

Some Helpful Notes

Contents

- How to select a research topic:**..... 1
- How to identify a research gap.**..... 2
- Structure paper** 3
- Research paper flow chart** 4
- Abstract**..... 5
- Conduct literature review using google scholar** 6

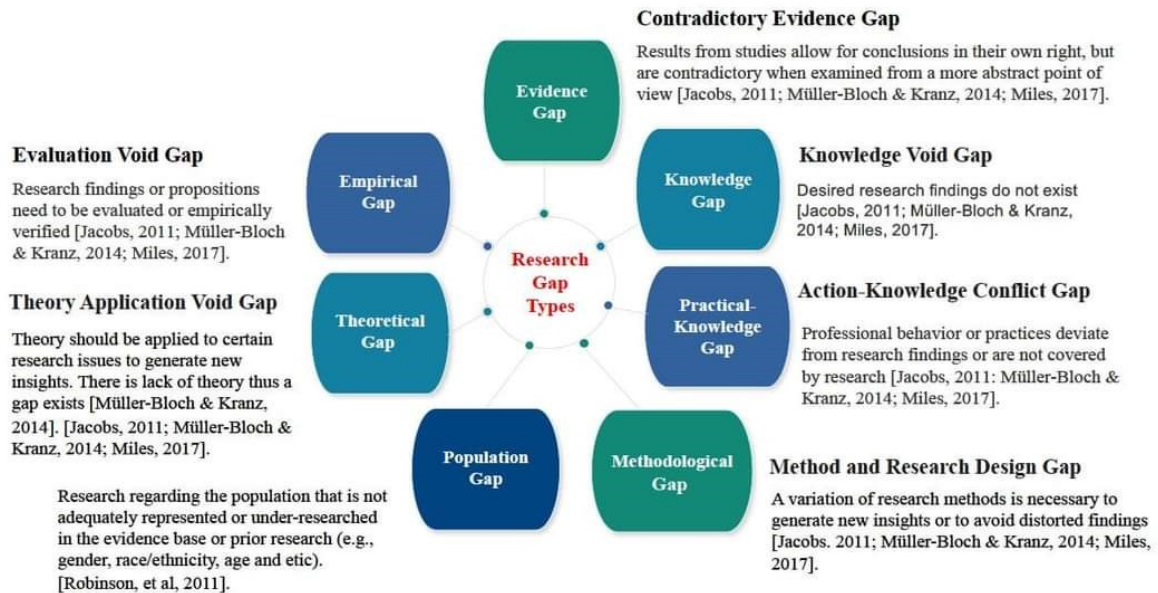
How to select a research topic:

How to select Research topic 5Ws and 1H



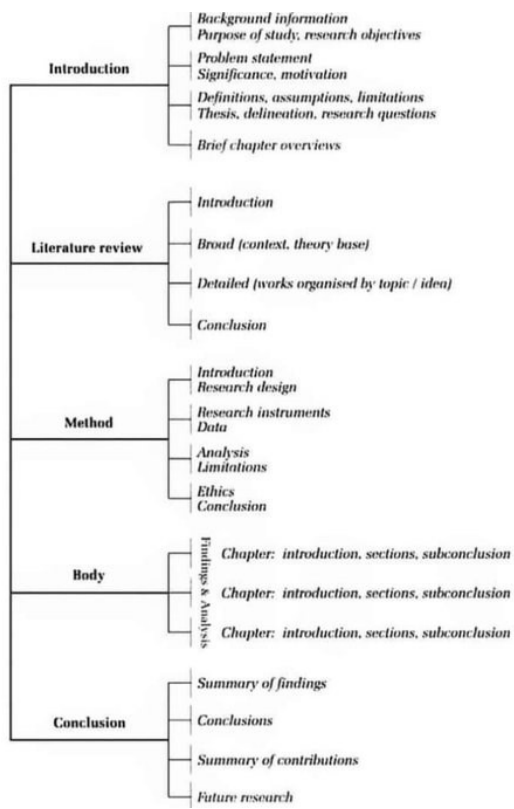
How to identify a research gap.

How to identify research gap?



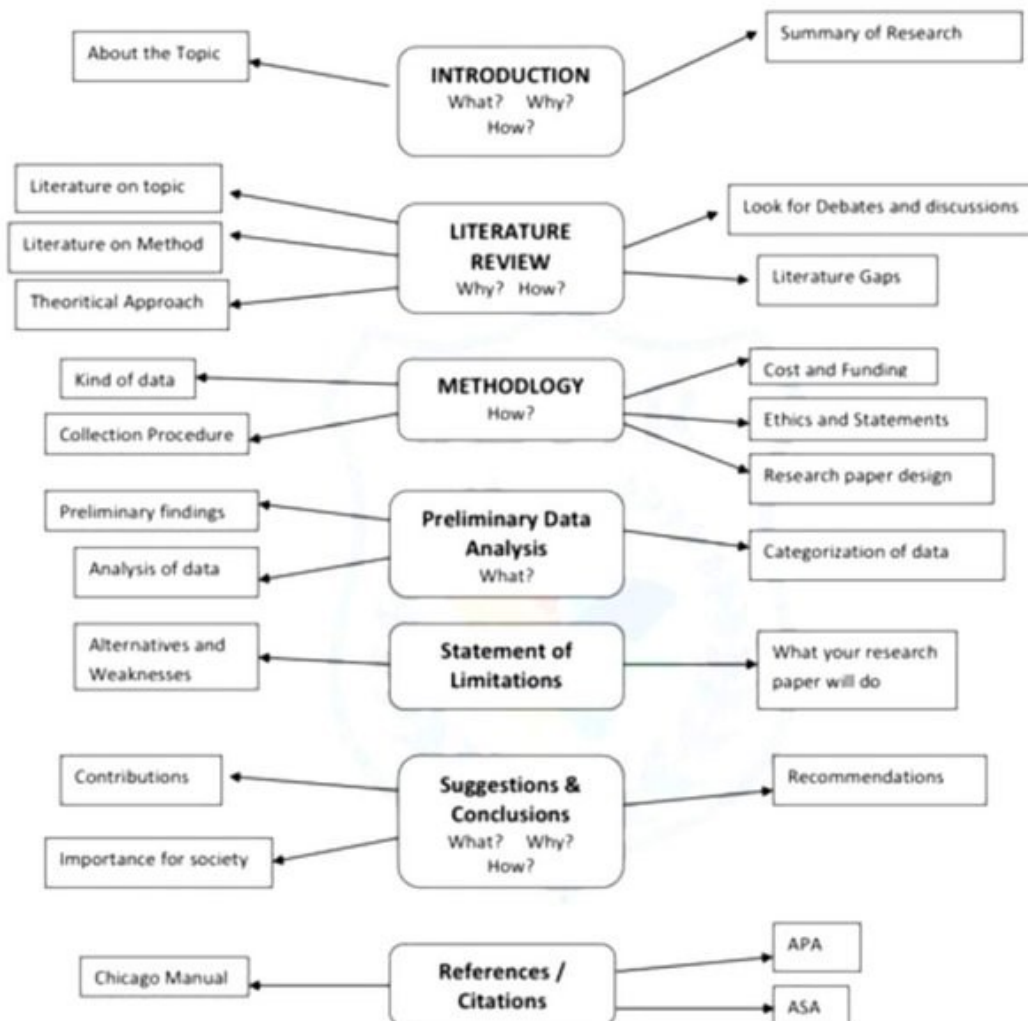
Source: Robinson, Saldanha, & McKoy (2011); Müller-Bloch & Kranz, (2015); Miles, (2017)

Structure paper



Research paper flow chart

FIGURE SHOWING RESEARCH PAPER WRITING FLOWCHART



Abstract

Box 7. Nature's abstract-writing template

nature

How to construct a *Nature* summary paragraph

Annotated example taken from *Nature* 435, 114-118 (5 May 2005).

One or two sentences providing a **basic introduction** to the field, comprehensible to a scientist in any discipline.

Two to three sentences of **more detailed background**, comprehensible to scientists related disciplines.

One sentence clearly stating the **general problem** being addressed by this particular study.

One sentence summarising the main result (with the words "here we show" or their equivalent).

Two or three sentences explaining what the main result reveals in direct comparison to what was thought to be the case previously, or how the main result adds to previous knowledge.

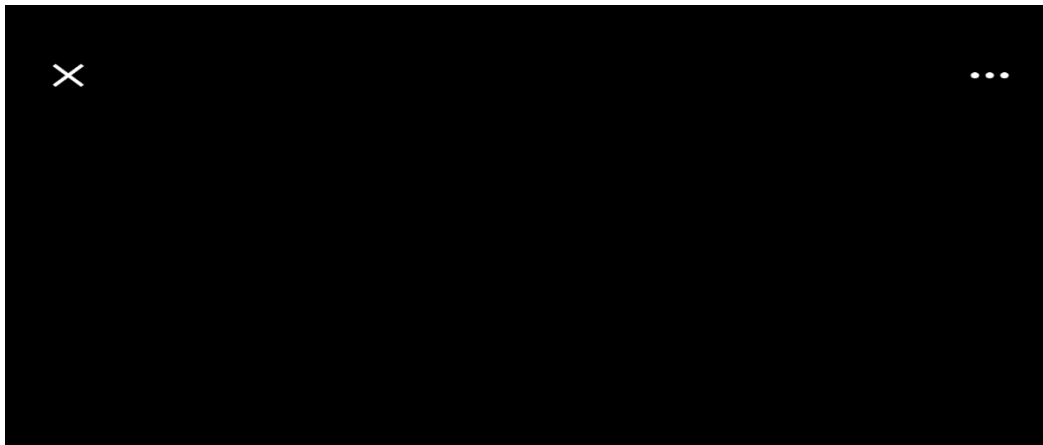
One or two sentences to put the results into a more general context.

Two or three sentences to provide a **broader perspective**, readily comprehensible to a scientist in any discipline, may be included in the first paragraph if the editor considers that the accessibility of the paper is significantly enhanced by their inclusion. Under these circumstances, the length of the paragraph can be up to 300 words. (The above example is 190 words without the final section, and 250 words with it).

During cell division, mitotic spindles are assembled by microtubule-based motor proteins^{1,2}. The bipolar organization of spindles is essential for proper segregation of chromosomes, and requires plus-end-directed homotetrameric motor proteins of the widely conserved kinesin-5 (BimC) family³. Hypotheses for bipolar spindle formation include the 'push-pull mitotic muscle' model, in which kinesin-5 and opposing motor proteins act between overlapping microtubules^{2,4,5}. However, the precise roles of kinesin-5 during this process are unknown. Here we show that the vertebrate kinesin-5 Eg5 drives the sliding of microtubules depending on their relative orientation. We found in controlled *in vitro* assays that Eg5 has the remarkable capability of simultaneously moving at $\sim 20 \text{ nm s}^{-1}$ towards the plus-ends of each of the two microtubules it crosslinks. For anti-parallel microtubules, this results in relative sliding at $\sim 40 \text{ nm s}^{-1}$, comparable to spindle pole separation rates *in vivo*⁶. Furthermore, we found that Eg5 can tether microtubule plus-ends, suggesting an additional microtubule-binding mode for Eg5. Our results demonstrate how members of the kinesin-5 family are likely to function in mitosis, pushing apart interpolar microtubules as well as recruiting microtubules into bundles that are subsequently polarized by relative sliding. We anticipate our assay to be a starting point for more sophisticated *in vitro* models of mitotic spindles. For example, the individual and combined action of multiple mitotic motors could be tested, including minus-end-directed motors opposing Eg5 motility. Furthermore, Eg5 inhibition is a major target of anti-cancer drug development, and a well-defined and quantitative assay for motor function will be relevant for such developments.

Nature's abstract-writing template, <https://www.nature.com/nature/for-authors/formatting-guide>. © 2021 Springer Nature Limited. All rights reserved. Permission for further reuse must be obtained from the relevant holder of the exclusive rights.

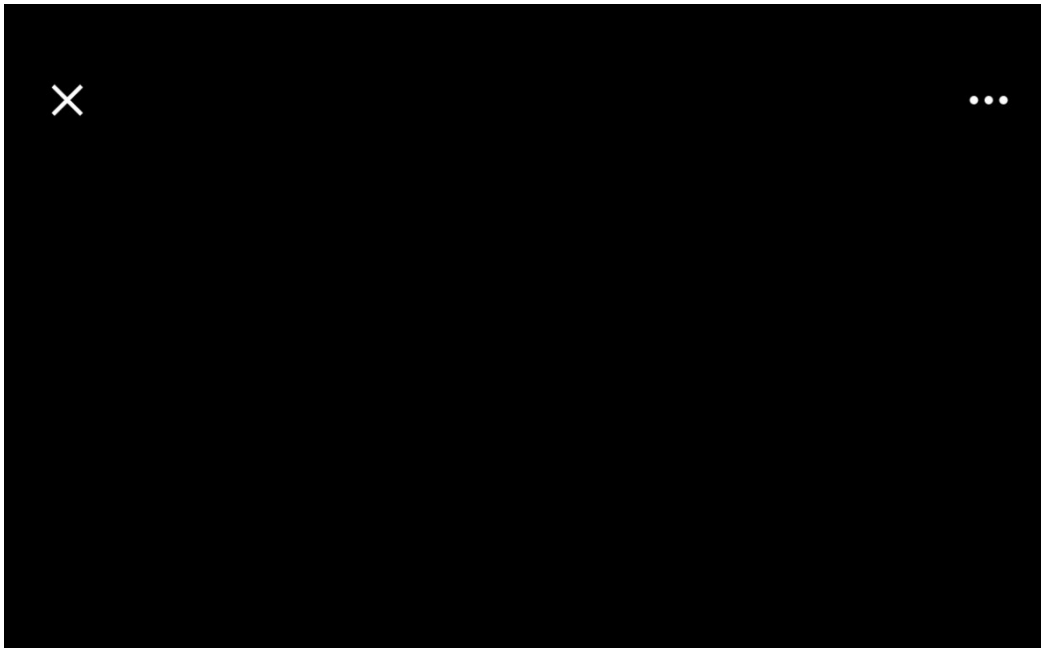
Conduct literature review using google scholar



1. **Open Google Scholar:** Go to scholar.google.com.
2. **Use Specific Keywords:**
 - Type your search query in the search bar. For instance: "machine learning in healthcare" AND "literature review".
 - Press **Enter** or click the **Search** button.
3. **Apply Filters:**
 - On the left sidebar of the results page, click **Since 2020** (or any other year range) under **Any time** to filter by recent publications.
 - If necessary, you can also click **Custom range** to set a specific timeframe.
4. **Search by Specific Journals:**
 - In the search bar, enter keywords with journal names if desired, like "literature review" AND "data science" AND "IEEE".
 - Google Scholar does not allow a journal filter, but specifying a journal name in the query can improve results.



A



5. Use Advanced Search:

- Click the three horizontal lines in the upper-left corner.
- Select **Advanced Search** from the dropdown menu.
- Enter your keywords in fields like **all of the words, with the exact phrase, or where my words occur** (in the title, for example).
- Click **Search** to view results.

6. Review Cited and Related Articles:

- Beneath each result, there are links labeled **Cited by** and **Related articles**. Click these to see additional papers that reference or relate to the selected literature review.

7. Access Full Texts:

- If the article is locked, try clicking on **[PDF]** links next to the article or check library access through your institution.

