Literature Review

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What is literature review?

Practical tips

What literature should you review?

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Definition of a Literature Review

Surveys scholarly articles, books and other sources (e.g. dissertations, conference proceedings) relevant to a particular issue, area of research, or theory.
Purposes of literature Review

- Research proposal
- Review paper
- Research grant
Purposes of literature Review

- Facts
- Eminent scholars
  - Prevailing trends
  - Prevailing paradigms
  - Prevailing theories

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Conducting a literature review will help you:

- Determine if proposed research is actually needed
- Narrow down a scope for your research
- Generate hypotheses or questions for further studies
What literature should you review?
What literature should you review?

1. Journals
2. Conference proceedings
3. Theses and Dissertations
4. Books
5. Corporate reports
6. Internet
7. Newspapers

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What is journal?

A publication which has scholarly information, usually written by experts in a subject area.

- Not intended for the general public
Types of Journals

Non-refereed journals

Peer reviewed
What are peer reviewed journal?

Refereed materials/peer reviewed are publications reviewed by "expert readers" or referees before publication.

- Refereed materials assure readers that the information conveyed is reliable and timely.

Most scientists regarded the new streamlined peer-review process as ‘quite an improvement.’
Anonymous peer review vs Open peer review
Most scientists regarded the new streamlined peer-review process as ‘quite an improvement.’
Peer reviewed Journals

Citation Index

An article database that indicates how many times the work of one author has been referred to, or cited, by another author, and where.

How many times a document is cited by other writers is an indication of its importance.
The impact factor is a measure of the citations to science and social science journals.

- It is a proxy for the importance of a journal to its field.

<table>
<thead>
<tr>
<th>Impact Factor</th>
<th>Journal Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>51.97</td>
<td>Nature</td>
</tr>
<tr>
<td>48.78</td>
<td>Science</td>
</tr>
<tr>
<td>19.84</td>
<td>New England Journal of Medicine</td>
</tr>
<tr>
<td>15.34</td>
<td>Cell</td>
</tr>
<tr>
<td>14.88</td>
<td>Proceedings of the National Academy of Sciences</td>
</tr>
<tr>
<td>10.62</td>
<td>Journal of Biological Chemistry</td>
</tr>
<tr>
<td>8.49</td>
<td>Journal Of the American Medical Association</td>
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</table>
Publications Award System in Sultan Qaboos University

1. Listed in Journal Citation Reports (JCR) of Web of Science / Thomson Reuters
2. Listed in Scopus
3. Local journals

Journal Citation Reports (JCR) provides information about academic journals in the sciences and social sciences, including impact factors.

All JCR journals covered are English language journals from North America, western Europe and Australia

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‘Big fives’ in medical sciences

Journal of the American Medical Association

The Lancet

British Medical Journal

Annals of internal medicine

New England Journal of Medicine

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Known 4 in Oman

Sultan Qaboos University Medical Journal
Oman Medical Journal
Oman Journal of Ophthalmology
International Journal of Nutrition, Pharmacology, Neurological Diseases

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Hidden rules

Acceptance rate

Prestigious general journals 5-20%

Prestigious specialist journals 10-30%

Other specialist journals 30-50%

New titles (obscure journals) 40-70%

Pay journals 70-90%

More ‘rejection, more prestige

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Can we judge how important a paper is by the number of citations it has?
Answer: No!

- Citations are not necessarily measure of quality

- Many important papers are rarely cited, but that doesn’t mean they are not important

- Many wrong papers are cited by people trying to disprove them (but that doesn’t mean the paper is not important)

- A paper may be highly cited because the author is working in a fashionable area, and has a lot of friends


Al-Adawi S, Burke DT, Mastronardi SE.


Association between body mass index and functional independence measure in patients with deconditioning.

Jain NB, Al-Adawi S, Dorvlo AS, Burke DT.

What about non-refereed journals?

• Non-refereed journals are those outlets with less rigorous standards of screening prior to publication.
  • Non-refereed materials may not be checked as intensely as refereed materials, but many can still be considered scholarly.
Freebies/’throwaways’

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Recap: Journals

**Journal articles**: these are good, especially for up-to-date information.

Journals are frequently used in literature reviews because they offer a relatively concise, up-to-date format for research.

- Depending on the publication, these materials may be refereed or non-refereed materials.
What literature should you review?

- Journals
- Conference proceedings
- Theses and Dissertations
- Books
- Corporate reports
- Internet
- Newspapers
What is conference proceedings

Conference Proceedings:

– The official record of the things said or done at a conference or meeting.

– A compilation of papers presented at a conference.

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Conference Proceedings

Conference proceedings serve:

- Highlighting latest research
- Research that has not been published

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What literature should you review?

- Newspapers
- Internet
- Corporate reports
- Books
- Theses and Dissertations
- Conference proceedings
- Journals

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Theses and dissertations

These can be useful sources of information.

Drawbacks:

Available from the library or interlibrary loan but in some places can be electronically accessed.

The student who carried out the research may not be an authority in the field.

- View the result with cautions.
What is the most valued citations in the scientific publications?
1. Journal article
2. Internet articles
3. Books
What is the most valued citations in the literature reviews?

1. Journal article
2. Internet articles
3. Books
What literature should you review?

- Newspapers
- Internet
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- Theses and Dissertations
- Conference proceedings
- Journals

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Books

Books are perceived as less up-to-date, as it takes longer for a book to be published than for a journal article.

Good detailed citations
What literature should you review?

- Newspapers
- Internet
- Corporate reports
- Books
- Theses and Dissertations
- Conference proceedings
- Journals

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Government/corporate reports

Many companies carry out research. These are useful sources of information, depending on your field of study.

Drawback?
What literature should you review?

1. Newspapers
2. Internet
3. Corporate reports
4. Books
5. Theses and Dissertations
6. Conference proceedings
7. Journals
The fastest-growing source of information is on the Internet.

- Anyone can post information on the Internet so the quality may not be reliable
- The information you find may be intended for a general audience

**Purist:** internet provide cheap and junk information

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Open access

- Open access means unrestricted access via the Internet to peer-reviewed scholarly research.

- The primary content for which Open Access is intended is scholarly journal articles
  - Theses
  - Book chapters
  - Scholarly monographs
What literature should you review?

- Newspapers
- Internet
- Corporate reports
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- Theses and Dissertations
- Conference proceedings
- Journals

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Newspapers

Newspapers are generally intended for a general (not specialised) audience, the information they provide will be of very limited use for your literature review.
Newspapers

- Newspapers are more helpful as providers of information about recent trends, discoveries or changes
  - Announcing changes in certain interest groups.
  - Sensationalism

Newspapers do not give unbiased opinions

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Interim summary:
What literature should you review?

Newspapers
Internet
Corporate reports
Books
Theses and Dissertations
Conference proceedings
Journals

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What is literature review?

What literature should you review?

Practical tips
How to access to the papers?
Major Databases

Biological Abstracts
CINAHL (Cumulative Index to Nursing and Allied Health Literature)
Embase
Google Scholar
Medline
PsycINFO
PubMed
ScienceDirect
Scopus
Web of Knowledge
Practical: Finding papers

• Some papers may not be available from the online archives. If so:
  – Google for it
  – The Library
  – Inter-Library Loan
  – Email the author
  – Ask someone who may have it, or access to it
“ResearchGate is a social networking site for scientists and researchers to share papers, ask and answer questions, and find collaborators. The site has been described as a mashup of “Facebook, Twitter and LinkedIn”.

http://en.wikipedia.org/wiki/ResearchGate

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Archiving policy

• Permission for authors to self-archive their publications varies between publishers and journals.

• **Green publisher**: Accessible

• **Blue or Yellow**: Conditions apply

• **White**: Not accessible/Pay

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Searching with PubMed

Developed by the National Center for Biotechnology Information (NCBI) at the National Library of Medicine, located at National Institute of Health

http://www.pubmed.gov
The Committee on Publication Ethics (COPE) is a nonprofit organization whose mission is to define best practice in the ethics of scholarly publishing and to assist editors, publishers, etc. to achieve this
## Websites with advice and discussion of ethical issue in scientific publication

<table>
<thead>
<tr>
<th>Institution</th>
<th>Website</th>
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</thead>
<tbody>
<tr>
<td>International Committee of Medical Journal Editors</td>
<td><a href="http://www.icmje.org/">http://www.icmje.org/</a></td>
</tr>
<tr>
<td>Committee on Publication Ethics</td>
<td><a href="http://www.publicationethics.org.uk/">http://www.publicationethics.org.uk/</a></td>
</tr>
<tr>
<td>Office of Research Integrity</td>
<td><a href="http://ori.dhhs.gov/">http://ori.dhhs.gov/</a></td>
</tr>
<tr>
<td>Council of Science Editors</td>
<td><a href="http://www.councilscienceeditors.org/">http://www.councilscienceeditors.org/</a></td>
</tr>
<tr>
<td>World Association of Medical Editors</td>
<td><a href="http://www.wame.org/">http://www.wame.org/</a></td>
</tr>
<tr>
<td>Danish Committees on Scientific Dishonesty</td>
<td><a href="http://forsk.dk/">http://forsk.dk/</a></td>
</tr>
<tr>
<td>Swedish Medical Research Council</td>
<td><a href="http://www.vr.se/english">http://www.vr.se/english</a></td>
</tr>
<tr>
<td>Canadian Guidelines on Ethical Conduct for Biomedical Research Involving Humans</td>
<td><a href="http://www.nserc-crsng.gc.ca/">http://www.nserc-crsng.gc.ca/</a></td>
</tr>
<tr>
<td>Indian Council of Medical Research</td>
<td><a href="http://icmr.nic.in/">http://icmr.nic.in/</a></td>
</tr>
<tr>
<td>UK Panel on Biomedical Research Integrity</td>
<td><a href="http://www.UKRIO.org.uk/">http://www.UKRIO.org.uk/</a></td>
</tr>
<tr>
<td>World Medical Association Declaration of Helsinki</td>
<td><a href="http://www.wame.com/">http://www.wame.com/</a></td>
</tr>
<tr>
<td>Bibliography on Scientific Fraud</td>
<td><a href="http://www.albany.edu/~scifraud/bibliography.htm">http://www.albany.edu/~scifraud/bibliography.htm</a></td>
</tr>
</tbody>
</table>

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“Knowledge is renewable, and we have to add something new to world knowledge”

Source: HM speech, Sultan Qaboos University, December 18, 2010

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THANKS