

A Short Guide to Read a Research Paper

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Outline:

- What is a research paper
- Benefits
- How to search
- Components of research papers
- Efficient reading tips

What is a research paper?

*A **citable** document of **observations, experiments, hypothesis** which is supported by **logic and/or results** and **reviewed critically** before getting published.*

Benefits

- Improves subject specific knowledge
- Keeps up to date with latest advancement in science
- Improves scientific vocabulary
- Develops scientific aptitude
- Gives basis for new idea
- Learns to write one of your own

How to search?

What to search	Where to search
Be specific to the problem	Google [not recommended]
Year	Google Scholar
Publisher	Cited in Indexed Journal
Authors	Peer reviewed
	Science Direct
	ArXiv
	ResearchGate

Components of a research paper

Section	What for
Title	Captures your work in a sentence
Author info	Recognises contributing authors and their affiliations
Abstract	Summarises the work in most attractive and lucrative way possible focusing on your contribution
Keywords	Most important words that weights more in comparison to the significance in the scientific community.

Components of a research paper (Contd.)

Section	What for
Introduction	Provide your thesis statement; simply a summary of what you're setting out to accomplish with your research project, including the problems you're looking to scrutinize and any solutions or recommendations that you anticipate beforehand.
Related works	Provide the theoretical framework that you elaborated during your research. Present the sources you have studied while preparing for the work ahead, and these sources should be credible from an academic standpoint. Make sure to include the name of the relevant authors you've studied and add a properly formatted citation that explicitly points to their works you have analyzed, including the publication year
Methodology (Problem Specific)	Point out the exact methods you have used in the course of your research work. Typical methods can range from direct observation to laboratory experiments, or statistical evaluations. Whatever your chosen methods are, you will need to explicitly point them out in this section

Components of a research paper (Contd.)

Section	What for
Experimental Setup	A crucial section from a practical standpoint. At this point, you're not expected to analyze your data yet but set the stage to do so. This will also be an important section for any other researcher who wishes to continue your work. Similar experimental setup is expected to generate similar result.
Result and Discussion	Analyze the data you have gathered while researching. This analysis should align with your previously stated methodology, and it should both point out any implications suggested by your data that might be relevant to different fields of study, as well as any shortcomings in your approach that would allow you to improve your results if you were to repeat the same type of research.
Conclusion	Concisely reiterate your thesis statement along with your methodology and analyzed data – by drawing all these elements together you will reach the purpose of your research, so all that is left is to point out your conclusions in a clear manner.

Efficient Reading Tips



- Check the title and see if you know all the words
 - Read the abstract and conclusion very carefully and make sure you understand them
 - If you find them interesting or serves your purpose, read the introduction to find out relevant study and their contribution.
 - Finally check the result to validate their claims.
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- | | | |
|-------------------|-------------------|------------------------|
| ➤ Slow down | ➤ Take a printout | ➤ Study in quiet place |
| ➤ Use highlighter | ➤ Take notes | ➤ Maintain a table |

