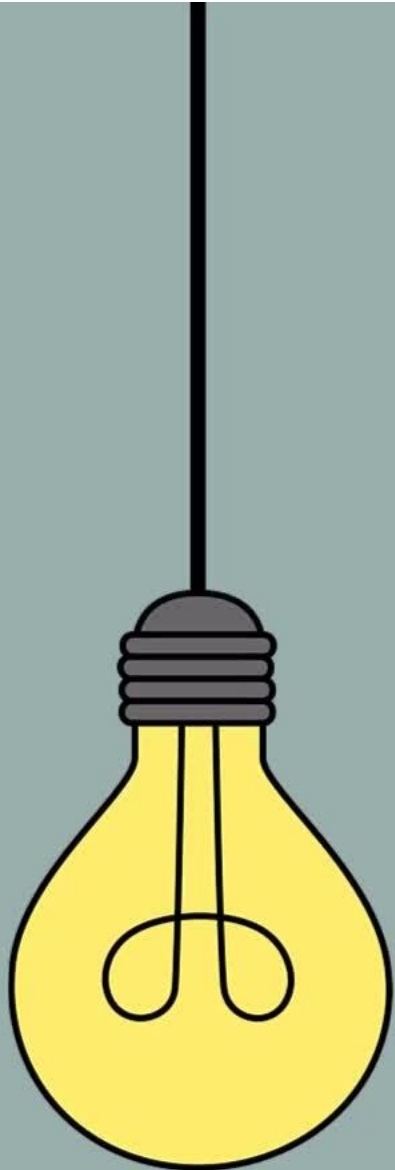# ZHAW University Library Wädenswil
Finding and Selecting Sources – Input
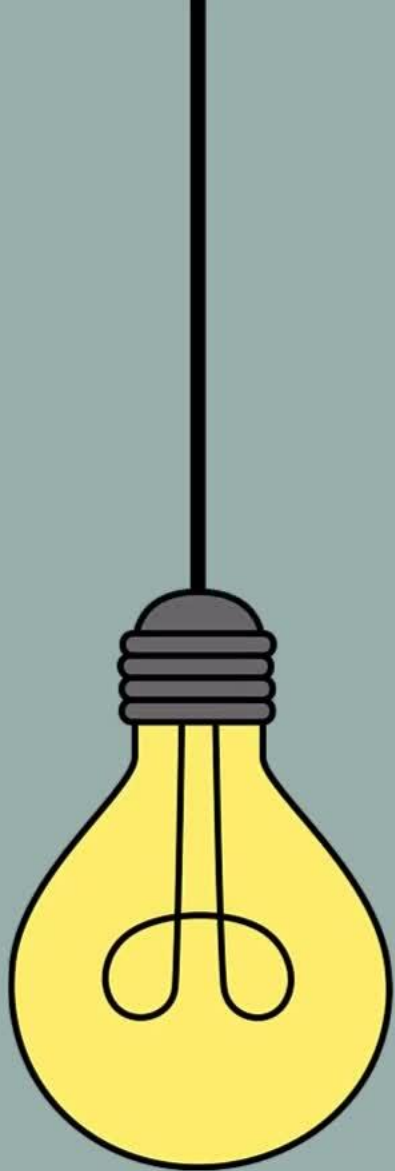

2024 / waedenswil.hsb@zhaw.ch

Today's goal:

We set up an efficient literature search, search databases and save the literature found (sneak preview for next time).

Agenda

- **Why do I need to search for literature? And when?**
  → literature research process

- **What steps am I taking?**
  → search strategies

  1. Initial search

  2. Exploratory search

  3. Systematic search

- **Is there any help?**

  → 7 tips for literature research

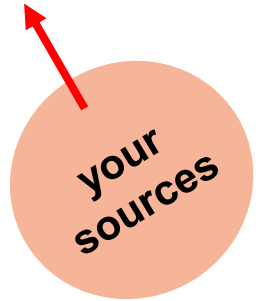# Why do I need to search for literature? And when?

literature research process
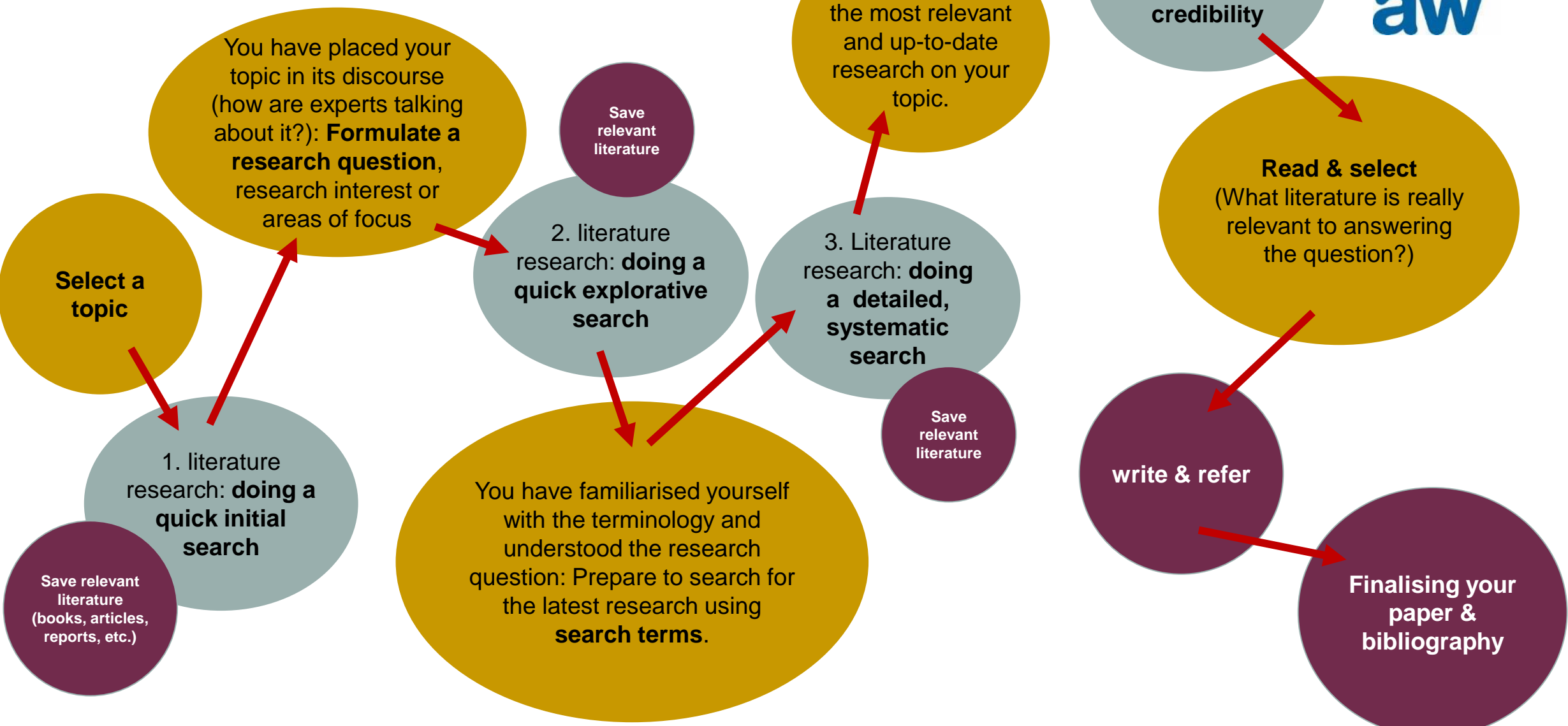
Literature research – why?

Literature research is a **methodical investigation** to find key information (books, journal articles, reports, case studies, policy documents, conference proceedings, etc.) on the topic of a paper, whether it is a project, seminar, bachelor's, or master's thesis.
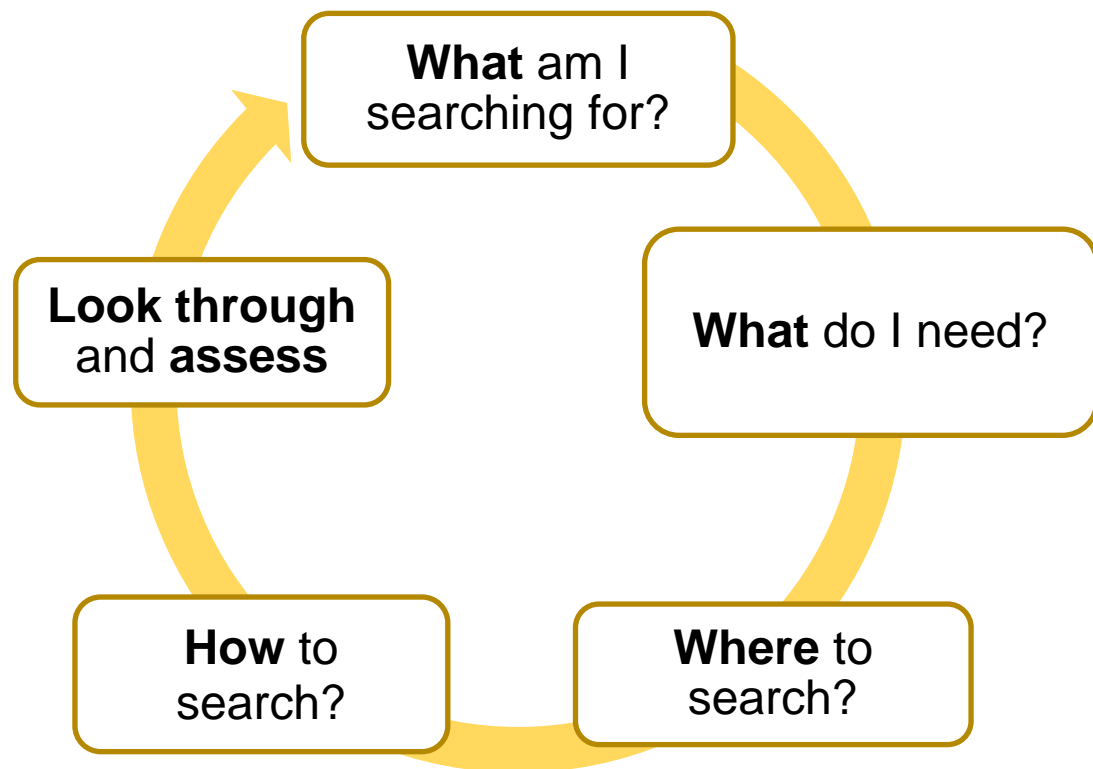
By carrying out literature research, you

- familiarize yourself with the topic, narrow down your areas of focus, and refine the research question.

- determine what has already been studied on a topic and where research gaps exist.

- can build on existing knowledge and where possible, draw your own conclusions.

your sources

Literature research – when?

Select a topic

You have placed your topic in its discourse (how are experts talking about it?): **Formulate a research question**, research interest or areas of focus

1. literature research: **doing a quick initial search**

Save relevant literature (books, articles, reports, etc.)

Save relevant literature

2. literature research: **doing a quick explorative search**

You have familiarised yourself with the terminology and understood the research question: Prepare to search for the latest research using **search terms**.

3. Literature research: **doing a detailed, systematic search**

You have found the most relevant and up-to-date research on your topic.

Save relevant literature

Checking literature for scientific credibility

Read & select (What literature is really relevant to answering the question?)

write & refer
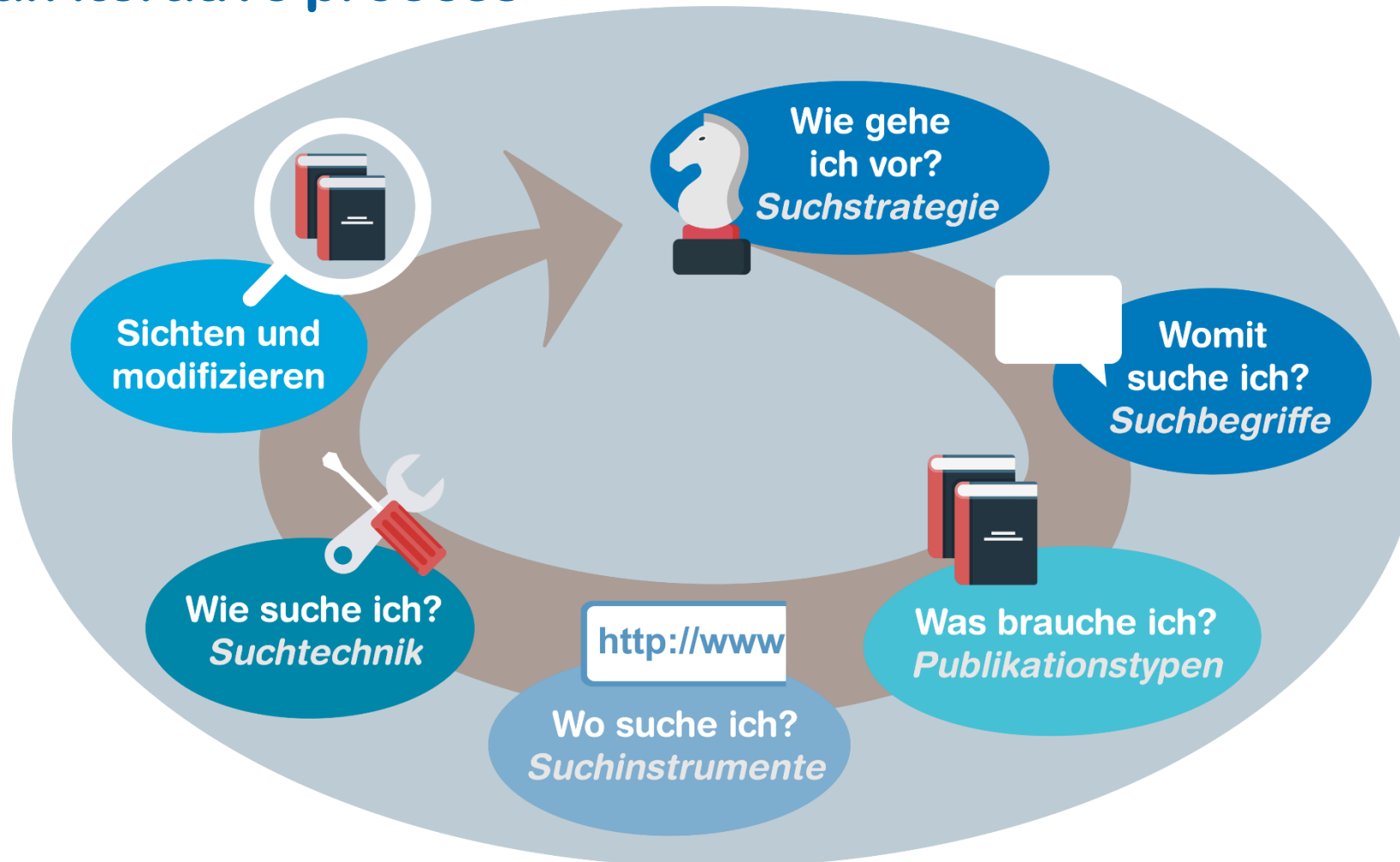
Finalising your paper & bibliography
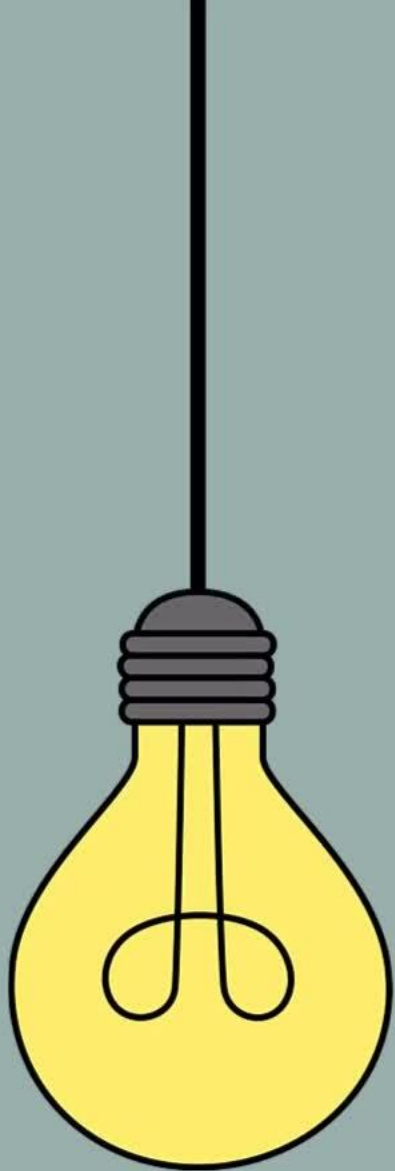
Literature research – how?

- **What** am I searching for?
  topic – what is to be found?

- **What** do I need?
  Information need - what types of documents contain the relevant information?

- **Where** to search?
  Search instruments?

- **How** to search?
  Search techniques?

- **Look through** and **assess**
  document the results
  evaluate the sources
  continue to search

Literature research – how?
→ As an iterative process

What steps am I taking?

Search strategies & databases

Step 1: Initial search

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

- **Starting point:** A topic to work on.

- **Aim:** To get an initial overview, to become familiar with the terminology and to identify the main areas of research.

- **Search tools:**
  - ZHAW swisscovery
  - reference works (for quick orientation)
  - Google, Wikipedia, Copilot …
  - Introductory books on the subject & textbooks
  - …..

Let's open up swisscovery and have a look…

Topic to practise: Cheese ripening

Keep the search in swisscovery open. We need it for later!

Step 2: Exploratory search

«I have familiarized myself with my topic and I am gradually defining a specific research question, resp. I am defining and understanding my research interest.»

- **Starting point:** You have a broad overview of the subject area in question.

- **Aim:** Define the research question/focus and work out its central aspects using search terms (key words). This is necessary in order to formulate a targeted search string in step 3.

Search tools for the explorative search

ZHAW swisscovery

- Publications acquired by the University Library for ZHAW programs.

- Holdings of over 500 Swiss (university) libraries
  → Courier orders possible ((and free of charge)

Google Scholar

- Freely accessible and multidisciplinary
- You will find some publications that are not listed in library catalogues and academic databases

ZHAW digitalcollection

- Open Access Repository of the ZHAW
- Publications of the ZHAW

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

and what about AI tools?

There are many AI tools for literature research. These offer different functions. (→ **Here** you can find a complete overview, please look at the instructions!!)

- Chatbot, e.g. ChatGPT or Microsoft Copilot

  → Caution: Literature may be invented.

- Scientific search engine, e.g. Semantic Scholar, Consensus

  → Semantic search: Accepts "natural" language as input and attempts to capture the semantics of a question (as opposed to searching with keywords and research techniques).

- Literature Mapping, e.g. ResearchRabbit

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

  - Literature Review, e.g. Elicit, Scispace

  → Analysing literature

Using AI tools requires **prior knowledge** and a high degree of judgement.

Use the snowball principle!

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

Backward search
- Searching for relevant sources in the bibliography of an appropriate text
- Often found in databases under 'Cited references' or 'References'

Forward search
- Various databases indicate how often a publication has been cited in more recent literature; often found under 'Times cited', 'Citations' or 'Cited by', e.g. Web of Science (interdisciplinary database) or Google Scholar

Collect search terms (keywords)…

To systematically search for relevant texts, you need the "right" search string. This is made up of search terms that relate to the central aspects of your areas of focus or research 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

… and document the terms

Wortfeld

Fragestellung:			

AND →

Hauptaspekte / Kernbegriffe des Themas				
OR ↓ • Synonyme • Oberbegriffe • Unterbegriffe • Verwandte Begriffe • Abkürzungen • Übersetzungen • weitere Suchbegriffe (aus bereits bekannten Artikeln, Klassifikationen in Datenbanken…)				

Assignment (5 min)

Think of search terms (keywords) for this question. Which aspects do we need to include?

- What effect do wooden shelves have on the ripening process of cheese?

Think about:

- synonyms (e.g. house / dwelling)

- broader terms (e.g. university / higher education)

- narrower terms (e.g. children / toddlers)

- related terms (e.g. training / coaching)

- antonyms (e.g. terms with opposite meanings, such as parent/child or poverty/wealth)

- persons and organisations of importance to your subject

- terms indicating space and time (e.g. for instance eras, centuries, names of places, countries)

- avoid bias in your search terms, it might colour the outcome of your search (e.g. search terms like "negative impact")

And different forms:

- singular/plural

- verb conjugations

- nouns/adjectives

- different spelling (labor / labour or organisation / organization)

- abbreviations

- translations into languages which are relevant to your subject and discipline

Step 3: Systematic search

«I have defined my research question and would like to find as many relevant texts on my research question / research interest as possible.»

- **Starting point:** A research question to answer

- **Aim:** Find relevant and up-to-date research

- **Search tools:**
  - Key databases

To find the latest research on your topic, we recommend that you consult databases. These index literature on a particular subject or field of research. You can find a list of key databases in the **discipline-specific information**. You can also search an interdisciplinary database such as Web of Science.

«Googling is like fishing in murky or troubled waters. A database search is a targeted treasure hunt.»

Databases

Subject databases record publications in a particular subject area, independent of the holdings of individual libraries. They include conference papers, case studies, reports and individual articles from journals and edited volumes.
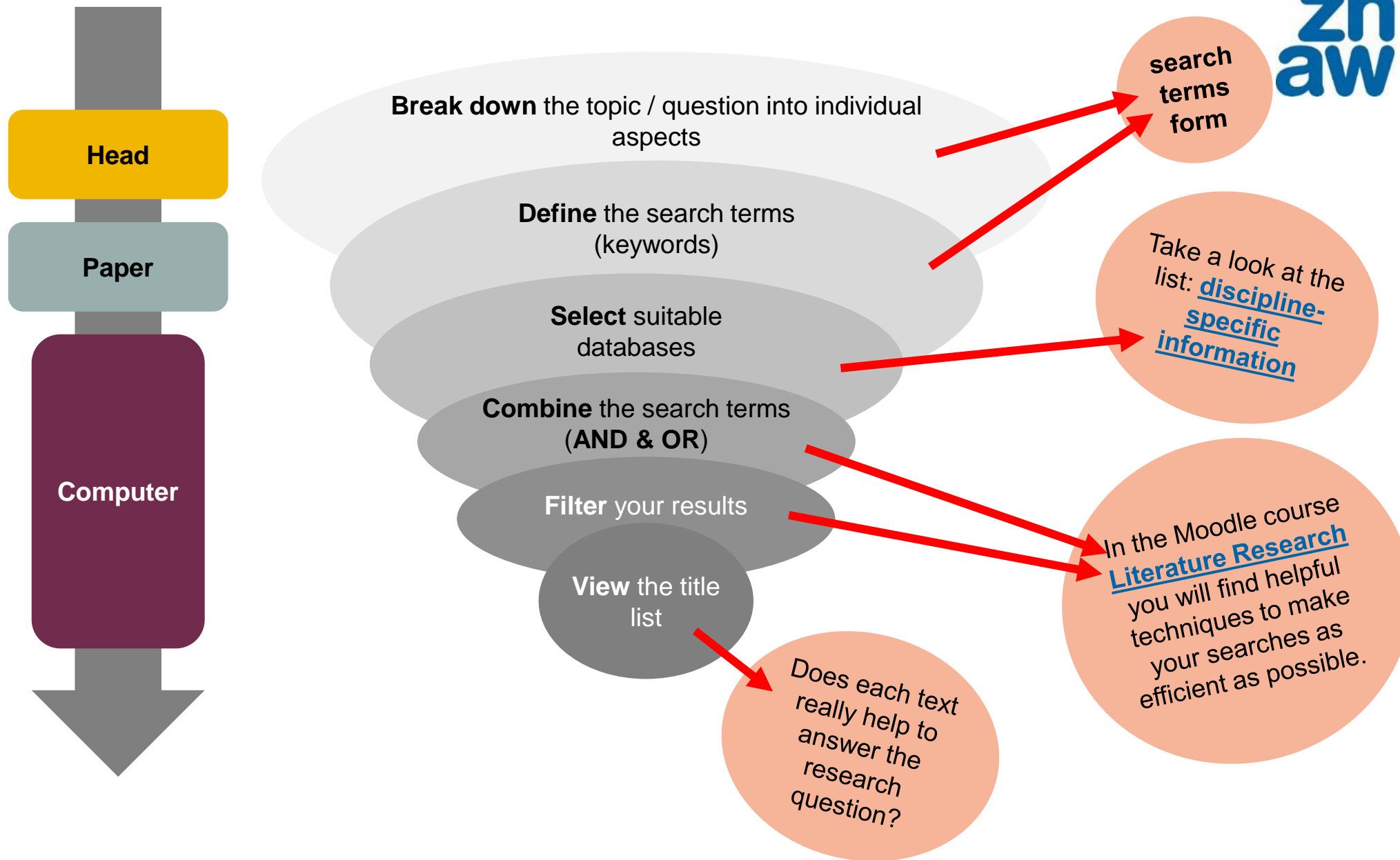
Advantages:
- Highly up-to-date
  The current state of research is represented.
- Quality
  Articles must meet certain scientific criteria.
- There is no ONE database that always fits. The selection depends on the topic / research question.

The latest findings in a subject area

Systematically listed

Suchen nach…	Finden in…
Bücher Zeitschriften E-Books Elektronische Zeitschriften Audiovisuelle Medien	ZHAW swisscovery verschiedene Suchbereiche: • «ZHAW»: Suche innerhalb ZHAW • «swisscovery»: schweizweite Suche
Wissenschaftliche Artikel (Studien, Reviews, Working Papers, Preprints, Kongressbeiträge etc.) Aufsätze in Sammelbänden (Buchkapitel, Kongressbeiträge etc.)	ZHAW swisscovery Suche nach Titel des Artikels oder Aufsatzes. Falls dies keinen Treffer gibt oder nur ohne Volltext: Suche nach dem Titel der Publikation, die diesen Text enthält (Zeitschriften- oder Buchtitel) Fachdatenbanken Google Scholar (lizenzierte und lizenzfreie wissenschaftliche Literatur)
Zeitungsartikel, Formeln, Normen, Patente, Statistiken, Bilder, Pläne, Verzeichnisse	ZHAW swisscovery Fachdatenbanken

zh aw swisscovery

Google Scholar

Head

Paper

Computer

Break down the topic / question into individual aspects

Define the search terms (keywords)

Select suitable databases

Combine the search terms (**AND & OR**)

Filter your results

View the title list

search terms form

Take a look at the list: **discipline-specific information**

In the Moodle course **Literature Research** you will find helpful techniques to make your searches as efficient as possible.

Does each text really help to answer the research question?

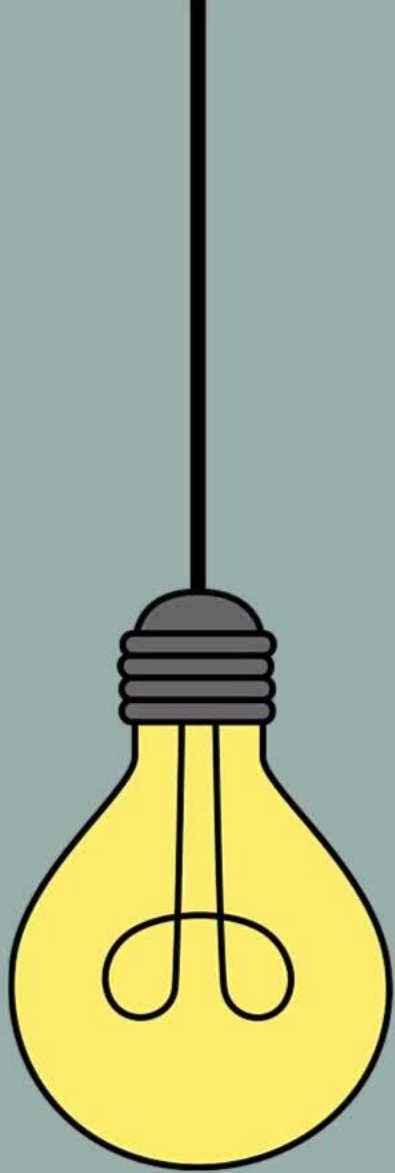Zürcher Hochschule für Angewandte Wissenschaften

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Assignment (8 min)

Go to the university library's website: Look at the databases and choose one; e.g. Web of Science.

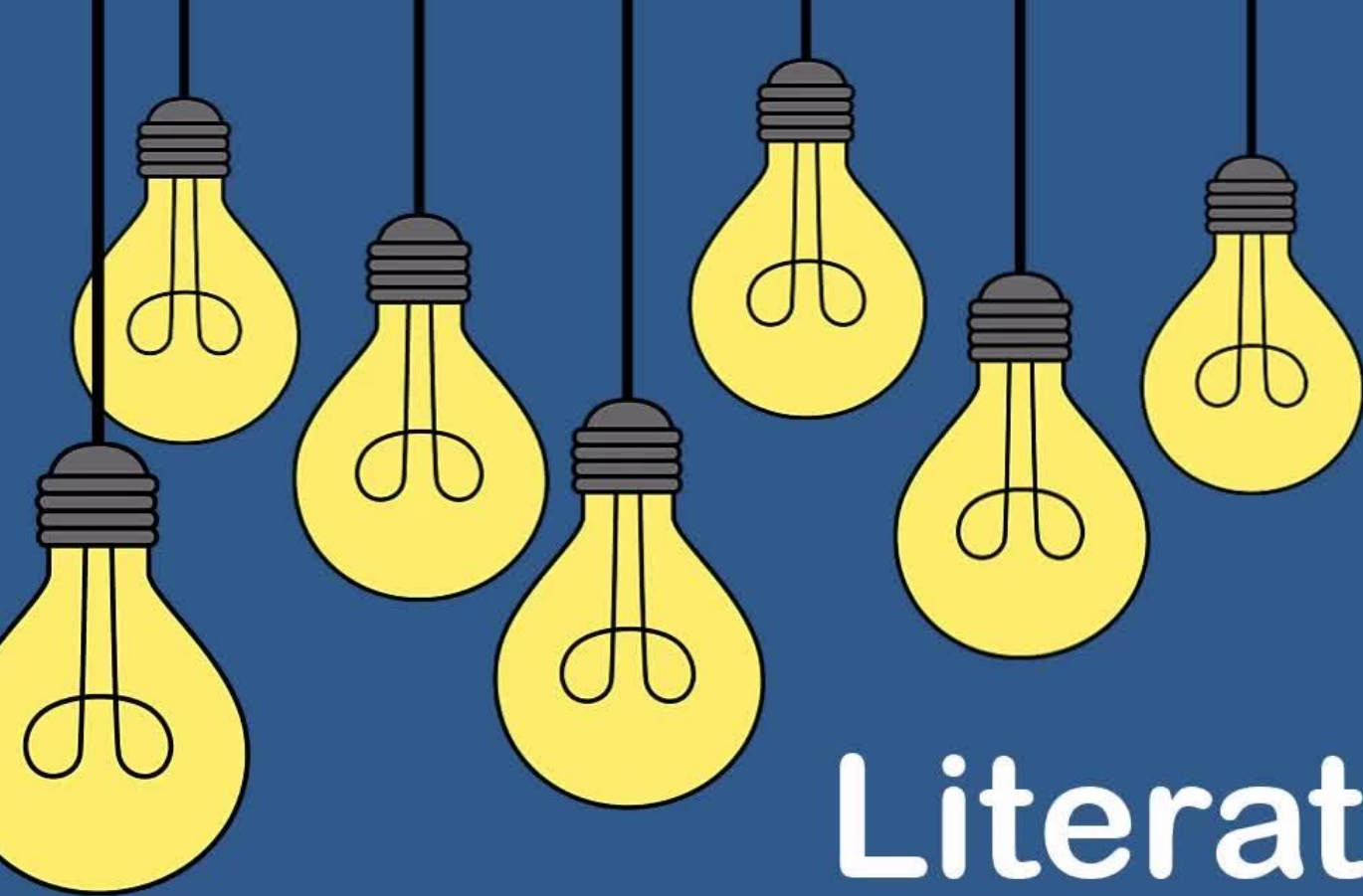Formulate a search string and share your thoughts.

Questions?

Is there any help?

7 tips & contact

7 Tipps zur Literaturrecherche

Link to the video series
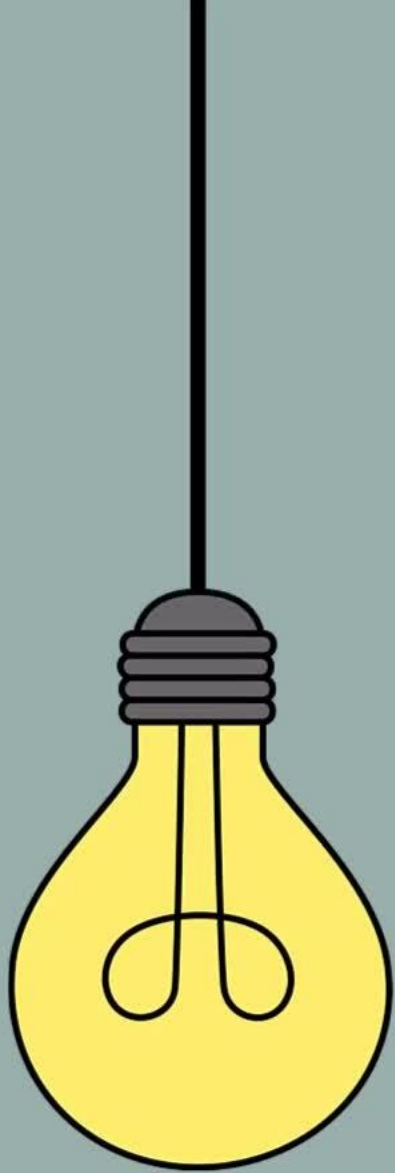
Library Team

Information desk

☺ on site   ☎ 058 934 59 99   ✉ waedenswil.hsb@zhaw.ch

(free) Reference service

- virtual or on site (or as written request)
- book an appointment on our website or by mail
rercheberatung.hsb@zhaw.ch

See you in April!