Library HITS: Evaluating Journal Research Papers
What you will know after 40 minutes?

The importance of evaluation

Critical analysis using the analytical framework

Citation analysis (bibliometrics)

– How do I evaluate a paper?

– How do I evaluate a journal?

– How do I evaluate an author?

Questions
1. Analytical framework
   - 6-point checklist
     - Qualitative criteria (mostly)
     - Requires your:

2. Citation analysis
   - Online tools
     - Quantitative criteria
     - Requires a:
EVALUATING JOURNAL RESEARCH PAPERS

The quality conundrum

Ideally, you want to build on quality research.

Low quality resources can have their place

(might even be rationale for own research)

Key: demonstrate awareness of limitations; utilise strengths.

Question: What are marks of quality?
EVALUATING JOURNAL RESEARCH PAPERS

Scholarly resources
Primary Information
Aimed at experts
Disseminate research within a discipline
Use of scientific methods to make claims that are valid and trustworthy
Independent
Based on clearly referenced sources and documentation.

Popular resources
aimed at a wider public
entertain, inform
promote viewpoints, sell products & services
may represent vested interests
based on personal accounts and opinion
Problem: not all scholarly publications are what they seem!

2 case studies:

**Faked data** (Woo Suk Hwang)

**Vested interest** (Andrew Wakefield)

**Shoddy Research** - A World Upside Down? Deficit Fantasies in the Great Recession (Thomas Ferguson and Robert Johnson)
Conclusions from these case studies:

Maintain critical approach

Maintain analytical & reflective mindset

Distinguish between popular reception and actual content of research

Far-reaching implications of research = increased critical vigilance
The 6 criteria for evaluation:

1. Relevance
2. Authority
3. Methods
4. Objectivity
5. Presentation
6. Currency
Relevance

“Does the publication help me answer my research question?”

Criteria

- **Level**: is its detail appropriate to your needs?
- **Geography**: does it concern only countries or regions not related to your research?
- **Context**: how does it relate to the “body of knowledge” in your field? Unique insights? Confirmed/refuted by other research?
- **Emphasis**: does it approach the topic from an appropriate angle? Relevant methodology?
Authority

- **Author** - established expert?
  
  - Academic or professional qualifications, institutional affiliation(s), endorsements by other experts, subjects of other publications
  
  - Known for a particular perspective, mission or bias?
  
  - Citation analysis: has their research been frequently cited? What is their ‘h index’? Where published? Peer-reviewed? Impact factor?

- **Publisher** – known for publishing experts?
  
  - Type: commercial, non-profit, government, research, educational?
  
  - Vested interest? Contactable?
Methods

- (Method of Production and Methodology)

**Traditional publications**

Academic journals, trade journals, magazines, newspapers, monographs ("books"), conference proceedings, (systematic) reviews

**New formats**

Blogs, wikis, discussion lists, open access journals, open (institutional) repositories. Anyone can publish on the Web...but not necessarily inferior quality; requires particularly careful (2. Authority) check
Type of publication

Things to check!

- “About” information (e.g. About the BMJ)
- Editorial policy, board (e.g. BMJ Ed. Advisory Board)
- Author guidelines (e.g. BMJ Resources for Authors)
- Peer reviewed? Impact factor?
- **Peer-review**: process by which an academic journal passes a paper submitted for publication to independent experts for comments on its suitability and worth; refereeing.

  Useful resource:

  • Ulrich’s Periodicals Directory
Objectivity

- **Vested interests**, personal or organisational objectives ought to be disclosed.
- **Check sponsors**; be extra careful in case of controversial topics (e.g. GM foods, climate change)
- **Check the evidence** – would you come to the same conclusions as the author(s)?
- **Check the literature review and references** – are all relevant points of view considered?
Presentation

- How is the information presented?

  Consider:

  • Colour & font, general appearance
  • Language, grammar, writing style: meaning clear?
  • Structure and layout: logical?
  • Use of diagrams and images
  • Quality of reproduction
  • Advertising: intrusive?
Currency

- How up to date is the research?

  • Consider:
    - Is it clear when the information was produced?
      » Publication sometimes years after research
      » Newer not necessarily better
    - Does the date of the information meet your requirements?
    - Is it obsolete or has it been superseded?
Citation Analysis = Bibliometrics

- How many times a paper or researcher is cited by other scholars in the field; assumes influential researchers/authors and important works cited more often than others.

**How do you find out?**

- **Web of Knowledge** (Thomson Reuters) Covers 9,000+ peer reviewed journals

- **Scopus** (Elsevier) Similar to Web of Science; covers 16,000+ peer-reviewed journals; more than 4,000 international publishers; 1996 on.

- **Google Scholar** provides links to ‘cited by’ information.

- **Scimago Country & Journal Rank Database** details journals and country-specific scientific indicators developed from the information contained in ‘Scopus.’
Impact Factor- limitations

- Very useful tools, but IF not a measure of true quality of a journal, e.g.: current popularity of topic and availability journal may give higher IF.

- Based on an average over all articles: underestimates the citations of the top cited article, exaggerates the number of citations of the average article.

- Comparison of impact factors between different fields is invalid e.g. not relevant for literature, where the most important publications are books citing other books.

- Only the ISI database journals are used; undercounts the number of citations from other journals e.g. in ‘less-developed’ countries, other languages (American bias).

- Why has the paper been cited? e.g. Wakefield

- 50% of papers are never cited