

Professional and Legal Issues (INFO2009)

Annotated Bibliography

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What is it?

“An annotated bibliography gives an account of the research that has been done on a given topic.”

“In addition to bibliographic data, *[it]* provides a concise summary of each source and some assessment of its value or relevance.”

Debora Knott, University of Toronto

<http://www.writing.utoronto.ca/advice/specific-types-of-writing/>

“An annotated bibliography is a list of citations to books, articles, and documents. Each citation is followed by a brief (usually about 150 words) **descriptive** and **evaluative** paragraph, the **annotation**. The purpose of the annotation is to inform the reader of the relevance, accuracy, and quality of the sources cited.”

<http://olinuris.library.cornell.edu/ref/research/skill28.htm>

Why do it?

- Preparing an annotated bibliography is an excellent way to familiarise yourself with a new topic.
- It helps you organise and record what you learn from reading the literature.
- It develops your critical appraisal faculties . . . literature sources are not ‘gospel’ or even necessarily very good!
- An annotated bibliography can be used by others to familiarise themselves with the literature.
- It can be easily updated over time by the addition of new sources (although these may demand revisions to existing annotations).
- Critical appraisal of other people’s technical writing improves your own.

A valuable first step in any research project!

Example

<http://bit.ly/9B32dx>

- An annotated bibliography on ubiquitous computing from SRI International (a leading independent US R&D company).
- It's a bit more verbose than most ... no doubt because it was prepared for external clients.

Other than that, is it a good annotated bibliography?

I don't like it too much 🤔

- Bibliographic source details are sketchy and incomplete.
- Over-reliance on web references (which should not be primary but an additional convenience).

Two Classic Annotation Styles

1. **Descriptive** : only lists contents, i.e., a factual summary of the selected source.

D. E. Knuth and M. E. Plass “Breaking paragraphs into lines”,
Software – Practice and Experience, vol. 11:11 (1981) 1119–1184.

Describes algorithm to break text into lines of approx. equal length.

Based on ‘boxes’, ‘glue’ and ‘penalties’.

Gives a history of line-breaking methods . . .

2. **Evaluative** or **critical** : as well as an overview of the content, also identifies and appraises the main argument(s).

. . . Processing paragraphs as a whole allows optimal line-breaking using dynamic programming.

Authoritative paper by a world-leading computer scientist and his student . . .

Identifying the Main Argument

- For a good (i.e., well-written) paper, this should be easy.
- If it isn't, it tells you something about the source article!
- It could be in the form of a thesis (i.e., a central claim), formulation of a research question, development of a formal framework, . . . not just “we have done some work”. (**ASK** yourself the question: so what?)
- Don't just look at the abstract . . . the introduction and conclusions are valuable too.
- Look for repeated phrases, ideas, etc.
- Look at the structure (headings), first sentence of each paragraph, introductory phrases like “In summary, . . .”

Critical Evaluation

- **Provenance** – Who wrote the paper? Is it in a respected source? How many times has it been cited by others?
- **Relevance** – Is it fully relevant? Bear in mind that problems can be common to different disciplines, so relevance has to be interpreted carefully.
- **Objectivity** – Is the article balanced and reasoned, or does it have an ‘agenda’?
- **Method** – appropriate? properly applied?
- **Presentation** – Poor, lazy presentation suggests low standards, which are just as likely to have compromised the underlying research.
- **Timeliness** – Is the source included as part of the historical development, or is it up to the minute?

Developing Your Judgement

● Orientation

● Sources

- Wikipedia
- Google search on keywords
- Google Scholar . . . etc.

● Approaches

- Skim reading
- Cross referencing – look for convergence and commonalities (but not ‘dumb repetition’!)

● Research

● Sources

- Trusted sources: TDNet, ACM Digital Library, SSRN, etc.

● Approaches

- Focus on abstracts
- Skim reading
- Who is citing whom?

Evaluation Matrix

- Matrix methods are popular for evaluating literature.


R. Klopper, S. Lubbe and H. Rugbeer “The matrix method of literature review”, *Alternation*, vol. 14:1 (2007) 262–276.

<http://alternation.ukzn.ac.za/docs/14.1/12Klopper.pdf>

- One possibility is to have just one matrix – a row for each source, a column for each criterion, and a tick in each cell for which that source meets that criterion.
- Could also use a numeric score, e.g., 1–5, in place of a tick (and sum across rows).
- Another possibility is to have one matrix per source, rows for who? what? where? when? why? and columns for 1–5 scores:

<http://www.library.dmu.ac.uk/Images/Selfstudy/ISEMLeaflet.pdf>

Frequently Cited Papers

- Go to Google Scholar and enter “Chomsky Syntactic Structures”. It reported 12857 citations (on 7 October 2012).
- Noam Chomsky is a highly cited author!
- Can you find any more highly cited sources? (I know one with > 25000 .)
- “Turing Computing Machinery Intelligence” gave 5527 citations; “Knuth Plass paragraphs” gave 190 citations.
- My best-cited paper has 115 
- Citation rate is primarily an indicator of influence, and only indirectly indicates quality.
- Have a look at the ACM Digital Library.

Peer Review

- Reputable scientific journals operate a system of *peer review*.
- Articles are only accepted for publication after recommendation by anonymous experts in the field, who often require extensive revisions and re-review before acceptance.
- Standards of review can vary quite widely between journals.
- How do you know what are “good” journals?
- ISI impact factor is useful (but **beware!**).
- Web of Knowledge at <http://wok.mimas.ac.uk/> publishes Journal Citation Reports (accessible from Library website via “Resources” then “A-Z List ...” buttons).

Grey Literature

- This is written material that can be difficult to find because it was not peer-reviewed, or commercially published, hence not archived in libraries.
- Examples are technical manuals, preprints of unpublished papers, reports from working groups, patents, newspaper articles, low print-run and self-published books, etc.
- It can be an important source of information, but lack of bibliographic control means that **basic information such as author, publication date or publishing body may not be easily discerned.**
- These days, there is a vast amount of (largely) grey literature on the web.
- Remember: a URL or URI is **NOT** a bibliographic source! Things change quickly on the Web.

Handling Grey Literature

- A URL/URI is no substitute for full and complete bibliographic details.
- Often, the web article will be a pre- or post-print of a paper that was properly published.
- Search out the original source and **give full details**.
- If you cannot find them, you should seriously consider abandoning this source.
- If you consider the information is too valuable or interesting to abandon, **DO NOT** simply pretend that the source is a good and legitimate one.
- Make it very clear that the source has weak provenance.
- Because web sources are ephemeral, you **MUST** give a “last accessed” date.

Assignment



Sadly, this is still under construction 🤔

- You are asked to prepare a short annotated bibliography, just two sources.
- One will be selected from a list, the other will be free choice.
- You will be given a specification for the bibliography style (see last slide).
- You will use Mendeley, a free reference manager (although I vastly prefer $\text{BIB}\text{T}_{\text{E}}\text{X}$).

<http://www.mendeley.com>

It's also an academic social network, so you will form a group with other members of your tutor group.

Things to be Aware of

- Resources (including marking scheme) in edshare – **currently inaccessible** 
- The listed articles are drawn from various sources: journal articles, book chapters, conference proceedings, professional magazine articles etc.
- Skim read them and compare the different styles and content.
- Develop your knowledge of useful and/or trusted sources:
 - ePrints Southampton
 - University Library
 - Google Scholar ...
- **WARNING**  Mendeley has bugs! Always check its outputs!

An Endnote on Bibliography Styles

- The outstandingly important thing is that all references are **complete** and **consistent**.
- Currently, there are two broad standards: (i) numerical and (ii) name-and-date sometimes called 'Harvard'. (The latter is VASTLY superior.)
- Many publishing houses have their own variants:
 - ACM http://www.acm.org/publications/latex_style/
 - IEEE <http://www.ieee.org/documents/ieeecitationref.pdf>
- One of the main inconsistency traps for Harvard style is full first name versus initials only. (Again, the latter is VASTLY superior.)
- NEVER refer to a multi-author paper by the first author alone. This is inexcusable! Knuth and Plass (1981)
NOT Knuth (1981).