Research methods: information retrieval, evaluation and integration

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Activity of
- Recognising need for info
- Identifying an appropriate source
- Formulating search strategy
- Retrieving information
- Evaluating the information
- Integrating knowledge, ideas into assignment, core values is called …

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Information literacy


Information literacy is
- a key generic skill
- essential for life long learning.

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- The Library is a national treasure –
- Available to you now!
- Use it to enrich your work
- To assist you to do well!

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- The University of Sydney Library is 152 years old
- Support teaching and learning
- Largest in Australia after NLA
- Have 200 staff members
- Have 20 libraries in 2004
- Science & Technology Library
- Favour electronic delivery
- Create electronic material/SETIS
- Promote information literacy
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- Topic – “mobile commerce”
- Do some work early – as in the time before the deadline you’ll become aware of connections and sources
- Read the assignment sheet twice – Let the topic brew in your mind!

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- What task have you set yourself?
- Know your research problem!
- Identify key concepts
- Define the key concepts
- Explore the relationship between the concepts

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- Key concepts – synonyms
- Plural/singular or both?
- Acronym and/or spelt out – SLA or Service Level Agreement
- Broader/narrower terms?

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- Expressing the relationship between the terms in your search strategy
- Boolean operators
- AND
- OR
- NOT

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- In order to define and engage with your problem –
- Look at “The literature”

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- To frame the problem under scrutiny
- To identify relevant concepts, methods/techniques
- To position the study – will your work add something new to the body of knowledge?
Indexes to the literature:

- Library catalogue
- Electronic databases
- Search engines

Fisher Library contains IT items – you can borrow from any of these libraries

Engineering and other libraries may hold items of interest to you.

General overview:

Monographs –
Subject heading
Key word search

Note that monographs (books) may be in print and electronic form
Safari Tech book online – electronic texts
Electronic databases provide the citation of relevant articles and often the full text of the article itself.

Remote access
The four databases that we cover today are available off-campus via an Extro account or via our Remote access system – your name & library barcode number.

Each database has its own search program.

Check Search tips to see how to enter your search in that database – often enter phrases in “parentheses” to that words are searched as a phrase.
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- **ACM Digital Library**
  Association for Computing Machinery – the full-text for articles published in ACM periodicals and proceedings since 1985.

- **IEEE Xplore**
  Full text access to IEEE and IEE journals, transactions, magazines, letters and conference proceedings published since 1988 plus selected content back to 1950; all current IEEE standards.

- **Abstract and fulltext of each article**
- **In the Abstract index terms for the abstract are provided and these may provide useful clues for other relevant terms.**

- **IEEE states its Peer review policy –**
  “implemented a rigorous peer review process to ensure the high quality of its technical material.”
"all scientific papers and communications published in regular IEEE periodicals shall be reviewed by at least two referees who are competent and have experience in the area of the subject matter of the paper."

Editor decides whether to publish and with what changes.

**ABI Inform**

American Business Index Inform

**ScienceDirect**

Published by Elsevier which is the world’s largest publisher of science, technology and medical information.

Contains nearly six million fulltext articles
Searching is a dynamic process

- Create search strategy
- Enter the strategy into a database
- Assess the search results
- Are the retrieved references covering the areas you want?

Do you need to narrow the search results by adding another or different word to the search strategy?

Do you need to use terms that cover a broader subject area?

Are there synonyms – mobile commerce is often referred to as m-commerce

How does the database record inform you about your topic?

Does the abstract give some useful hints to broader/narrower terms or synonyms?

What about related terms – how does m-commerce relate to e-commerce?

How does wireless relate to m-commerce?

Are there author keywords or index terms on the record that will inform you?

You may need to review the search strategy and search with the new strategy and continue the process until you are satisfied that all relevant references have been located.

Think about the topic

Talk to your friends, classmates
Bounce ideas around with them as information literacy is a social activity!
Material held or made available by the Library is
- Published
- Peer-reviewed
- Purchased by the Library

Assignment calls for 4/5 papers should be “peer-reviewed research papers”.
- 1/5 “could be technical reports, newspaper articles or online articles.”

ABI Inform/Proquest has lighter, newspaper articles.
- “Online” for the assignment means internet articles.

Internet
- Anyone can publish an internet page
- A Google search retrieves a whole range of pages.

Search engines – Google
Key features:
- Results are relevancy ranked.
- Adds ADD to the search strategy so that looks for all words
- Use “quotation marks” to search for a phrase “mobile commerce”

Boolean option OR is not available
- No advanced search options
- Links to sites are cached – view the contents of the web page when Google indexed it – information may not be up-to-date
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- Evaluating an internet page
  - Reliability
  - Scope
  - Currency
  - Accuracy
  - Commercialism
  - Design

To conclude:
- Check out the Library’s resources
- Have a go at the databases
- Locate the fulltext
- Think about your search strategy, refine it if necessary
- Be wary of internet pages

Powerpoint is at
On Information Technologies
subject guide on Library homepage

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