



Aalto University

Learning Centre

Advanced information retrieval ARTS / Media 4.-5.3. 9-12 am



*Aalto University Learning Centre
Marika Sarvilahti*

Course content

Identifying your key information sources

- Update on Learning Centre's information sources
- In depth look at databases
- Other information services in Finland

The systematic information retrieval process

- Systematic information retrieval
- Conceptualising the research topic
- Defining information needs

Course content

Assessment of search results and source criticism

- Strategies for problem situations
- Citation information and bibliometrics

Information management

- Reference management with RefWorks
- Strategies for managing research information

Services for dissertation writers

- Learning Centre's services for researchers

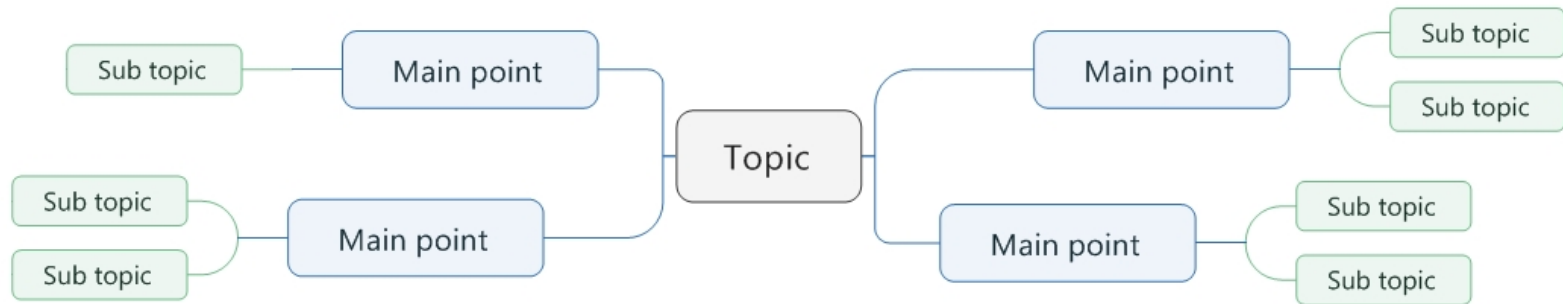
Information searching process



Conceptualising the research topic

- **This is the most important phase in the search process.**
- The research topic is broken down into a concept map.
- Concepts are defined into search terms to be used in the search process.
- Concepts are selected using tools such as dictionaries, vocabularies and thesauruses.
- Useful concepts are also jargon terms which are specific to the discipline and research subject.
- Concept maps evolve during the research process

Keywords in a concept map



Conceptualising the research topic

Impact of ecological ideology and globalisation on ecommerce

	Concept 1	Concept 2	Concept 3
Keywords	Ecological ideology	Globalisation	Ecommerce
Synonyms	Environmentalism Eco-friendly Green	Multinational Globalization Global market Multicultural	E-commerce Online shopping Spending

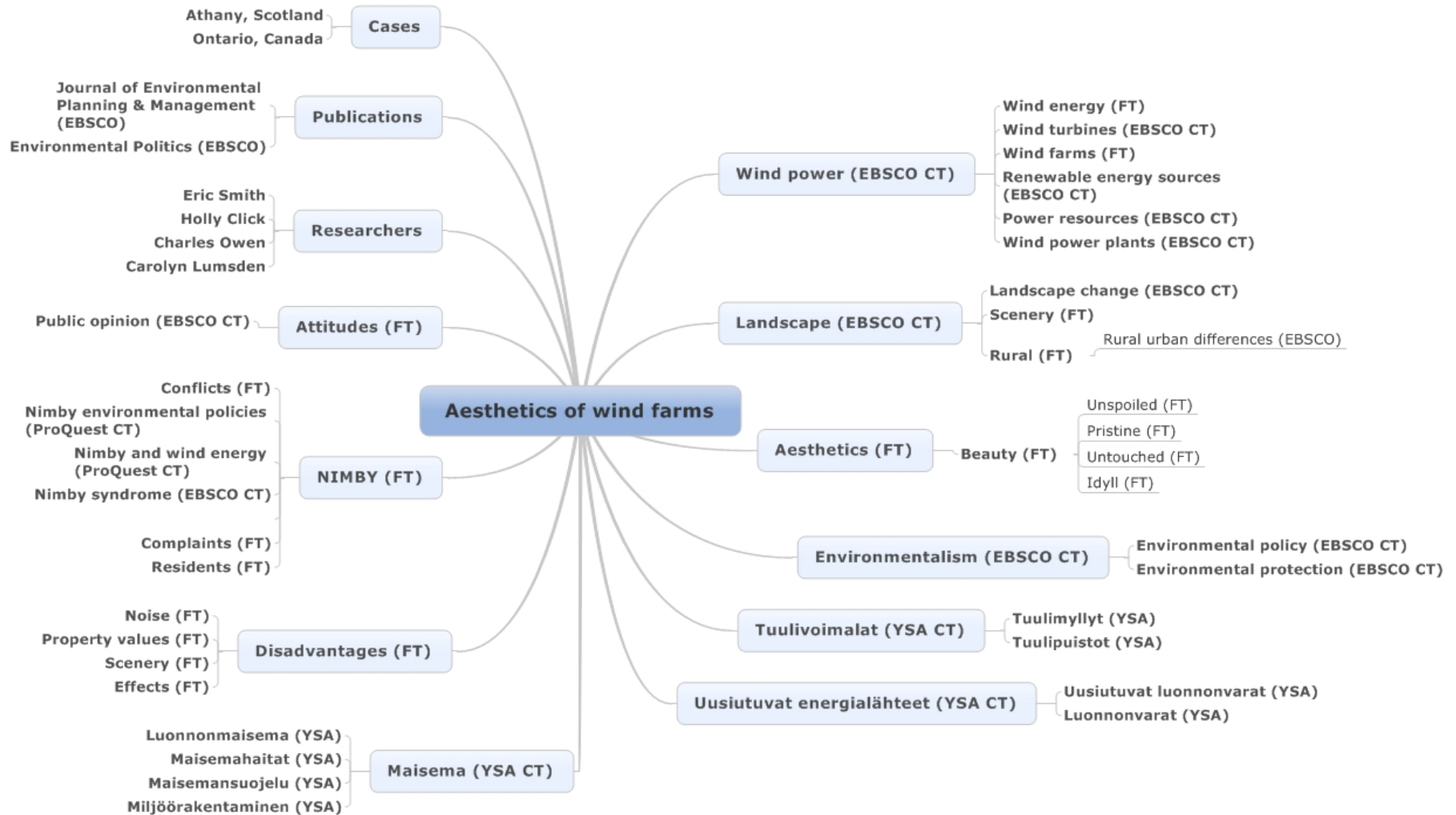
Workshop 1. My research topic (10 min)

1. Write a short sentence about your research interest
2. Underline key concepts
3. Write down alternative words/phrases for each concept
4. Discuss with your neighbour.

Information retrieval is a play with words.

Why use concept mapping

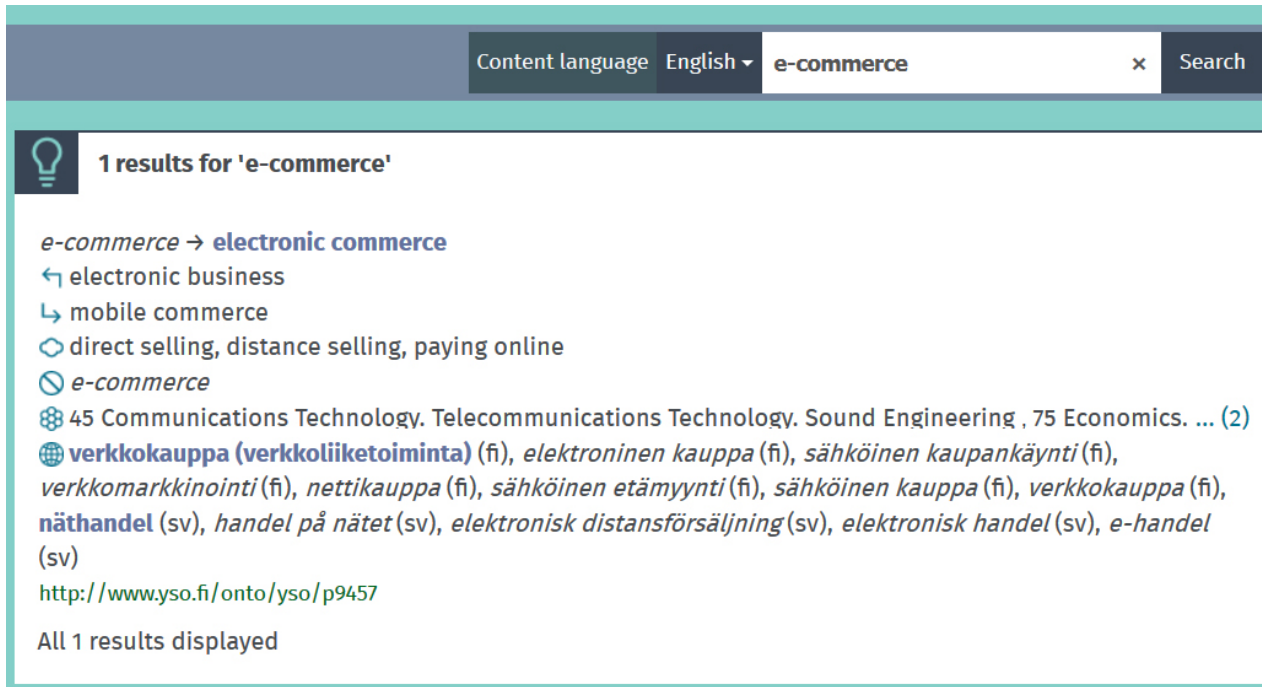
- generate a comprehensive and imaginative map of search terms
- aid thinking and brainstorming at the beginning of the research process
- help keep track of evolving ideas during the research process
- create a visual overview of a topic
- develop questions on a topic
- reveal patterns, themes, and associations between ideas



Tools for selecting concepts

- **Oxford English Dictionary OED** – definitive guide to English language
- **Thesaurus.com** – find synonyms in English language
- **General Finnish Ontology** – <http://finto.fi/yso/en/>

Find exact concepts in English that are used in indexing materials into Aalto-Finna and translate them into Finnish and Swedish.



The screenshot shows the search interface of the General Finnish Ontology (YSO). At the top, there is a search bar with the text "Content language English" and a dropdown menu. The search term "e-commerce" is entered, and a "Search" button is visible. Below the search bar, the results are displayed under the heading "1 results for 'e-commerce'". The results list includes:

- e-commerce* → **electronic commerce**
- ↩ electronic business
- ↳ mobile commerce
- ⬢ direct selling, distance selling, paying online
- ⬢ *e-commerce*
- ⬢ 45 Communications Technology. Telecommunications Technology. Sound Engineering , 75 Economics. ... (2)
- ⬢ **verkkokauppa (verkkoliiketoiminta)** (fi), *elektroninen kauppa* (fi), *sähköinen kaupankäynti* (fi), *verkkomarkkinointi* (fi), *nettikauppa* (fi), *sähköinen etämyynti* (fi), *sähköinen kauppa* (fi), *verkkokauppa* (fi), **näthandel** (sv), *handel på nätet* (sv), *elektronisk distansförsäljning* (sv), *elektronisk handel* (sv), *e-handel* (sv)
- <http://www.yso.fi/onto/yso/p9457>

At the bottom, it says "All 1 results displayed".

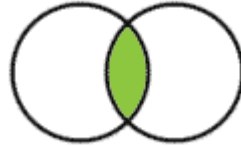
Combining concepts in a search

Impact of ecological ideology and globalisation on ecommerce

	Concept 1	Concept 2	Concept 3
Keywords	Ecological ideology	Globalisation	Ecommerce
Synonyms	Environmentalism Eco-friendly Green	Multinational Globalization Global market Multicultural	E-commerce Online shopping Spending
Search combinations	(green OR eco-friendly) AND ecommerce	(Globali*ation OR multinational) AND "online shopping"	(Ecommerce AND globalisation AND environment*) NOT transport

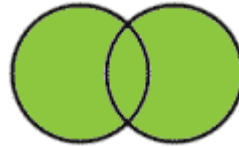
Combining concepts in search

AND cats **AND** dogs



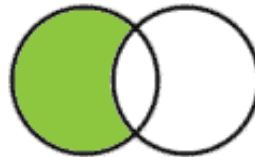
Narrows search

OR cats **OR** kittens



Broadens search


NOT pets **NOT** dogs



Excludes from search

Structured searches

- Truncation and wildcards e.g. wom?n, globali*ation
- Search for a phrase by using quote marks e.g. “service design”
- Parentheses e.g. (academic OR educational) AND achievement
- Limit to particular fields e.g. title, abstract, keywords
- Apply search filters e.g. date, format



Searching: [Academic Search Elite](#) | [Choose Databases](#)

Select a Field (optional) ▾

AND ▾

Select a Field (optional) ▾

AND ▾

Select a Field (optional) ▾

?

+

-

Search

Create Alert

Clear

[Basic Search](#) [Advanced Search](#) [Search History ▶](#)

<input type="text" value="affective"/>	Select a Field (optional) ▼	<input type="button" value="Search"/> <input type="button" value="Create Alert"/> <input type="button" value="Clear"/> <input type="button" value="Help"/>
AND ▼ <input type="text" value="behavio#r"/>	Select a Field (optional) ▼	
AND ▼ <input type="text" value="social media"/>	Select a Field (optional) ▼	

[Basic Search](#)
[Advanced Search](#)
[Search History](#)

Search Options

Search Modes and Expanders

Search modes

- ☒ Boolean/Phrase
- ☐ Find all my search terms
- ☐ Find any of my search terms
- ☐ SmartText Searching [Hint](#)

Apply related words

☐

Also search within the full text of the articles

☐

Apply equivalent subjects

☒

Limit your results

Full Text

☒

Published Date

Month ▼	Year: 2008	–	Month ▼	Year: 2017
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Publication

Scholarly (Peer Reviewed) Journals

☒

Publication Type

Workshop 2. Your concept map (30 min)

Make a mindmap of your research topic, which includes:

- Key concepts of your topic and their combinations with AND, OR, NOT
- Broader and narrower concepts for your key concepts (Finnish General Ontology: <http://finto.fi/yso/en/>)
- Synonyms and alternative concepts (thesaurus.com)
- People, places, time, things, phenomena related to your topic
- Use MindJet mindmapping program or pen and paper

Selecting information sources

What are you looking for?	Where to look?
Specific book	Aalto-Finna, Melinda
Specific article	Google Scholar, Aalto-Finna article search
Systematic overview of research on a topic	Key databases of your research field, variety of types of sources (literature reviews, conference papers, dissertations, etc.)
Find latest information on a topic	Google Scholar, Aalto-Finna article search
Find highest cited articles on a topic	Web of Science, Scopus
Dissertations	Aaltodoc, Melinda
Authentic digital images of art, architecture, design, photography, visual communication	Image databases in Visual Resources Centre guide

sustainable behavio*r

✕ All fields ▾



Q* Advanced search

Q Article Search



Archive material



E-books



Theses



Acquisition Request



Other collections ▾



Content providers in Finna

Opening hours

Aalto University Learning Centre

Open

Week 43 ▶



News from the Aalto University Learning Centre

24.9. [Repair works at the K floor of the Harald Herlin Learning Centre](#)

17.8. [Harald Herlin Learning Centre's service hours will change from 1st](#)

How can I find stuff in Aalto-Finna?

1. Kim, S. Y., & Cho, K. (2013). Usability and design guidelines of smart canes for users with visual impairments. *International Journal of Design*, 7(1)
2. Weissberg, Liliane, and Beckman, Karen, eds. On Writing with Photography. Minneapolis, MN, USA: University of Minnesota Press, 2013.

[Add 1 and 2 to your favourites in your Aalto-Finna account!](#)

3. New Media & Society, November 2015 17:(10)
4. Artfilms database
5. Make searches from Aalto-Finna using your own concepts, add interesting references to your account



Workshop 3. Systematic information retrieval from key databases



Identify your top 5 databases for your research topic and share your findings

- Explore the databases listed the Media Resource Guide and the image databases in the Visual Resources Centre.
- Take a look at subject specific databases, image databases, research methodology databases, etc.
- Make in-depth searches in native interfaces of your key databases using concepts from your concept map

Systematic information retrieval is not quick googling

- Forward planning, selecting and combining search terminology, choosing key databases, making searches that cover all key topics and concepts related to the research = **increased confidence that you know your research topic**

Googling it? – use Google Scholar



Scholar About 17,500 results (0.11 sec)

Articles

Case law

My library

Any time

Since 2017

Since 2016

Since 2013


Custom range...

Sort by relevance

Sort by date

☒ include patents

☒ include citations

 Create alert

Did you mean: impact of globalisation and sustainability on **e commerce**

Impact of globalisation on entrepreneurial enterprises in the world markets
[S Kumar, D Liu](#) - International Journal of Management and ..., 2005 - inderscienceonline.com
... internationalisation in entrepreneurial enterprises has begun and will make its **effects** felt even ... the theory that the global restructuring trend can have negative **impacts** on entrepreneurial ... Table 1 SWOT analysis for entrepreneurial enterprises under the **impact of globalisation** ...
Cited by 85 Related articles All 5 versions Cite Save More

[PDF] Impacts of information and communication technologies on environmental sustainability: Speculations and evidence
[F Berkhout, J Hertin](#) - Report to the OECD, Brighton, 2001 - ictliteracy.info
... are considered low technology but, coupled with intelligent controls, they can have a major **impact** on energy ... to print out information from the Web on desktop printers ² will be outweighed by substitution **effects**. ... The net **effect** of this was a fall in inventory to sales ratio to a record ...
Cited by 160 Related articles All 4 versions Cite Save More

Globalization and sustainable development: Case study on international transport and sustainable development
[J Köhler](#) - The Journal of Environment & Development, 2014 - journals.sagepub.com
Cited by 18 Related articles All 3 versions Web of Science: 6 Cite Save

Resilience and competitiveness of small and medium size enterprises: an empirical research
[A Gunasekaran, BK Rai, M Griffin](#) - International journal of ..., 2011 - Taylor & Francis
... their individual competitiveness (Fassoula 2006) and take advantage of synergy **effects** created by ... Lilly (2009) explains how design could be used to **influence** user behaviour towards ... Entrialgo (2002) explored the **impact** of co-alignment between managerial characteristics and ...
Cited by 133 Related articles All 4 versions Web of Science: 40 Cite Save

[book] Computing Our Way to Paradise?: The Role of Internet and Communication Technologies in Sustainable Consumption and Globalization
[R Rattle](#) - 2010 - books.google.com
... Accordingly, their **effects** are pervasive and cut across all spheres of human activity (Castells, 1996, 16). ... Further, they may offer a wealth of information to new consumers on the **impacts** of their decisions and opportunities to reduce their **impact** on the planet. ...
Cited by 23 Related articles All 4 versions Cite Save More

[PDF] ictliteracy.info

[HTML] sagepub.com
FullText: sfx@Aalto

[HTML] tandfonline.com
FullText: sfx@Aalto





Scholar Settings

Search results

Languages

Library links

Account

Button

Show library access links for (choose up to five libraries):



e.g., *Harvard*

☒ Aalto University - FullText: sfx@Aalto

☒ Open WorldCat - Library Search

Online access to library subscriptions is usually restricted to patrons of that library. You may need to login with your library password, use a campus computer, or configure your browser to use a library proxy. Please visit your library's website or ask a local librarian for assistance.



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1.3.2019

22

Google will not answer all your needs

Pros of Google Scholar	Cons of Google Scholar
Familiar and relatively simple to use, much like Google.	Does not allow users to limit results to peer reviewed or full text materials or by discipline.
Variety of materials including articles, books, conference proceedings.	Coverage is wide-ranging but not comprehensive and high scholarly quality is not guaranteed.
Can display links to articles and books held through Aalto University Learning Centre.	Weeding through results not held at Aalto is time-consuming.
See how many times an article has been cited and by whom.	Citation information is not as reliable as Scopus or Web of Science information.

Other information services

Finnish information services are open to all

- **Melinda:** all Finnish University libraries <http://melinda.kansalliskirjasto.fi>
- **Helsinki University Library:** <http://www.helsinki.fi/kirjasto/>
- **Art University Library:** <https://lib.uniarts.fi>
- **Helsinki Public Library:** www.helmet.fi/
- **National Gallery Library:**
<https://www.kansallisgalleria.fi/en/kokoelmatietopalvelu/kirjaston-palvelut/>
- **National Archives:** www.arkisto.fi
- **National Audiovisual Archive:** <https://kavi.fi/>

Digital image databases and VRC

Visual Resources Centre (VRC)

Image databases, image search tools and information on how to use visual materials in dissertations such as citations and Creative Commons-licenses.

Europeana

Europeana brings together European libraries, museums and archives digital collections. 12 million images, 3 million with an open license.

Finna

Finna brings together Finnish museums, libraries and archives digital content. 100 organisations, 800 000 images.

ARTstor











Over 2 million images of visual art, cultural history, design, architecture, photography for use at Aalto University (please note: not for publishing in Aaltodoc or anywhere on the web).



Creative Commons licenses

- All works resulting from creative output are protected by copyright (e.g. 70 years from the death of author, or 50 years from the completion of an ordinary photographic image)
- A copyright holder may partially or completely waive their rights with a Creative Commons-license to encourage use and impact of their work
- When the copyright protection expires the works enter Public Domain where no copyright restrictions apply

Creative Commons licenses

License		Type of use	Symbols
Attribution (BY)		You must credit the creator, the title and the licence the work is under.	
Non Commercial (NC)		The work cannot be used for commercial purposes.	
No Derivatives (ND)		The work can only be used exactly how it is. The work cannot be adapted or modified in any way.	
Share Alike (SA)		Any new material produced using the work must be made available under the same licence as the original work.	
Public Domain CC0		The copyright holder has voluntarily waived their rights and the work can be freely used	
Public Domain		The copyright of the work has expired and it is free of known copyright restrictions	

Top picks: search engines for CC-licensed media

Google advanced image search

The go-to image search engine. Advanced search useful for filtering by size, type. Colour, date, rights and more.

CC Search

Search engine for CC-licensed images from a variety of good quality sources including AI generated tags

Flickr Creative Commons

Search for CC-licensed images from all subjects

Citation information

- Citation databases contain information on research and its connections by way of counting citations and references
- Search for the most cited articles by author, a topic, and citations of a specific article.
- Move forward in citation path - locate current research based on earlier research
- Find out how many times, and where, a paper is being cited
- Analyse the impact of a publication or a researcher
- Check the availability of full-text versions via SFX linking

Citation information sources

Web of Science

- Social Sciences Citation Index (SSCI)
- Over 3200 titles
- Citations from 1956-present

Scopus

- Social Sciences & Humanities subject collection
- Over 22,000 titles
- Scopus is in progress of updating cited references going back to 1970

Google Scholar

- No information made public about coverage, subject emphasis or collection policy

Workshop 4. Citation searching and bibliometrics

1. Use your search concepts in Web of Science Core Collection
2. Sort your results by Relevance – note some titles which have been highly cited.
3. Sort your results by Times Cited – note some titles which look relevant.

Information management

- Keep references organised in a reference management system such as RefWorks

RefWorks allows you to:

- organize and create a personal database online
- format bibliographies and manuscripts according to different output styles
- import references from a variety of databases
- create references for web pages
- attach files and notes to references

Workshop 5. RefWorks

1. Create a RefWorks account
2. Add references to RefWorks from Aalto-Finna (export reference function)
3. Create bibliography in your chosen citation style

Results: 130

(from Web of Science Core Collection)

You searched for: TOPIC:

("sustainable behaviour") ...More


 Create Alert

Refine Results

Search within results for...



Filter results by:

☐ Highly Cited in Field (1) 

Refine

Publication Years ▾

☐ 2015 (35)☐ 2016 (24)☐ 2014 (14)☐ 2012 (12)☐ 2017 (11)

more options / values...

Refine

Web of Science Categories ▾

Sort by: Times Cited -- highest to lowest ▾

◀ Page 1 of 13 ▶

☐ Select Page

Save to EndNote online ▾

Add to Marked List

Save to EndNote online

Save to EndNote desktop

Save to ResearcherID - I wrote these

Save to InCites

Save to Other File Formats

Save to RefWorks

- ☐
- 1.
- Framing and communicating manipulations**

By: Spence, Alexa; Pidgeon, Nick

GLOBAL ENVIRONMENTAL CHANGES

Issue: SI Pages: 656-667 Published: 2012

[→ Links](#)[View Abstract](#)

and outcome frame

ONS Volume: 20 Issue: 4 Special

 Create Citation Report Analyze Results

Times Cited: 133

(from Web of Science Core Collection)

 Highly Cited Paper

Usage Count ▾

- ☐
- 2.
- Design for sustainable behaviour: strategies and perceptions**

By: Lilley, Debra

DESIGN STUDIES Volume: 30 Issue: 6 Pages: 704-720 Published: NOV 2009

[→ Links](#)[View Abstract](#)

Times Cited: 68

(from Web of Science Core Collection)

Usage Count ▾

- ☐
- 3.
- Does sustainable supplier co-operation affect performance? Examining implications for the triple bottom line**

By: Hollos, Daniel; Blome, Constantin; Foerstl, Kai

INTERNATIONAL JOURNAL OF PRODUCTION RESEARCH Volume: 50 Issue: 11 Pages: 2968-2986

Published: 2012

[→ Links](#)[View Abstract](#)

Times Cited: 58

(from Web of Science Core Collection)

Usage Count ▾

- ☐
- 4.
- Understanding investment drivers for UK sustainable property**

By: Sayce, Sarah; Ellison, Louise; Parnell, Philip

Conference: Rethinking Sustainable Construction Conference 2006 Location: Sarasota, FL Date: SEP, 2006

BUILDING RESEARCH AND INFORMATION Volume: 35 Issue: 6 Pages: 629-643 Published: 2007

[→ Links](#)[View Abstract](#)

Times Cited: 55

(from Web of Science Core Collection)

Usage Count ▾

Search strategies

1. Preliminary searching and browsing

- Scan abstracts and skim-read papers
- Identify current directions of research
- How will you contribute new knowledge?

2. Structured searching with appropriate syntax

- Identify the key articles and heavily-cited papers
- Establish key authors, organizations and sources
- Commit to in-depth consideration and re-reading of papers

3. Develop search

- Track citations to follow research connections
- “Cast net more widely” in terms of resources searched
- Use database subject headings to find more search concepts
- Set up alerts for new content

Source criticism

Source criticism means the assessment of the reliability, relevance and originality of the source.

Scholarly presentation

- How was the information published, is it peer reviewed?
- Is the information well presented?
- Pay attention to the language, layout and structure.

Relevance

- Does the resource meet your research subject or answer questions around the subject? Does it take you to different directions?
- Scan the introduction and conclusions sections.
- What is the main subject and argument of the resource?

Source criticism

Impartiality

Is the subject presented from all relevant viewpoints?

- Pay attention to the introduction and conclusion; how do author(s) argue a standpoint?
- Is the language emotive or neutral?
- Is the author biased or looking after their own interest?

Research methods

What is the information and argumentation based on?

- Does the research method support the subject?
- Do you trust the information and opinions presented to you?

Overview of information sources for researchers at Aalto University

- **Learning Centre website** is a good starting point: learningcentre.aalto.fi
- **Aalto-Finna** contains information on all collections at Aalto
- **Aaltodoc** contains all theses and dissertations
- **Resource guides** identify essential databases and learn information skills
- **Visual Resources Centre** for image databases
- **Citation and journal ranking** Web of Science, Scopus
- **Google Scholar with Aalto settings** finds specific articles quickly
- **Research.aalto.fi** research outputs and research project information at Aalto
- **RefWorks** keep information in order for making references and bibliographies

The background image shows the interior of the Aalto University Learning Centre. It features a modern, multi-level design with white concrete pillars and a vibrant pink carpet. Numerous white, teardrop-shaped pendant lights hang from the ceiling. In the foreground, there are modular orange and red armchairs. In the background, people are seated at study tables, and bookshelves are visible. A large white staircase with a glass railing is also present.

A?

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Thank you! Questions?

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