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!

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.


   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.
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/](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 BibTeX).

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/

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).