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:
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