# Question time & workshop

2DV50E

10/2-21

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# The content of this meeting

The process of information retrieval

An example of a search process

Scientific articles & scientific journals, conference proceedings

Search techniques & strategies

Databases & other resources

Reference management software

Questions / Exercises (individually)

Before the workshop, you should have taken part of the following sections in the course room,

2020/2021-Examensarbete/DegreeProject

- Information retrieval
- Types of publications
- Evaluating information sources
- Subject guides
- Referencing



#### The article's path from script to database - a process in various stages









A scientist is studying something and writes an article script, sent to a journal or publishing company.

The editor of the journal reviews the article and if approved, it is forwarded to a number of reviewers that can either approve, propose revisions or refuse to publish. The process is called **peer review.** 

Once the article has been adopted for publication it is sent to different databases.

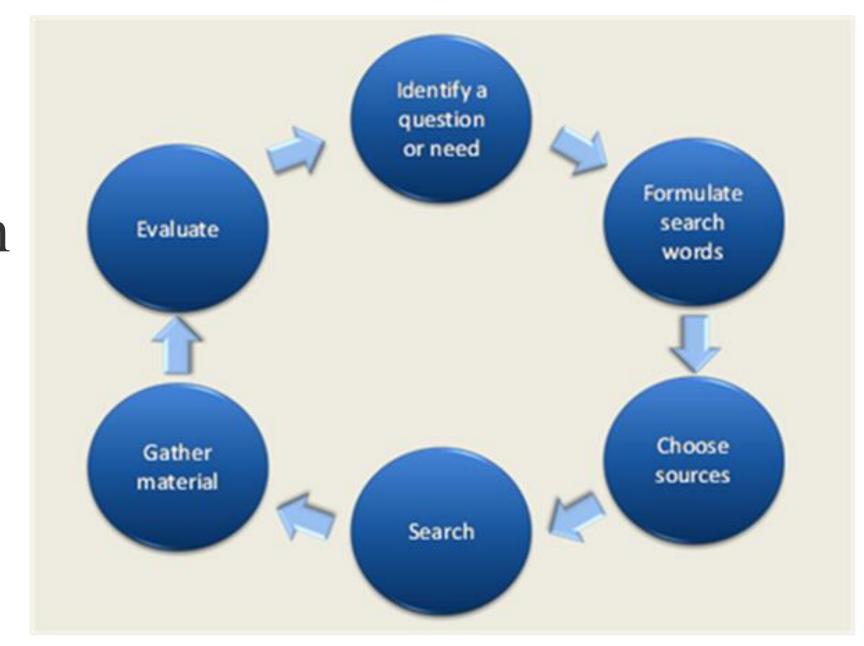
There, the article is analyzed and an article entry is created.

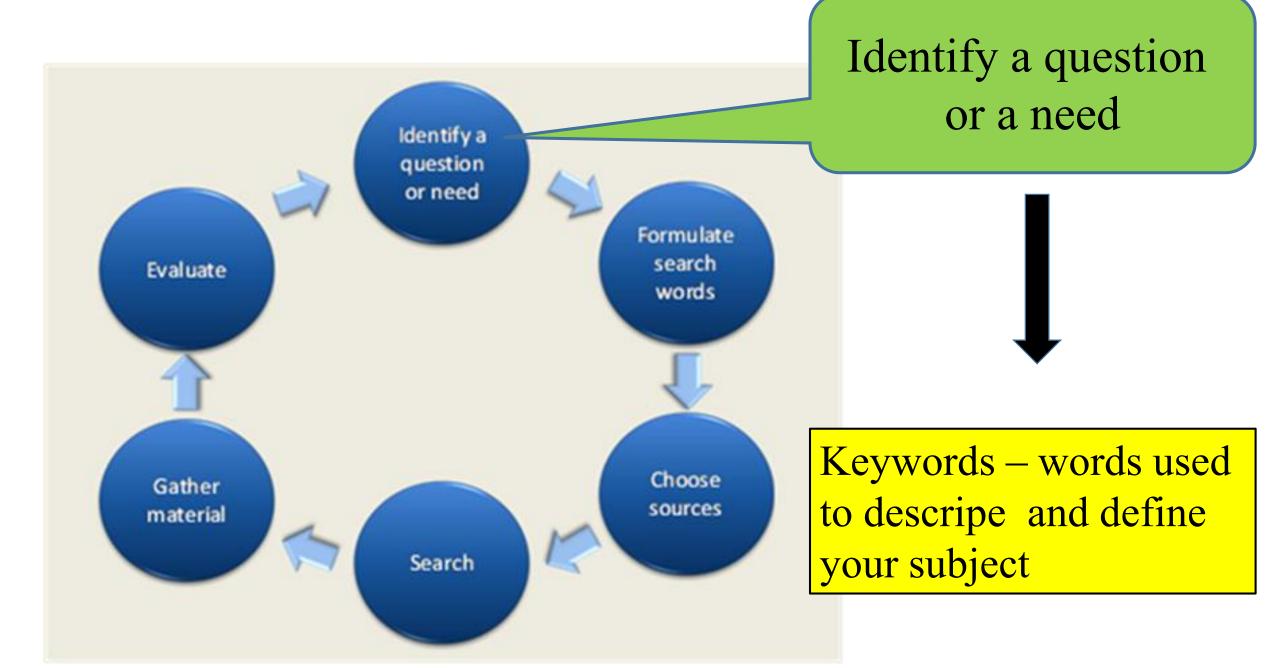
The article is also indexed.

Subjects are retrieved from the database thesaurus.

Now the article is searchable in different databases, and you can search the article via for example title, author or subject.

# The process of information retrieval

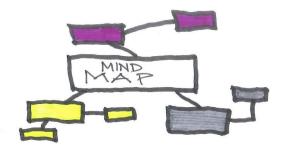




# Find your research gap

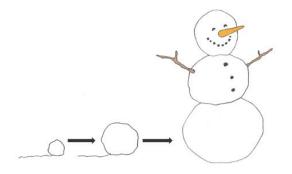
#### Get an overview of the topic

- Encyclopedias, course literature, manuals
- Google Google and Google Scholar
- Search OneSearch
- Monitor the outside world what is being talked about on TV, radio, social media, etc.
- Look for review articles
- Get inspiration from other students' essays
- Test search to see how much or how little material is available



# Different search strategies

• Citation pearl growing / snowball search



• Block search



Quote search (search for citations) [HTML] Birth order and physical fitness in early adulthood: Evidence from Swedish military conscription data

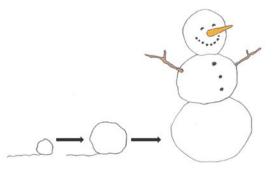
K Barclay, M Myrskylä - Social Science & Medicine, 2014 - Elsevier

Physical fitness at young adult ages is an important determinant of physical health, cognitive ability, and mortality. However, few studies have addressed the relationship between early life conditions and physical fitness in adulthood. An important potential factor influencing ...

☼ 99 Citerat av 17 Relaterade artiklar Alla 12 versionerna Web of Science: 9

# Citation pearl growing or snowball search

- If you have found an interesting scientific article that you want to use in your work, you can start from that article to find more articles in the same subject.
- Look up the article in different databases to see which terms are used to describe the article, and then use these in your search.
- Look up references from the article
- More articles by this author



# Quote search

[HTML] Birth order and physical fitness in early adulthood: Evidence from Swedish military conscription data

K Barclay, M Myrskylä - Social Science & Medicine, 2014 - Elsevier

Physical fitness at young adult ages is an important determinant of physical health, cognitive ability, and mortality. However, few studies have addressed the relationship between early life conditions and physical fitness in adulthood. An important potential factor influencing ...



# Search techniques

- Truncation (broadens a search)
  techni\* gives technics, technique, techniques, technician
- Phrase search (narrows a search) "artificial intelligence"
- Combination search
  - "Artificial Intelligence" **OR** AI (broadens a search)
  - "Artificial Intelligence" AND librar\* (narrows a search)
- Field search (narrows a search)
  - for example specify that the title of the article should be in the field title of the article entry

#### **Keyword search**

Concepts that appear in title, abstract, subject word

Captures the author's own words, new concepts (+)

Finds studies that have not yet received subject words (+)

Tip! Easy to search in free text, but can give many irrelevant hits, the concept is peripheral in abstract (-)

#### Search with subject headings

Terms from thesaurus (hierarchical dictionary)

Describes the content of the article uniformly regardless of which terms the author has chosen (+)

May be too general or "out of date" (-)

Tip! Can only be used in subject-specific databases



# Will students' study results be affected by daily exercise?

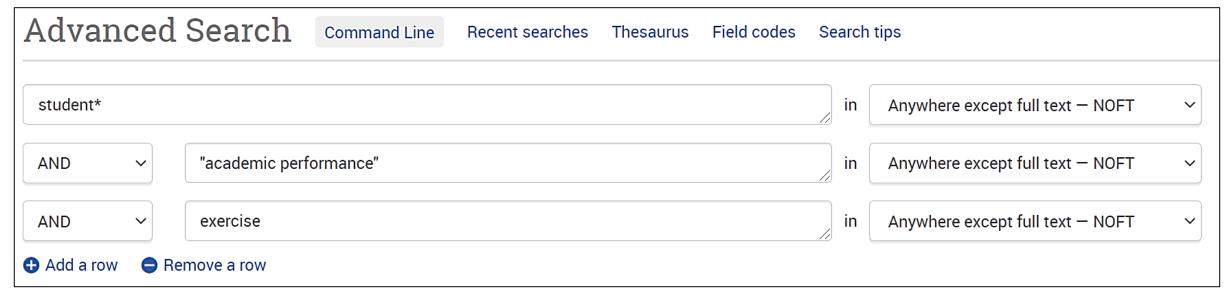
- student
- study results
- affect
- exercise



Concept 1	Concept 2	Concept 3	Concept 4
students	grades academic performance academic achievement academic success scholastic performance school achievement	affect influence	exercise motion sports do gymnastics physical fitness physical activities





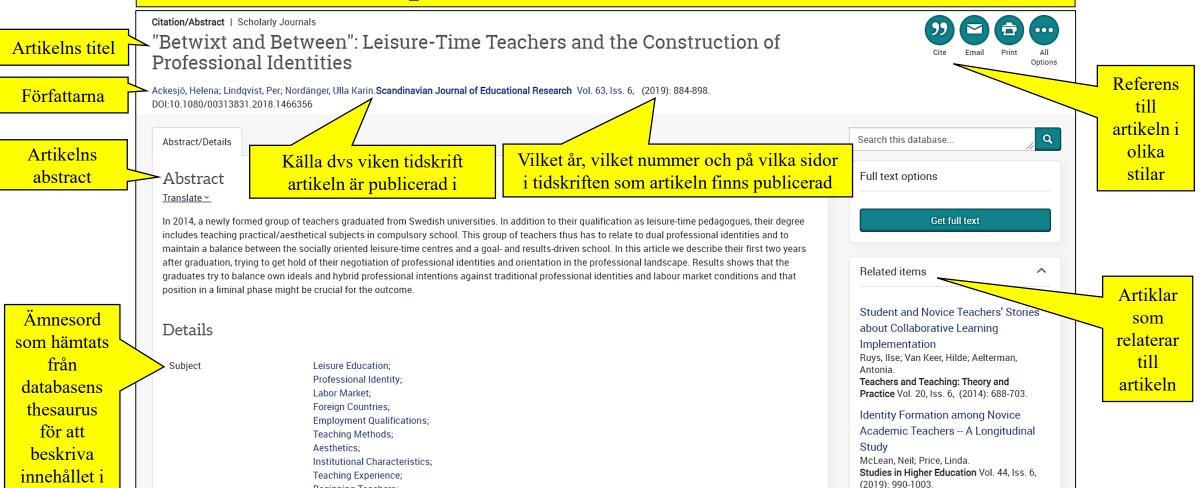


First search student\* AND "academic performance" AND exercise

"Read" the article entries and look for words, concepts in these fields:

- Title
- Author
- Source
- Abstract
- Subject
- Related / Similar articles

#### En artikelpost i databasen ERIC



Mer information som går att läsa ut i artikelposten är bland annat följande:

Language of publication: English

artikeln

Education level: Higher Education, Postsecondary Education

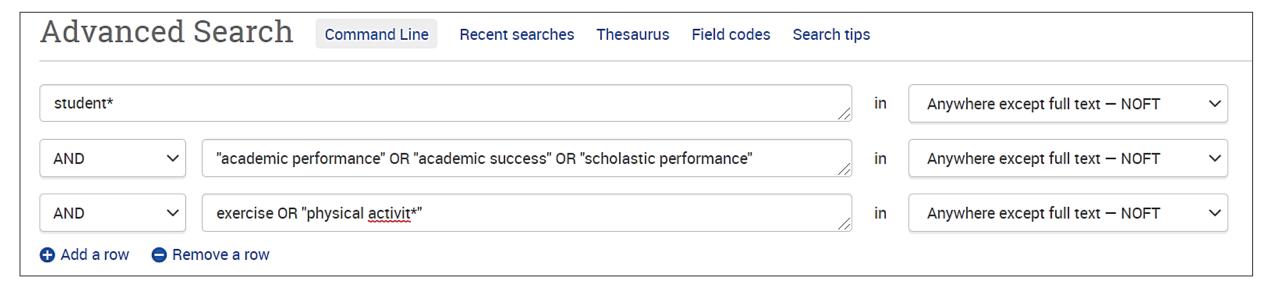
Beginning Teachers;

DOI: http://dx.doi.org.proxy.lnu.se/10.1080/00313831.2018.1466356

Document URL:http://proxy.lnu.se/login?url=https://www-proquest-com.proxy.lnu.se/docview/2461141745?accountid=14827

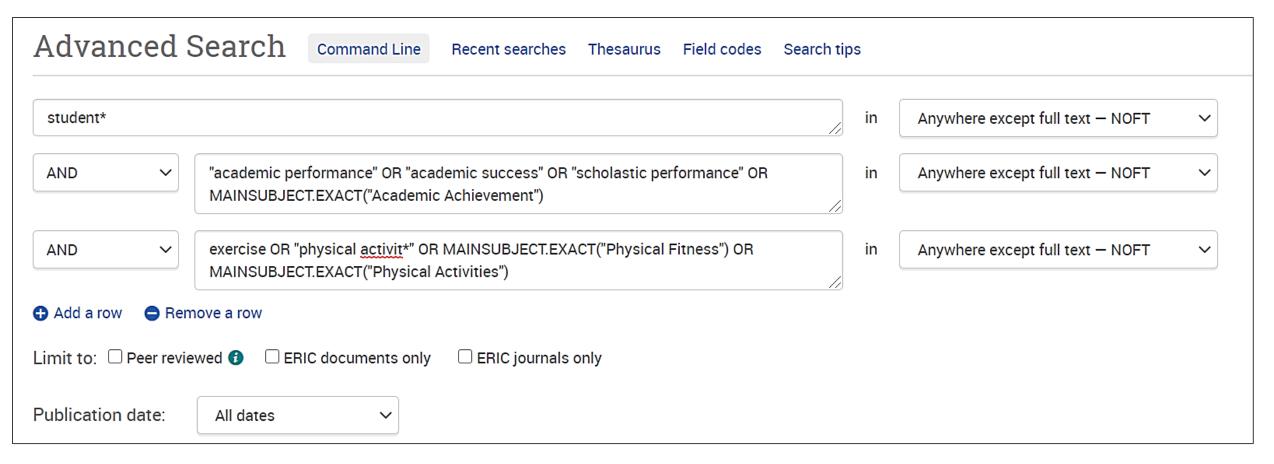
En lärresurs från Universitetsbiblioteket vid Linnéuniversitetet, ht 20





#### Second search

student\* AND ("academic performance" OR "academic success" OR "scholastic performance") AND (exercise OR "physical activit\*")



Third search

student\* AND ("academic performance" OR "academic success" OR "scholastic performance" OR MAINSUBJECT.EXACT("Academic Achievement") AND (exercise OR "physical activit\*" OR MAINSUBJECT.EXACT("Physical Fitness") OR MAINSUBJECT.EXACT("Physical Activities")

Set ▼	Search	Databases	Results	Actions
S5	● noft(student*) AND ("academic performance" OR "academic success" OR "scholastic performance" OR MAINSUBJECT.EXACT("Academic Achievement")) AND (exercise OR "physical activit*" OR MAINSUBJECT.EXACT("Physical Fitness") OR MAINSUBJECT.EXACT("Physical Activities")) ✓ Limits applied		372	Actions ▼
S4	⊕ noft(student*) AND ("academic performance" OR "academic success" OR "scholastic performance" OR MAINSUBJECT.EXACT("Academic Achievement")) AND (exercise OR "physical activit*" OR MAINSUBJECT.EXACT("Physical Fitness") OR MAINSUBJECT.EXACT("Physical Activities")) ✓ Limits applied	ERIC	547	Actions ▼
S3	noft(student*) AND ("academic performance" OR "academic success" OR "scholastic performance" OR     MAINSUBJECT.EXACT("Academic Achievement")) AND (exercise OR "physical activit*" OR MAINSUBJECT.EXACT("Physical Fitness") OR MAINSUBJECT.EXACT("Physical Activities"))	ERIC	1,046	Actions ▼
S2	noft(student*) AND noft("academic performance" OR "academic success" OR "scholastic performance") AND noft(exercise OR "physical activit*")	ERIC	279	Actions ▼
S1	⊕ noft(student*) AND "academic performance" AND exercise	ERIC	117	Actions ▼



- Search history
- Create an account
- Document your search
  - When you did the search
  - Which databases and search services you used
  - Number of hits in each database
  - Which keywords and which search technique did you use
  - Which filters you used, such as peer reviewed, language or year.
  - O How you made your selection of items

# Different types of reviews

Rapid review, Scoping review, Systematic review, State-of-the-art review etc.

A typology of reviews: an analysis of 14 review types and associated methodologies (Grant & Booth) from 2009

https://onlinelibrary.wiley.com/doi/epdf/10.1111/j.1471-1842.2009.00848.x

# Structured literature reviews – A guide for students

This is a step-by-step guide aimed at Master's students undertaking a structured literature review as part of their Master's thesis.



https://kib.ki.se/en/search-evaluate/systematic-reviews/structured-literature-reviews-guide-students

# Databases

- ACM Digital Library
- IEEE Xplore
- OneSearch
- Libris
- Web of Science
- Google Scholar
- Scopus
- SwePub



Subject guide - Informatics, Computer Science and Media and Communication technology

Scientific resources in Informatics, Computer Science & Media and Communication Technology.

# More resources (article databases)

- DOAJ
- Lecture Notes in Computer Science
- SAGE Journals Online [OneSearch]
- Springer Link [OneSearch]
- Taylor & Francis [OneSearch]

https://lnu.se/en/library/search-and-evaluate/articles-and-databases/

# Gray literature

• Grey literature is a type of scientific information that is not formally published as articles in scholarly journals. It could be reports, dissertations, manuscripts, documentation, clinical guidelines produced by governments, universities and private companies.

Source: <a href="https://kib.ki.se/en/search-evaluate/grey-literature">https://kib.ki.se/en/search-evaluate/grey-literature</a>

# Gray literature

- OpenGrey European database including around 700,000 references: technical or research reports, doctoral dissertations, conference papers, official publications.
- OAlster Search enginge covering more than 1,500 resources including 30 million of documents. Hosted by OCLC.
- <u>Bielefeld Academic Search Engine (BASE)</u> One "of the world's most voluminous search engines especially for academic open access web resources", covering around 3,000 resources and more than 60 million documents, including several options for limits such as language, publication type and topic.

# Is this academic?



#### **Academic publications**

- Dissertations
- Research reports
- Conference proceedings
- Academic specialist literature
- Scientific articles

### About scientific articles

There are different kinds of academic articles:

- Original article the research process and the results of empirical studies are described for the first time
- Review article presentation of research results within a certain field, analysis and interpretation of different previously published studies



# About scientific articles – structure and layout

#### An academic original article usually contains the following elements:

- Abstract a brief summary of the article
- Introduction background, the aim and issue of the article, previous research
- Method the choice of quantitative or qualitative method is described
- Results presentation of research results
- Discussion interpretation and evaluation of the results with conclusions and connection to previous research
- References all documents that have been used must be listed in the references

#### Scientific journal & Peer Review

#### The Peer Review process

An academic journal consults independent experts in a given subject, so-called referees, to review the academic value of an article before publication.

Among other things, they assess the choice of method, data analysis, and whether the results are probable. The subject experts decide whether the article should be accepted, revised or refused.

#### Check scientific status – use Ulrichsweb

In the database Ulrichsweb you can check whether a given journal practices "peer review".

If that is the case, it has a referee's shirt attached to it as a symbol (with the description "refereed").

Keep in mind that the information about peer review applies to the journal as a whole and does not guarantee that all articles in the journal are reviewed.

# Conference proceedings

#### Definition:

A conference proceeding is the **published record of a conference, congress, symposium, or other meeting** sponsored by a society or association, usually **but not necessarily including abstracts or reports of papers presented by the participants**. When the entire text of the papers presented is included, the result is called transactions.

Short video in your courseroom about Conference Publication

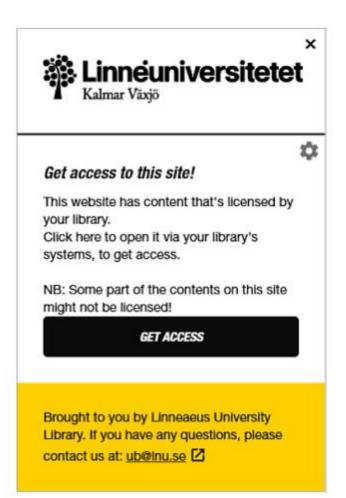
https://www.conference-service.com/conferences/index.html

https://conferencealerts.com/

# Library access

Library Access is a plugin that you can download to your browser, which leads you directly to the entire article or the entire e-book if the university has access to the material.

The Library Access plugin will take you to the full text even when you are off-campus and whether you are coming through a Google search or have searched through a database or are using Google Scholar.



https://lnu.se/en/library/search-and-evaluate/searching-off-campus/

# Interlibrary loan

- If you need books or articles that are not available from the University Library you can make a purchase suggestion or order an interlibrary loan.
- Please note that there is a fee for article copies and for loans from libraries outside the Nordic Region.
- Tip always use Google Scholar and search for the article before you make a request for an interlibrary loan.

# Referencing - reference management software

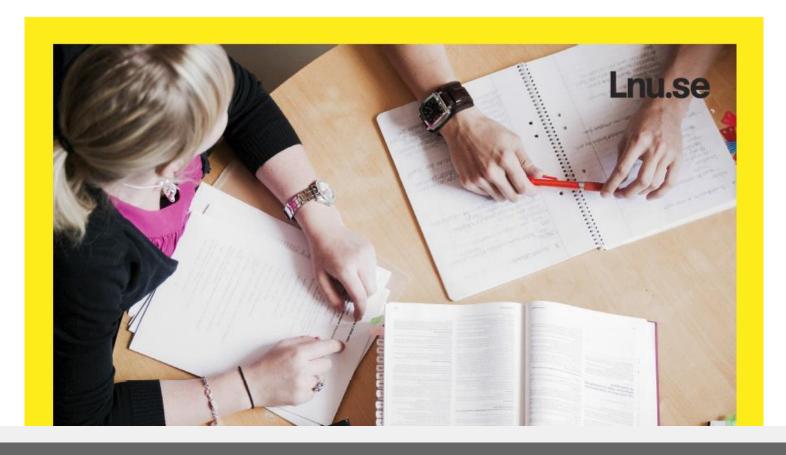
Referencing is an important aspect in academic texts. There are many different referencing systems to choose from. We have listed guides and manuals for the systems most commonly used at Swedish universities, along with information on copyright law and how to use other people's work without plagiarizing.

read more,

https://lnu.se/en/library/Writing-and-referencing/referencing/

Zotero is a free-to-use reference manager. The program has a wide number of features such as web browser integration, online synchronization, easy generation of text quotes, footnotes and bibliographies, shared reference libraries and integration with word processors.

- How to handle references in word/LaTex
- <a href="https://libguides.rhul.ac.uk/referencing/latex">https://libguides.rhul.ac.uk/referencing/latex</a>
- <a href="https://libguides.rhul.ac.uk/referencing/Zoterolatex">https://libguides.rhul.ac.uk/referencing/Zoterolatex</a>



Drop-in academic support

#### End of the "lecture"

- Questions / Exercises (individually)
- Try the links from the lecture
- Search on your own
- We can put you into breakout rooms, depending of your area of interest
  - Gray literature
  - Systematic reviews
  - Search techninques
  - Scientific materials
  - Databases