Writing Academic Papers: Where to Start

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MDPI English editing
Outline

• Getting started
• Working collaboratively
• Editing your work
• Grammar tips
Outline

• Getting started
  • Working collaboratively
  • Editing your work
  • Grammar tips
Make an Outline

• Is it a research paper?
  • Introduction
  • Materials and Methods
  • Results
  • Discussion
  • Conclusions
Is it a review paper?

- Background
- Theme1, theme 2, theme3,…
- Conclusion

Collect groups of references into themes.

https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3715443/
Add Some Structure

• Define subsection headings and list the main points

1. Introduction
   • Define 3PL
   • Describe how 3PL is applied in practice
   • Missing criteria (business|sustainability)
   • Motivation for research: sustainability
   • Brief description of research
   • Overview of paper structure

• For the results section, list the figures you want to show
Add Some Structure

Ready to start writing!

- You don’t have to start at the beginning.
- Assign sections to different authors.
- Identify where there are missing results.

Title

Introduction

- Motivation: why are citation metrics important?
- List citation metrics
- List other kinds of metrics
- Shortcomings of citation metrics (in general)
- Measure of the impact factor
- Describe research presented here and hypothesis
- Structure of paper

Methods

- Written definition of generalized citation metric
- Examples of several instances of citation metrics
- Describe methods for simulating citation data (for each, motivation plus description)
  - Stochastic method
  - Log normal
  - Normal
  - Extreme cases
- Code for simulating metric data
- Code for calculating the metric
- Analysis steps
- Code for analysis
- Source of real citation data

Results

- Show how the metrics differ on some small, contrived sets of citations
- Results of citation simulations
- Link to raw data for citation results
- Link to source of real data and description of features
- Calculation of metrics
  - Metrics analysis
  - Box and whisker plots
  - Table of Pearson correlations
  - Selected correlation plots

Discussion
Example: This is a presentation about English editing. The first in the series seeks to advise authors about how to structure their paper. In particular, it shows how to break down a writing task into smaller, manageable chunks. We sincerely hope it will take away the fear of writing and make it an enjoyable experience. Following this method should add value to the research and lead to clear, well expressed articles.
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• Editing your work
• Grammar tips
Working Together

“Many hands make light work”

“Too many cooks spoil the broth”
Working Collaboratively

- Talk about authorship before you start writing
- Divide up the work
- Work to people’s strengths
- Set and keep to deadlines
- Use collaborative tools
Collaborative Tools

Shared file system
Cloud services: Dropbox, Google Docs, Overleaf
Collaboration tools: Slack, Github

Disclaimer: MDPI does not endorse any specific tools or websites.
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How to proofread

Set the language
Keeping track

Word: Use ‘track changes’

LaTeX: use a comparison tool (e.g. Kdiff)

Use Git (yes, really!)

Name files logically, e.g. with date: 20170305
How to Edit Work

**MOTIVATION SECTION MISSING: WHY DO THIS EXPERIMENT?**

Acridine orange is a small molecule used as a fluorescent deoxyribonucleic acid (DNA) dye, especially for whole cells. It has the advantage of fluorescing differently for single- and double-stranded DNA, so it was proposed that it may produce differential fluorescence for the different conditions used here.

LD was measured for CT and ML DNA with no salt and 1 mM acridine orange present, using the MOS-450 spectrometer (manufacturer?? figure 2.9). If acridine orange was sensitive to single-stranded regions in double-stranded DNA we would expect to see different spectral shapes for the CT DNA (which may have single-stranded regions) and ML DNA (which appears not to). The same spectral shape was seen for both types of DNA. Thus, either this method is not sensitive to regions of single-stranding, or single-stranded regions are not present. A peak at 500 nm was found, which suggests that the acridine orange was bound to the DNA. The apparent DNA peak was shifted to 264 nm, probably by absorbance of the acridine orange in this region.

**Martyn Rittman**

- In what context?
- Which conditions? It isn’t clear.
- Define abbreviation.
- Define abbreviations.
- Acridine orange? Not consistent.
- Vague?
- Could it be confirmed by another method?
How to Edit Work

• Show where the changes are.
• Change text directly (don’t suggest a change in comments).
• Make comments clear.
• Consider separate read-throughs for content and grammar.
• Don’t take criticism personally!
Tips

• Use the spellcheck option.
• Check for double spaces.
• Make sure you use any template or submission guidelines available.
• Use the correct language.
• Ask an English-speaking colleague to review your work.
Use a spell-checker

Here is some text with a speling mistake included.

This sentence is grammatically. not correct.

• Misspellings are underlined in red.
• Grammar errors are underlined in blue.
Use a spell-checker

Here is some text with a spelling mistake included.
This sentence is grammatically.

• Right-click to see options
Read your work!

Although association preferences documented in our study theoretically could be a consequence of either mating or shoaling preferences in the different female groups investigated (should we cite the crappy Gabor paper here?), shoaling preferences are unlikely drivers of the documented patterns both because of evidence from previous research and inconsistencies with a priori predictions. Our methods closely followed those of published mate choice experiments in this system (Tobler et al. 2009a,b; Plath et al. 2013),
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Grammar and punctuation matter!

Let’s eat grandma.
Let’s eat, grandma.
Semicolons

- Avoid them where possible!
- Use only in lists where some items have commas.
- Replace with a comma or full stop.

https://www.youtube.com/watch?v=th-zyfwDdl
Capitalization Of headings

Different options, check the journal:

• Title Case With All Words Capitalized
• Title Case with Some Words Uncapitalized
• Some titles just have the first word capitalized
• Words Like *Escherichia coli* Should Never Be Capitalized

In MS Word, use Shift-F3 to toggle between cases.
Did I define that correctly?

- Figures
- Tables
- Supplementary material
- Appendixes

Should be mentioned in the main text. Use the correct style (Fig. 4, Figure 4, figure 4).
Defines an ongoing activity up to a certain time.

- × Papers should be submitted until Wednesday
- ✓ Papers should be submitted before Wednesday
- ✓ Submission is open until Wednesday
The definite article

http://www.englishteacherhelene.com/grammar-when-not-to-use-the-definite-article/

Talking in general terms:
We analysed carrots

Undefined single case:
We analysed a carrot

Unique instance:
We analysed the carrot
Tenses in methods

• Actions you took are in the past tense:
  • Samples from five rivers were taken
  • The results were analysed using a complex algorithm

• Established facts should be in the present tense:
  • Our results show that pollution levels were high
  • Smoking causes cancer
Besides, however, on the other hand...

They can often be removed! Keep your writing simple.

❌ We recorded all information online. Besides, it was published in a journal

✔️ We recorded all information online and published it in a journal.

Besides, however, therefore, thus,…
Did I define that abbreviation/symbol?

T.L.A. • Define all abbreviations the first time you use them in the text of abstract.
• Define all symbols used in equations.
• Ensure format (font, italics, bold) is matched between equations and main text.
Show/shown/showed

The past participle of ‘show’ is ‘shown’:

- Other experiments have shown that this is common.

Simple past:
- Other experiments showed that this is common.

- Other experiments have showed that this is common.
Like can often be replaced with ‘such as’:

• There are many examples, like those in Johnson et al.
• There are many examples, such as those in Johnson et al.
Get some agreement!

Verbs should agree with the subject. Be careful in complex phrases:

❌ The copper and manganese was heated.
✔️ The copper and manganese were heated.
What is allowed

‘Allow’ should not be used without an object:

✗ It allows to calculate the result.

✓ It allows us to calculate the result.
It is broadly accepted that data is plural:

- The data was collected in February 2010.
- The data were collected in February 2010.
In the last years...

- In the last years
- In recent years
Punctuation of equations

Formulas/Equations should have commas at the end or periods, depending on the next part of the content.

The equation
\[ x^2 - y^2 = r, \]
where \( x \) and \( y \) are positive integers and \( r \) is a positive rational number, is widely used in this context, but never
\[ x^2 + y^2 = r. \]
English editing at MDPI

MDPI English Editing Service

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