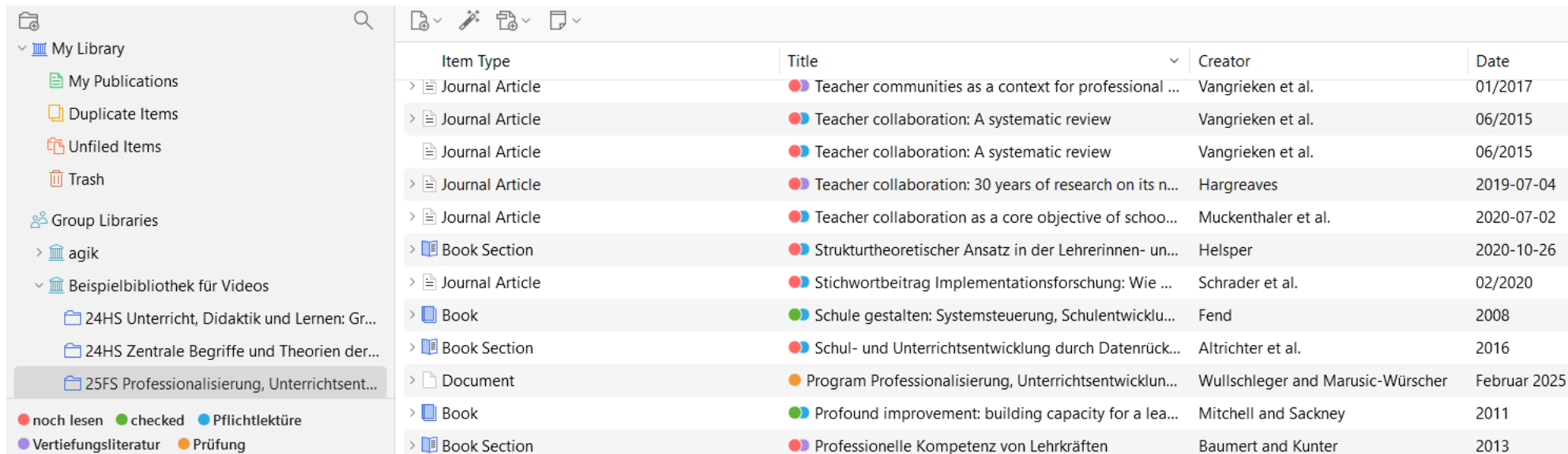
Search documentation

To ensure that you do not lose track of things during your literature research, it is helpful to **document it**. This means you can avoid having to conduct the same search more than once or forgetting a possible search query.

- The search documentation is a helpful tool for approaching your search systematically
- Start with it right from your first search
- It transparently shows the path to the literature you have found.
- It shows the search terms, the search steps and the work you have done.

Why reference management?

Ideally, you should already use a **reference management system** such as Zotero (Moodle course Literaturverwaltung mit Zotero) during your research so that you have a collection of all the documents you have found in one place.



The screenshot shows the Zotero interface with a sidebar on the left and a main list of items on the right. The sidebar includes 'My Library' with sub-items like 'My Publications', 'Duplicate Items', 'Unfiled Items', and 'Trash'. It also shows 'Group Libraries' with 'agik' and 'Beispielbibliothek für Videos' containing folders for '24HS Unterricht, Didaktik und Lernen: Gr...', '24HS Zentrale Begriffe und Theorien der...', and '25FS Professionalisierung, Unterrichtsent...'. A legend at the bottom left indicates item status: 'noch lesen' (red dot), 'checked' (green dot), 'Pflichtlektüre' (blue dot), 'Vertiefungsliteratur' (purple dot), and 'Prüfung' (orange dot).

Item Type	Title	Creator	Date
Journal Article	Teacher communities as a context for professional ...	Vangrieken et al.	01/2017
Journal Article	Teacher collaboration: A systematic review	Vangrieken et al.	06/2015
Journal Article	Teacher collaboration: A systematic review	Vangrieken et al.	06/2015
Journal Article	Teacher collaboration: 30 years of research on its n...	Hargreaves	2019-07-04
Journal Article	Teacher collaboration as a core objective of schoo...	Muckenthaler et al.	2020-07-02
Book Section	Strukturtheoretischer Ansatz in der Lehrerinnen- un...	Helsper	2020-10-26
Journal Article	Stichwortbeitrag Implementationsforschung: Wie ...	Schrader et al.	02/2020
Book	Schule gestalten: Systemsteuerung, Schulentwicklu...	Fend	2008
Book Section	Schul- und Unterrichtsentwicklung durch Datenrück...	Altrichter et al.	2016
Document	Program Professionalisierung, Unterrichtsentwicklun...	Wullschleger and Marusic-Würscher	Februar 2025
Book	Profound improvement: building capacity for a lea...	Mitchell and Sackney	2011
Book Section	Professionelle Kompetenz von Lehrkräften	Baumert and Kunter	2013

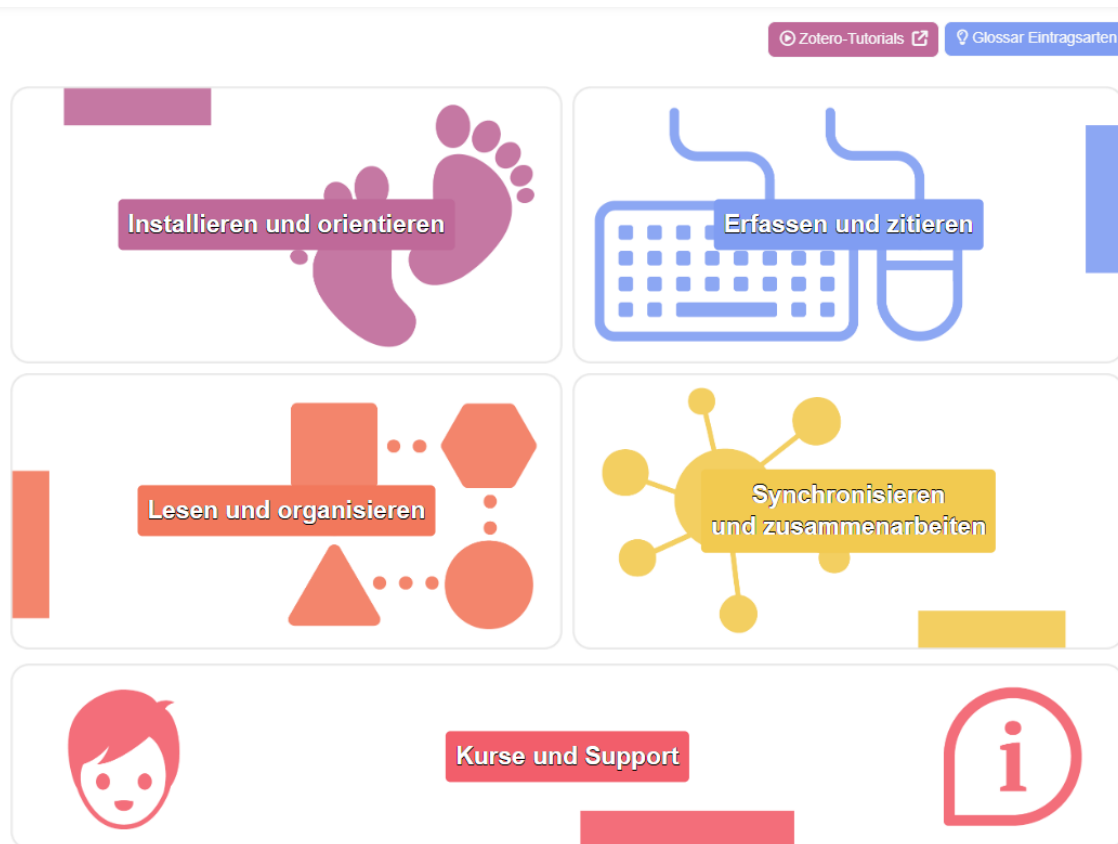
What is Zotero?



- Save literature
- Organize
- Read and annotate
- Cite your sources
- Synchronise
- Collaborate

Zotero: Overview and support

Moodle Course (mostly in German)



Zotero Basics in English

- Installing Zotero
- Setting up Zotero
- Saving literature
- Citing
- Organise your literature and library
- Reading and knowledge management

Questions?

Write to us at literaturverwaltung@zhaw.ch
Virtual consultations are also possible by appointment

Part I: Save and cite sources

- Go to this [Moodle page](#). There you find exercises.

Advanced exercises

- Do you know other import options?
-

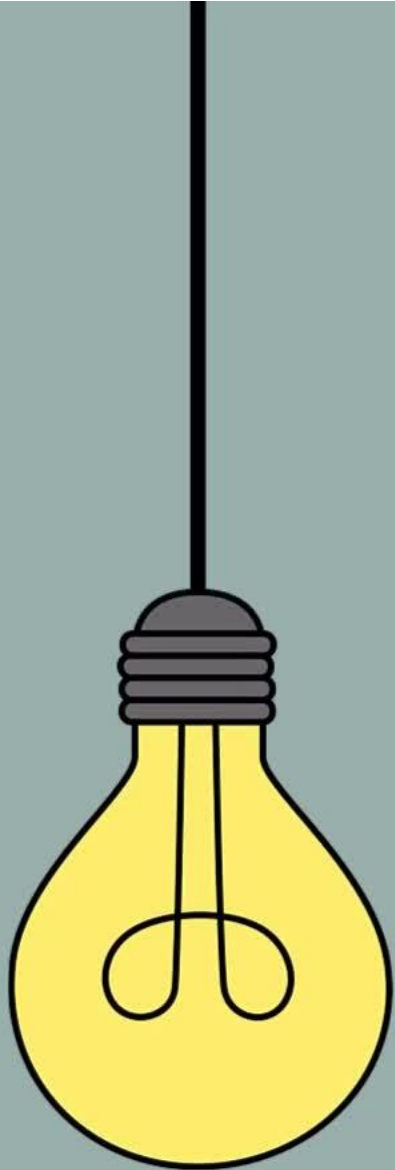
Part II: Organise and read sources

- Create a Zotero online account. The registration is free of charge, if you use your ZHAW mail address you get unlimited storage space.
- Join this Zotero Group
- There you find exercises

Don't forget: document your search

To ensure that you do not lose track of things during your literature research, it is helpful to **document it**. This means you can avoid having to conduct the same search more than once or forgetting a possible search query.

- The search documentation is a helpful tool for approaching your search systematically
- Start with it right from your first search
- It transparently shows the path to the literature you have found.
- It shows the search terms, the search steps and the work you have done.



**Evaluate your research: check
your sources and your search**

Tip: Check literature with the CRAAP test

Publications on which you build in the university context must meet scientific standards.

Criteria for this are:

- Topicality of the publication
- Qualification of the authors
- Source of information
- Bibliography
- ...

In order to check found literature for scientificity, use the CRAAP test. Details can be found in the Moodle course Evaluating sources

Tip: Check literature with the CRAAP test 1/2

Currency

When was the information published?

Has the information been revised or updated?

Is the information up-to-date or outdated for your topic?

Do the links work?

Relevance

Does the information relate to your topic or does it answer your question?

Who is the target audience?

Is the information at an appropriate level (i.e. not too basic or too advanced for your needs)?

Did you look at different sources before deciding on this one?

Authority

Who are the authors, the source?

Is the organizational affiliation of the authors indicated?

What qualifications do the authors have to write about the topic?

Is there contact information, such as an email address?

Does the URL reveal anything about the authors or the source?

Tip: Check literature with the CRAAP test

Accuracy

Where does the information come from?

Is the information supported by evidence? Are there references and a bibliography?

Has the information been reviewed or peer-reviewed?

Can you verify the information in another source or through your personal knowledge?

Does the language or tone of voice seem unbiased and neutral?

Are there typographical errors, spelling or grammatical errors?

Purpose

What is the purpose of the information? Should it inform, teach, sell, entertain, persuade?

Do the authors or sponsors make their intentions clear?

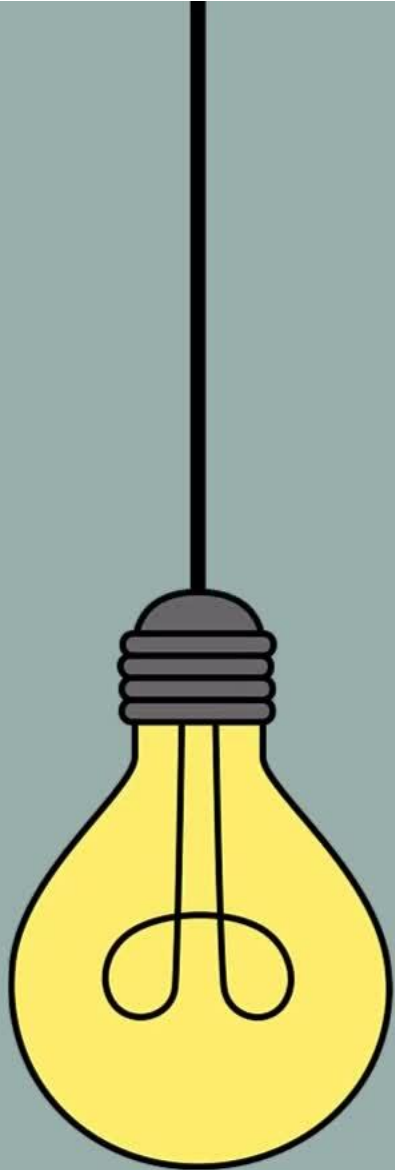
Is the information fact, opinion or propaganda?

Does the view appear objective and impartial?

Are there political, ideological, cultural, religious, institutional or personal prejudices?

Questions?





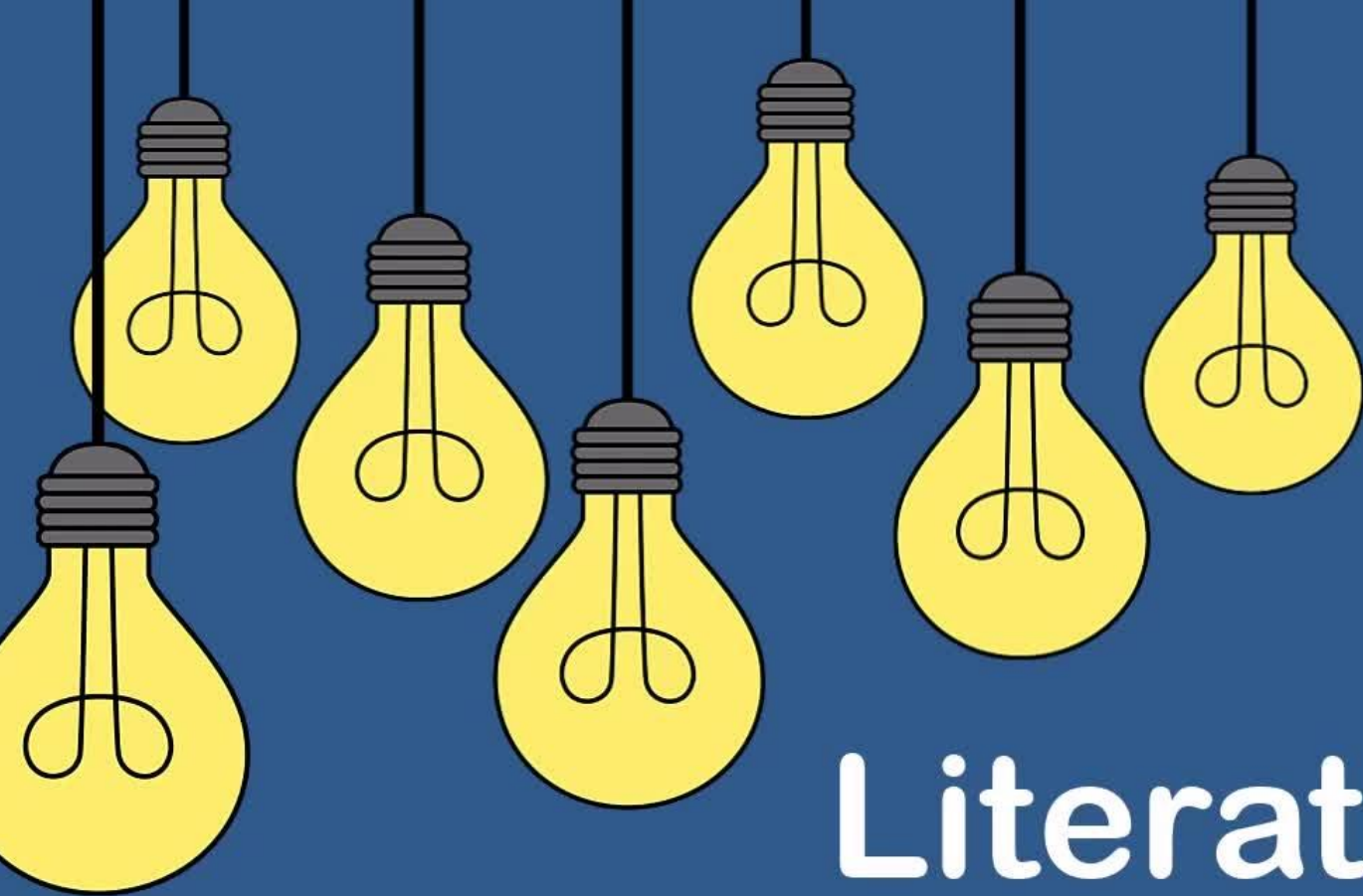
Talk to us!

waedenswil.hsb@zhaw.ch

*Are you in the middle of a
literature search?
book a*

research
consultation

*Then we will discuss the
research on your topic!*



7 Tipps zur Literaturrecherche

[Link zur
Video-Serie](#)