From the choice of topic to publication:

information resources and tools in scholarly communication I.

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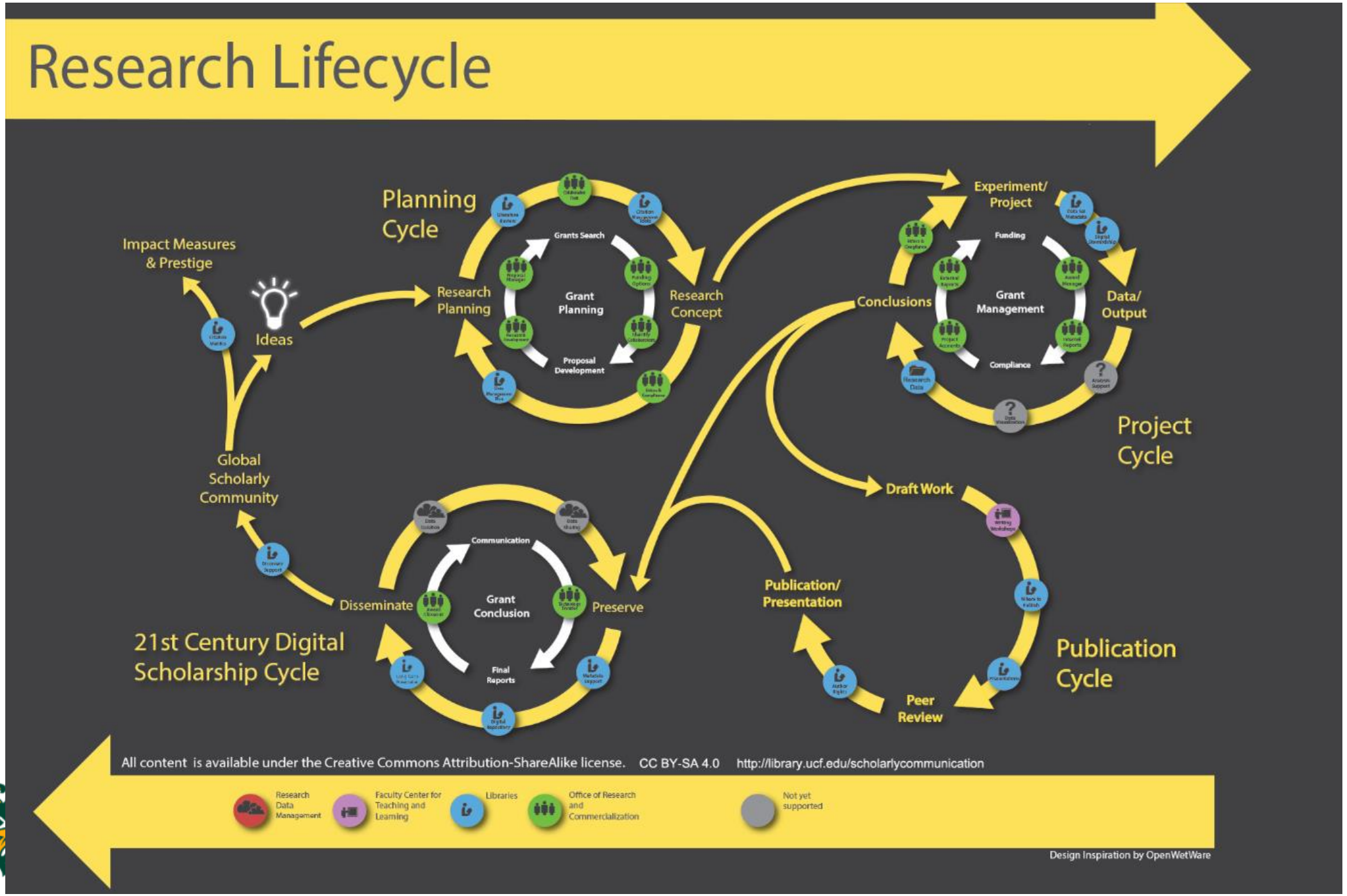
Research Lifecycle



Information

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Information

- the communication or reception of knowledge or intelligence /Merriam-Webster/
- Data that is (1) accurate and timely, (2) specific and organized for a purpose, (3) presented within a context that gives it meaning and relevance, and (4) can lead to an increase in understanding and decrease in uncertainty. /http://www.businessdictionary.com/definition/information.html/
- Facts provided or learned about something or someone

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Type of sources

- **Physical appearance**
  - print
  - digital
  - audio-visual
  - multimedia
  - microform
  - personal communication

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- **Nature and quality of content**

  - ***Primary.*** A primary source is either a first-hand account of an event or generated by the event (such as data from an experiment). Primary sources are used as evidence. In scholarly communication primary sources are the first to communicate new scientific results (patents, research reports, dissertations, conference papers, etc.).
  - ***Secondary.*** A secondary source is a second-hand account; it is the researcher-author's original thinking based on primary sources. Secondary sources interpret concepts. They are used to inform and substantiate a researcher's interpretation of the evidence.
  - ***Tertiary.*** A tertiary source is third-hand, based on secondary sources. Tertiary sources are used to provide background information and are usually not cited in research because they are based on other scholars' interpretations and are not original (reference books, text books).

- **Target groups**
  - ***Popular:*** written to inform or entertain wider audiences
  - ***Scholarly*****:** written by scholars for other scholars, comprised of detailed, advanced, sophisticated information about a topic, based on extensive research,
  - ***Business****:* the mixture of the above categories to provide market and business information

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- **Frequency of publication**
  - published once (books, monographs)
  - published regularly (journals, periodicals, newspapers)

Openness

- published
- not published (grey literature: thesis, dissertation; patent technical reports from government agencies or scientific research groups, working papers from research groups or committees etc.)

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Document Types

- Books (author, title, publisher, place of publication, ISBN)
- Periodicals (Title, Volume, Issue, Year, ISSN)
- Journal Articles (article title; author/s; volume; issue; publication year; source(journal) title; DOI)

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Types of Scientific Articles

- **Primary research articles**
  - Known as **original articles** too**. It provides new information based on original research.** Most often published in *peer reviewed* journals, primary research articles report on the findings of a scientist's work. They will almost always include a description of how the research was done and what the results mean.

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- **Case Reports**
  - Case reports describe an unusual disease presentation, a new treatment, an unexpected drug interaction, a new diagnostic method, or a difficult diagnosis that may be followed by evaluative studies that eventually lead to a diagnosis.

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- **Review articles**
  - These can be easily confused with primary research articles. A review is also published in peer reviewed journals, but seek to synthesize and summarize the work of a particular sub-field, does not introduce new information and does not include the author's opinion or personal experience. It serves to highlight important points that have been previously reported in the literature. (e.g. reviews of the current literature).

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- **Perspectives**
  - Perspectives provide a personal view about a particular issue in a clear narrative voice. These articles can be well researched and include a lot of citations to the peer reviewed literature, or simple items without citations. They can appear in peer reviewed journals, in trade publications, or in popular publications.

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- **Analyses**
  - Analyses provide an in-depth prospective and informed analysis of a policy, major advance, or historical description of a topic related to biology or medicine.

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- **Clinical Trial**
  - Work that is the report of a pre-planned clinical study of the safety, efficacy, or optimum dosage schedule of one or more diagnostic, therapeutic, or prophylactic drugs, devices, or techniques in humans selected according to predetermined criteria of eligibility and observed for predefined evidence of favorable and unfavorable effects.

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- **Comment**
  - This is a short article that describes an author's personal experience of a specific topic. This work consisting of a critical or explanatory note written to discuss, support, or dispute an article or other presentation previously published. It may take the form of an article, letter, editorial, etc. It appears in publications under a variety of names: comment, commentary, editorial comment, viewpoint, etc.

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Database

- A **database** is an organized collection of data, generally stored and accessed electronically from a computer system. /Wikipedia/
- A database is a collection of information that is organized so that it can be easily accessed, managed and updated. /https://searchsqlserver.techtarget.com/definition/database/
- **Database**, also called **electronic database**, any collection of data, or information, that is specially organized for rapid search and retrieval by a computer. /Britannica/

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- Databases store only specific types and amounts of information.
- Based on the nature, content, and other characteristics of the information stored in them, we distinguish between several different types:
  - bibliographic,
  - full text
  - image collections
  - audio / video collections
- What kind of database we use is primarily about what kind of information we need. The "help" of the database provides detailed information on the nature of the information stored in the database (and the areas of use).

How to Choose the Right Database

- What type of source does it contain?
  - Scientific journals, magazines, books, book chapters, multimedia etc.
- What period does it cover?
- Which disciplines does it cover?
- What is the language of the database?
- What source of information does it contain?
- What source of data does the records cover?

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Google vs. Catalogs

- Deep web: is part of www that cannot be accessed by the usual search engines. private place; 500 times larger
- Visible web: is a part of the www that can be accessed by using search engines and databases. public place /public web; surface web same expressions/

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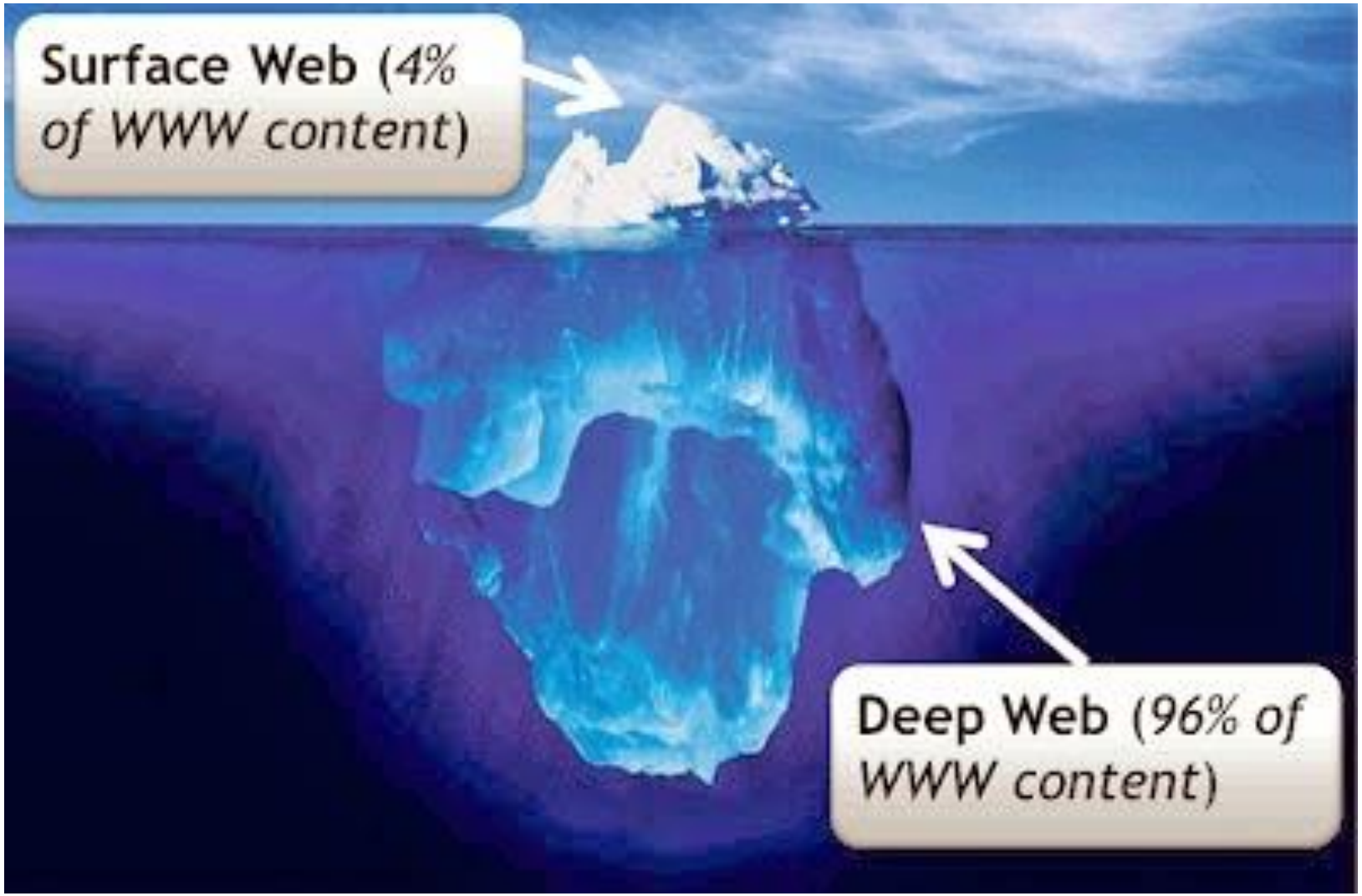

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Keyword and Subject searching

Advantages

Keyword searching	Subject searching
▪ May be used to find information on current subjects, trends ▪ May use synonyms ▪ May combine terms (using AND, OR, or NOT) ▪ May be used to find subject headings	▪ Hits usually relevant ▪ May provide suggestions for narrower, broader, or related terms ▪ Will return all items in the database indexed with the subject term used in the search

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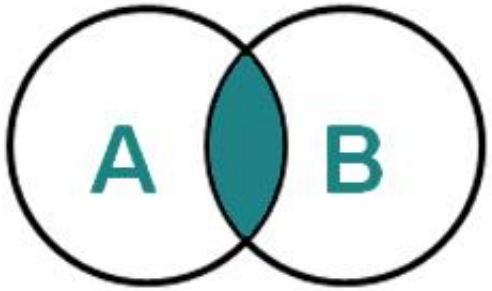
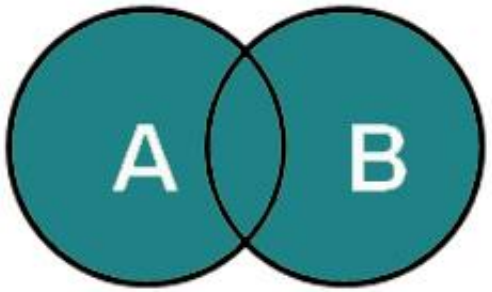
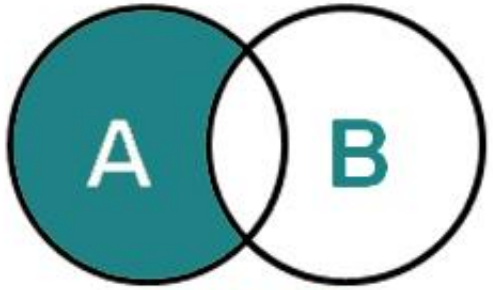
Boolean operators

 A AND B	Retrieves all records having concept **A** and concept **B** in the same record. Using **AND**, the number of hits retrieved decreases.
 A OR B	Retrieves records containing either concept **A** or concept **B**. Used usually to connect synonyms or related terms. Using **OR**, the number of hits retrieved increases.
 A NOT B	Retrieves records containing concept **A** but not concept **B**. Use with caution as it might eliminate some relevant records.

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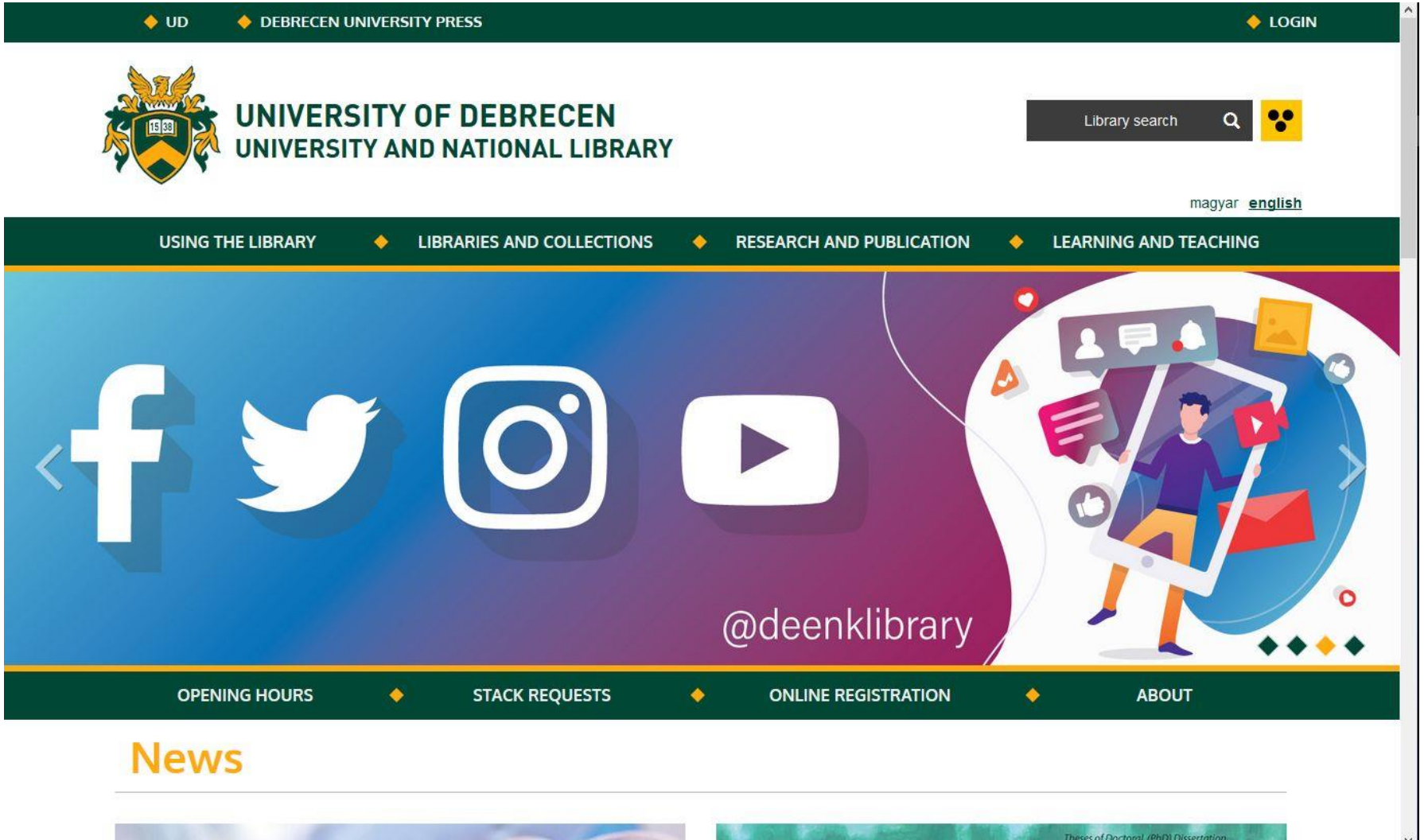
Where are the relevant databases

- https://lib.unideb.hu/en



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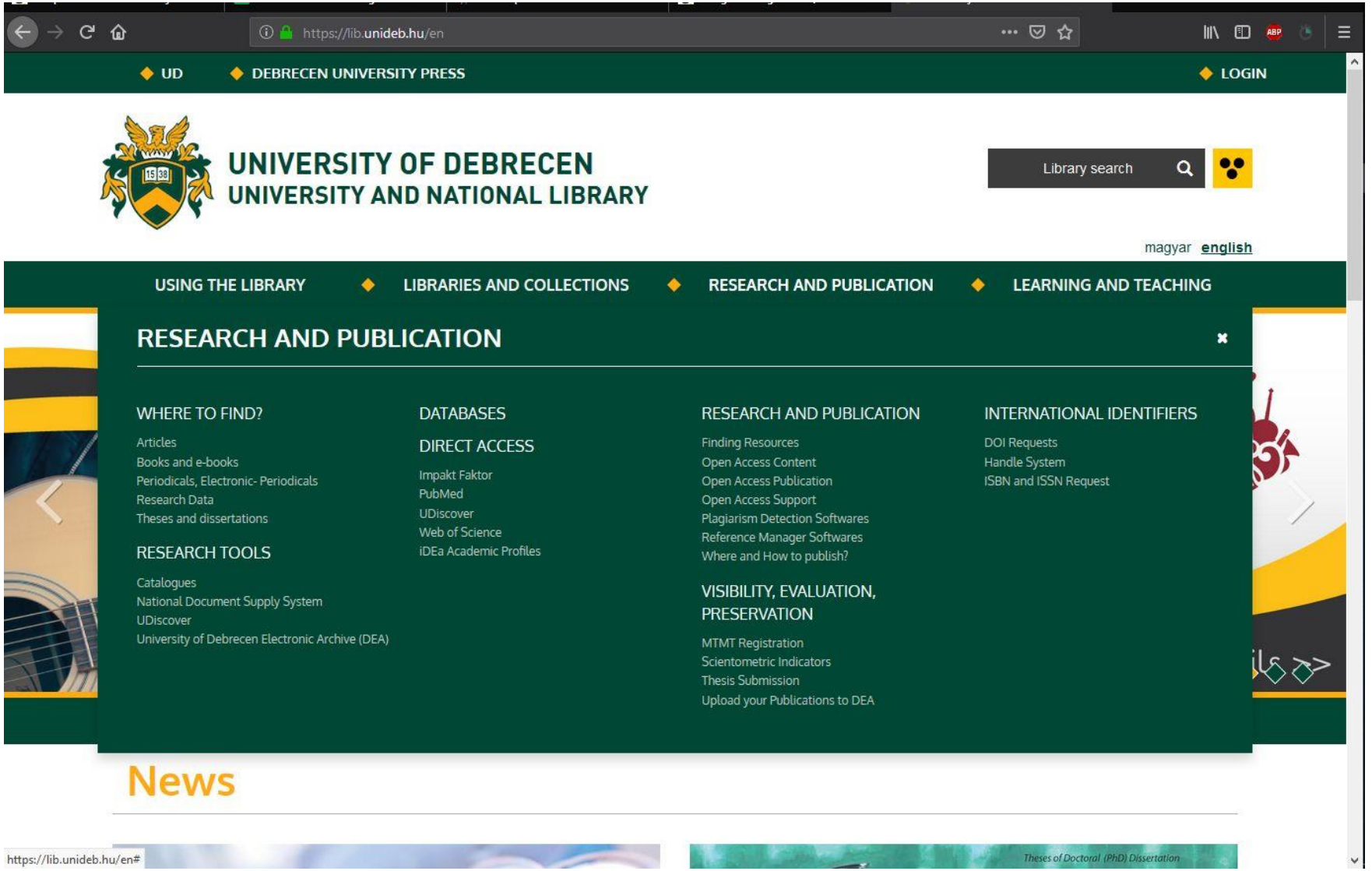

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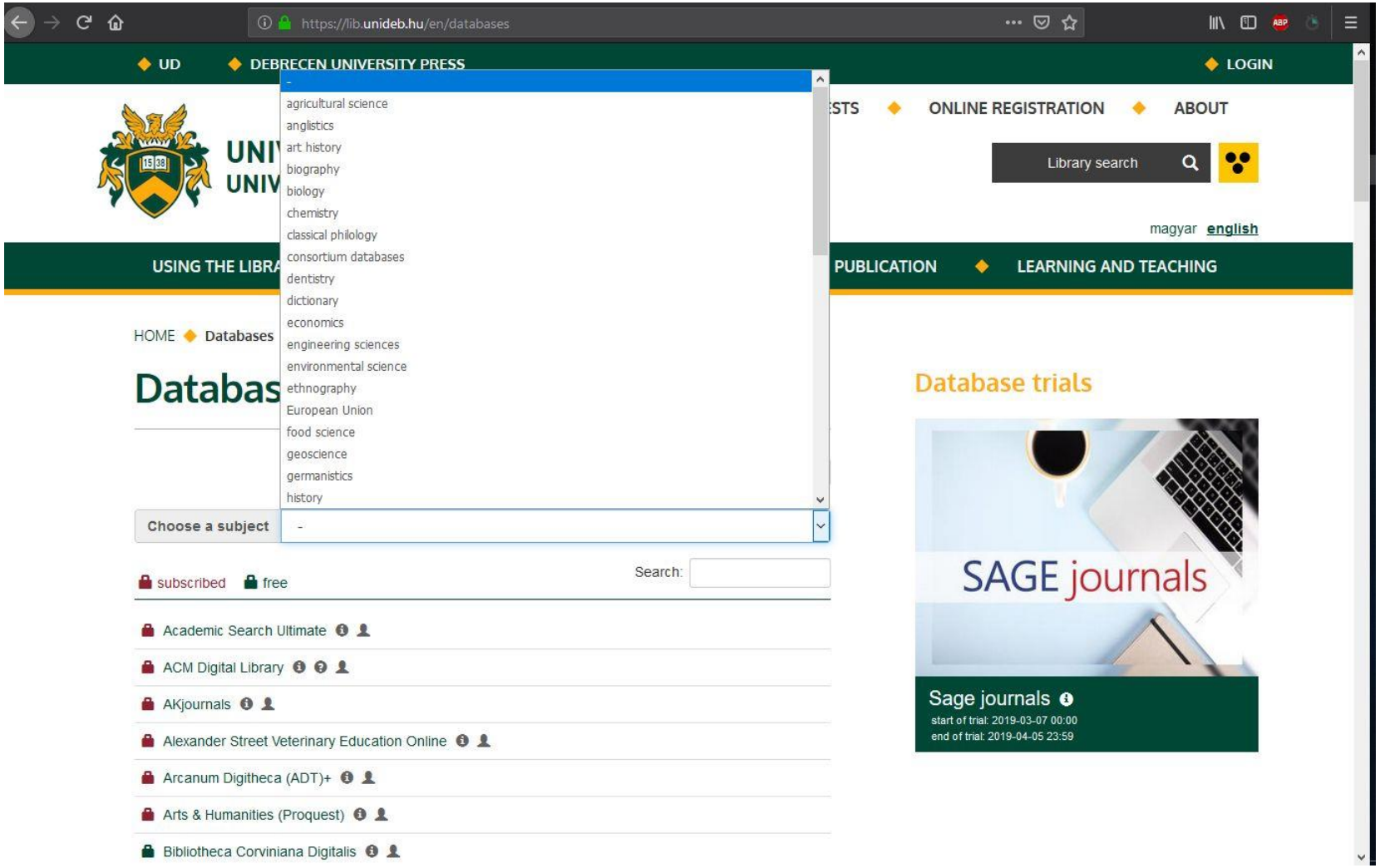

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Citation Manager softwares

- Refworks (online, subscription-based)
- EndNote (online, subscription-based)
- EndNote (unique license required)
- Mendeley (free online software)
- Zotero (free online software)

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Thank you for your attention!

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