Conducting a Literature Review

Bob Green
July 2020
This Webinar has a related blog post, last week.

Check it out for additional information.

The literature review | your definitive guide (2020)

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Clarivate

This is our ultimate guide on how to write a narrative literature review. It forms part of our Research Smarter series. Learn more best practice tips by registering for our upcoming webinar.

How do you write a narrative literature review?

Researchers worldwide are increasingly reliant on literature reviews. That’s because review articles provide you with a broad picture of the field, and help to synthesize published research that’s expanding at a rapid pace.
Agenda

1. What is a Literature Review

2. Tools to help with the various stages of your review
   - Searching
   - Evaluating
   - Analysing and Interpreting
   - Writing
   - Publishing

3. Additional Resources
The Literature Research Workflow

Web of Science
The world’s largest and highest quality publisher-neutral citation index.

Essential Science Indicators
Reveals emerging science trends as well as influential individuals, institutions, papers, journals, and countries across 22 categories of research.

Journal Citation Reports
The world’s most influential and trusted resource for evaluating peer-reviewed publications.

InCites Benchmarking & Analytics
Analyse institutional productivity and benchmark your output against peers worldwide.

ScholarOne
Simplified submission workflows and peer review for scholarly publishers and societies.

EndNote
A smarter way to streamline references and write collaboratively.

Kopernio
Fast, one-click access to millions of high-quality research papers.

Publons
Supporting researchers through documenting their peer-review and journal editing contributions, providing guidance and best practice for the peer-review process, as well as increasing the overall visibility of their research and its impact.

Converis
One flow to let institutions collect, manage, and report on all research activity, working seamlessly with an institutions existing systems.

Web of Science Author Connect
Reach leading researchers in the sciences, social sciences, and arts and humanities.
## Systematic vs. Literature Review

<table>
<thead>
<tr>
<th></th>
<th>Systematic Review</th>
<th>Literature Review</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Definition</strong></td>
<td>High-level overview of primary research on a focused question that identifies, selects, synthesizes, and appraises all high quality research evidence relevant to that question</td>
<td>Qualitatively summarizes evidence on a topic using informal or subjective methods to collect and interpret studies</td>
</tr>
<tr>
<td><strong>Goals</strong></td>
<td>Answers a focused clinical question</td>
<td>Provide summary or overview of topic</td>
</tr>
<tr>
<td></td>
<td>Eliminate bias</td>
<td></td>
</tr>
<tr>
<td><strong>Question</strong></td>
<td>Clearly defined and answerable clinical question</td>
<td>Can be a general topic or a specific question</td>
</tr>
<tr>
<td></td>
<td>Recommend using PICO as a guide</td>
<td></td>
</tr>
<tr>
<td><strong>Components</strong></td>
<td>Pre-specified eligibility criteria</td>
<td>Introduction</td>
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<tr>
<td></td>
<td>Systematic search strategy</td>
<td>Methods</td>
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<tr>
<td></td>
<td>Assessment of the validity of findings</td>
<td>Discussion</td>
</tr>
<tr>
<td></td>
<td>Interpretation and presentation of results</td>
<td>Conclusion</td>
</tr>
<tr>
<td></td>
<td>Reference list</td>
<td>Reference list</td>
</tr>
<tr>
<td><strong>Number of Authors</strong></td>
<td>Three or more</td>
<td>One or more</td>
</tr>
<tr>
<td><strong>Timeline</strong></td>
<td>Months to years, Average eighteen months</td>
<td>Weeks to months</td>
</tr>
<tr>
<td><strong>Requirement</strong></td>
<td>Thorough knowledge of topic</td>
<td>Understanding of topic</td>
</tr>
<tr>
<td></td>
<td>Perform searches of all relevant databases</td>
<td>Perform searches of one or more databases</td>
</tr>
<tr>
<td></td>
<td>Statistical analysis resources (for meta-analysis)</td>
<td></td>
</tr>
<tr>
<td><strong>Value</strong></td>
<td>Connects practicing clinicians to high quality evidence</td>
<td>Provides summary of literature on the topic</td>
</tr>
<tr>
<td></td>
<td>Supports evidence-based practice</td>
<td></td>
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</tbody>
</table>

Source: [https://guides.libraries.psu.edu/c.php?g=319063&p=5222056](https://guides.libraries.psu.edu/c.php?g=319063&p=5222056)
A literature review is a survey of scholarly sources that provides an overview of a particular topic. Literature reviews are a collection of the most relevant and significant publications regarding that topic in order to provide a comprehensive look at what has been said on the topic and by whom.

The basic components of a literature review include:

✓ a description of the publication
✓ a summary of the publication’s main points
✓ a discussion of gaps in research
✓ an evaluation of the publication’s contribution to the topic.

What is the difference between a literature review and an annotated bibliography?

An annotated bibliography is a list of your references with a summary of the content and the publication’s relationship to your research question. A literature review is an overview of the topic, an explanation of how publications differ from one another, and an examination of how each publication contributes to the discussion and understanding of the topic.
The Literature Review Process

Problem formulation
Clearly defining which topic or field is being examined and what its component issues are.

Literature search
Finding all materials relevant to the subject being explored and keeping up to date during the review process.

Data evaluation
Determining which literature makes a significant contribution to the understanding of the topic.

Analysis and interpretation
Discussing the findings and conclusions of pertinent literature.

Write and Publish
Produce a formatted document that you can get published in an appropriate journal to inform everyone of your findings.

Source: https://guides.library.ucsc.edu/write-a-literature-review

• An overview of the subject, issue or theory under consideration, along with the objectives of the literature review
• Division of works under review into categories (e.g. those in support of a particular position, those against, and those offering alternative theses entirely)
• Explanation of how each work is similar to and how it varies from the others
• Conclusions as to which pieces are best considered in their argument, are most convincing of their opinions, and make the greatest contribution to the understanding and development of their area of research
Literature Search

Search Web of Science to track ideas across disciplines and time from over 1.7 billion cited references from over 171 million records. With Web of Science Core Collection, search the top journals, conference proceedings and books, in the sciences, social sciences, and arts and humanities to find the high quality research most relevant to your area of interest.

https://doi.org/10.1007/s11192-017-2622-5

AND, OR, NOT, NEAR, SAME, *?$, Lemmatization
Search Rules →
Search Operators →
Sort Options →
Wildcards →

An example of an iterative search around a subject.
Cast your net wide but not too wide.

A more complex example.
Literature Search

Narrow the results of your search by using any of the **Refine Results** options:

- Web of Science Categories (254 fields of research)
- Document Types (journal, review, book, etc.)
- Publication Years
- Organization-Enhanced (Unified organisations)
- Source Titles (journal, conference name, etc.)
- Funding Agencies
- Open Access (including type of Open Access)
- And more!

You can also **Sort** your results: by newest; most cited; usage counts; recently added; relevance; etc.
Literature Search

Navigating the Citation Network to follow a research thread and find possible relevant outliers

- **Cites References** – the research that a paper cites
- **Times Cited** – more recently published papers that cite the paper
- **Related Records** – papers which share at least one cited reference in common with the paper. If they share citations, they’re likely discussing similar topics.

This is perfect for finding publications that are related to each other, via the citations that were made.

It is particularly useful:
- where keywords in the topic are not easy to define
- where older research needs to be traced
- when you need to see where a particular research thread leads.
Group and rank records in a results set by extracting data values from a variety of fields. Find the most prevalent authors in a particular field of study, or generate a list of institutions ranked by record count based on your search query.

The Citation Report provides aggregate citation statistics for a set of search results. This can give an indication of the influence of the results set.
Highly Cited and Hot Paper indicators put citation counts into context. They take into account the field of research, year of publication and document type, comparing ‘like with like’. This information comes from our Essential Science Indicators.

Citation take time to accrue, so they are not a good indicator of influence for recent publications. For this reason we provide Usage Counts. Every time a Web of Science user clicks a full text link or exports a record, the record’s Usage Count is incremented. So it provides an indication of interest.
Data Evaluation

Viewing the Full Text to understand content

To fully understand any publication you need to read it. **Web of Science** has several in built routes to access Full Text. In addition you could add **Kopernio** to your browser to leverage subscription services as well as **Open Access** sources.

Open Access Status

Some reviews include an evaluation of **Open Access**, others have a requirement to either include or exclude **Open Access** publications. **Web of Science** has **Open Access** version as a filter, so these types of evaluation can be carried out.
Managing your Results

The **Marked List** page stores records selected from your search results. After marking records, you can save your Marked List and return to it later. **Save up to 50 Marked Lists with up to 50,000 records per list.** In order to save, you must be logged into your Web of Science personal profile.

Use the Marked List to:

- **Store your search results** - it's not always possible to finish your search in one session. Marking records for your next visit to Web of Science helps you pick up where you left off.
- **Group articles together you want to analyze** - gather the perfect set of publications, then use Analyze to understand trends across them, or use Citation Report to reveal the articles that cite your selections.
- **Create a custom set of items to export**. There are lots of export options - send to EndNote for later use in writing a paper, print, email or even export to InCites Benchmarking & Analytics for detailed citation analysis.
Managing your Results

Saving (and revisiting) your Searches

Saving a search is a way to return to that search as many times as needed to complete your work.

Web of Science stores the search statement you use in your personal profile, so that you can always return to it and edit, or rerun it against different time periods or parameters.

You can create complex queries by combining many searches together in your Search History, then save the combinations so they don’t have to be recreated each time you come into Web of Science.

They mean your results are repeatable.

You can also send your search methods to other Web of Science users.
Managing your Results

Creating Alerts (to keep up to date)

Your Web of Science account also allows you to use your Saved Searches as Alerts that notify you of updates in the data.

Search Alerts - save a search and establish a daily, weekly or monthly email notification when new publications are added that match.

In addition, there are two other types of Alert:-

Citation Alerts - have a favourite or important article you want to track? We'll notify you when it receives new citations.

Table of Contents Alerts (Journal Alerts) - subscribers to our Current Contents Connect database can set up TOC alerts for their favorite journals all in one place.

Recent updates to Alerting in Web of Science
- All Database Alerting: Set one alert across all collections in your Web of Science subscription.
- One Click Access: Go directly to the Web of Science platform for ALL the records returned in your alert.
- Alerts are delivered directly to your email (or multiple email addresses, suitable for viewing on your mobile device.
Managing your Results

Outputting your Results

The relevant results can be exported to other applications, for further analysis or to cite in your review.

Common options are to export to **Excel** for analysis and to **EndNote** (or another Reference Management application) for citing.

You can stipulate how much metadata is exported by selecting an option from the list.
Analysis and Interpretation

**FIND FULL TEXT** find and attach PDFs to your references.

**ORGANIZE YOUR REFERENCES** Create groups and drag and drop your references into them, or create automatic smart groups and let EndNote take care of this for you.

**SEARCH EASILY** Access thousands of online resources within EndNote. Customisable de-duplication tool.

**VIEW AND ANNOTATE YOUR PDFS** Add sticky notes to your PDFs and search for them later. Use the built-in email functionality to quickly share a reference and its file attachments with others.

**SYNC YOUR LIBRARY** across desktop, online, and iPad®.

**SHARE YOUR LIBRARY OR GROUPS** and collaborate with other EndNote users.
Analysis and Interpretation

Typical considerations when working on your literature review

• What is the balance between description and comment?
• Have I missed out any important dimension of the argument, or literature?
• Have I supported the development of each step in my argument effectively?
• Is the material presented in the most effective order?
• Are there places where the reader is left with unanswered questions?
• Is every element of my research question supported by the preceding material?
• Have I explained to the reader the relevance of each piece of evidence?
• Is there any material that is interesting but which does not contribute to the development of the argument?
• Have I explained adequately the justification for this research approach / topic / question?
• Are my references up to date?
• How effective is my linking of all the elements?
Writing the literature review

FIND AND SELECT CITATIONS and insert them into your manuscript.

EDIT CITATIONS to add information such as a page number, or remove a reference from a group of citations.

REFORMAT YOUR ENTIRE PAPER and bibliography with one click.

Using EndNote’s Cite While You Write, you can instantly insert and format citations and bibliographies when writing your review.

Over 7,000 styles are available, plus you can create your own.

Collaborate with others by sharing your library.

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Publishing your Literature Review

**EndNote** returns a list of possible journal Matches, based on your title, abstract and list of references.

It provides the following information for the resulting journals:

- Match Score
- JCR Impact Factor
- Journal
- JCR Category
- Rank in Category
- Quartile in Category
- Link to journal’s website
- Publisher links
Publishing your Literature Review

Use Journal Citation Reports to compare journals you might publish in

Journal Citation Reports (JCR) provides detailed metrics on journals in the Web of Science.

Use these metrics to make an informed decision on which journal to try to get published in.

One example is the % Articles in Citable Items. If this is 0% the journal is focused on reviews, if it is 100% they do not publish reviews.
Publishing your Literature Review

The Master Journal List provides plenty of useful information too.

The Master Journal List provides detailed information on journals in the Web of Science.

Useful information includes Open Access status, including APC fees.

There is also valuable information on a journal’s review process, like whether they operate ‘blind’ or ‘double blind’ reviews.

It also provides the average time from submission to publication.
Web of Science Group Learning
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- Self-Guided Learning
- Live Training
- LibGuides
Thank you

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