

How to clock a research study and article in one go.

Written By: Terence van Zyl

Big picture step-by-step guide

1. Use IEEE template to put down the basic structure in latex on overleaf
 - Introduction, Background, Method, Results, Discussion, Conclusion.
2. Write the initial introduction to Create a Research Space ([CARS](#)) – Three paragraphs for now
 - Paragraph 1: **Here is an interesting problem.** (*The Territory*)
 - Paragraph 2: **It is unsolved!** (*The Niche*)
3. Write the initial background – The idea in one-two paragraph for now
 - Paragraph 3: **Here is an idea on how to solve it.** (*Occupy The Niche*)
4. Write up the intended research method – One-two paragraph for now
 - Paragraph 4: **How to falsifying the idea**
5. **ONLY DO THE RESEARCH NOW**
6. Add a single figure that expresses the main idea of the study
 - This figure is the **bootstrap** for an exceptional paper
7. Fill in the rest of the tables and figures for the results
 - This is the **kernel** of the paper, all linked hierarchically back to the **bootstrap**
8. Describe the results
9. Update the Background – The idea in one-two page
10. Update the Method to reflect the method followed
11. Writeup the Discussion – In one-two page
12. Expand the Introduction and add the studies contributions – One page
13. Add Conclusion after Discussion and write it up – Half page
14. Add an Abstract before Introduction and write it up
15. Finally, the title – Ten words or less

If you change your mind about the above content, go back to the start.

Small picture step-by-step guide - (IMRaD)

Introduction - ([the moves](#))

Establishing the territory

Here is an interesting problem

Describe the current state of research on the topic. [From phrase bank](#) start with two sentences, one from each of:

1. Establishing the importance of the topic [...]
2. Referring to previous work to establish what is already known

Identifying a niche

It is unsolved!

Provides a problem statement for the study that can be addressed in just one or two sentences. [From phrase bank](#) select one or two of these as sentences to start:

1. Identifying a knowledge gap in the field of study
2. Claim something is wrong with the previous research
3. Explaining the inadequacies of previous studies
4. Identifying the scarcity or lack of previous research

Occupying the niche

State the contributions

Describes how the research contributes to solving the problem statement. [From phrase bank](#) select one sentence from each of:

1. Stating the focus, aim, or argument of a short paper
2. Stating the purpose of the current research
3. Explaining the significance of the current study

When you revisit the introduction, you can

1. Describing the research design and the methods used
2. Share the contributions

Background

The idea

Suppose you have devised a novel idea and compared it to several other baselines and state-of-the-art methods. Then you would describe the idea and the other methods compared here.

1. Describe the idea
2. Describe other background needed

Method - [\(the moves\)](#)

All the details

[From phrase bank](#) and start with one paragraph for each of:

1. Contextualizing why the study method is used
2. Describing the process followed
3. Analyzing the data used
4. Describe the libraries, hardware, and languages used

Results - [\(the moves\)](#)

Some more details

It forms a location statement, which identifies the tables or figures and indicates their content, and a highlighting statement or statements, which point out and describe the relevant or significant data. For each result, [from phrase bank](#), take a sentence from each of:

1. Referring back to the research aims or procedures
2. Referring to data in a table or chart
3. Highlighting significant data in a table or chart

Then possibly a sentence or two for:

1. Stating a positive or negative result
2. Highlighting exciting or surprising results

Discussion- [\(the moves\)](#)

First [from phrase bank](#):

1. First sentence - What is 'the answer' to the problem
2. Second sentence and on - justify your answer.

Include related work from literature. For each significant result, do one or more of the:

1. Providing background-related work
2. Restating, contrasting, and explaining result(s) in context
3. Advising cautious interpretation of findings
4. Suggesting general hypothesis

Conclusion - [\(the moves\)](#)

Conclusions serve two functions. First, summarise and bring together the main ideas; second, give a final judgement on the study. Finally, comment on suggestions for improvement and speculate on future directions [from phrase bank](#).