



Urmia University

How to write great papers and get published

Understanding and benefiting from the publishing process

Presented by: Sepideh Shafaie

Location: Urmia University

Date: April 2019

In the name of God



دانشگاه ارومیه

How to Write a Good Scientific Paper?

Presented by: Dr. Sepideh Shafaie

Spring 2019



Research papers:

The most credible document for specialists.



*Writing is 90% procrastination
and 30% panic.*

Workshop Outlines:

- Getting started (planning)
- Structure & organization of a manuscript (Title, Figure, Citation)
- Picking the right journal
- Cover letter
- Authorship
- Plagiarism
- What an editor looks for?
- Review process
- The ethics & responsibilities before, during and after publication

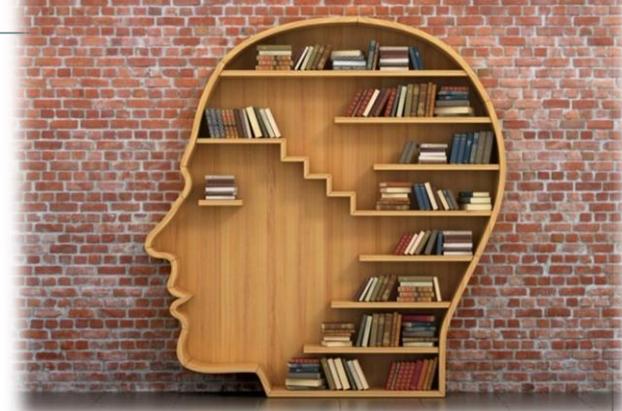
Chapter 1. Getting Started



Why are you here?



The Literature Search



Goal: Evaluate the state of our communal knowledge on a topic before adding to that knowledge.

Be strategic! There is more than **Google**

- Learn what online resources are available at your institute, and learn to search in a clever way.
- Ask your library experts for help.

Do`s and Don`ts

- Do the literature search before performing the research!
- Pay attention to the next most promising papers to read/ Key paper
- Test another keywords
- Up to date references (Ideas, Methods in the world)

A common mistake is to save the literature search until the end of the paper writing process.



Generates spurious citations which are rarely valuable!

Databases and Databanks



Find out **what is being cited** and **from where!**

Find out **who is being cited!**

Questions to answer before you write

Think about WHY you want to publish your work.

- Is it new and interesting?
- Is it a current hot topic?
- Have you provided solutions to some difficult problems?
- Are you ready to publish at this point?

If all answers are “Yes”, then start preparations for your manuscript.



What type of manuscript?

- Full articles/ Original articles
- Letters/ Short communications/ Case reports
- Review papers/ Perspectives



Sometimes outsiders see things more clearly than you.

Chapter 2.



Language and Style

How to improve your writing?

Learn to change your **STYLE!**

1. Mastering words and grammar
2. Clear and accurate sentences
3. Paragraphs that communicate complex thoughts well
4. Finally an organized whole that contributes to the accumulated knowledge of science!



The Scientific Style follows 5 Criteria:

1. Truth
2. Presentation
3. Scene
4. Cast
5. Thought and Language

Truth



There is no absolute truth in the world!

We can only comment on the accuracy of our scientific models.

The writer assumes no privileged access to truth.

Presentation

The most valued attributes are accuracy, clarity, concision, and grace.



Time

Respect

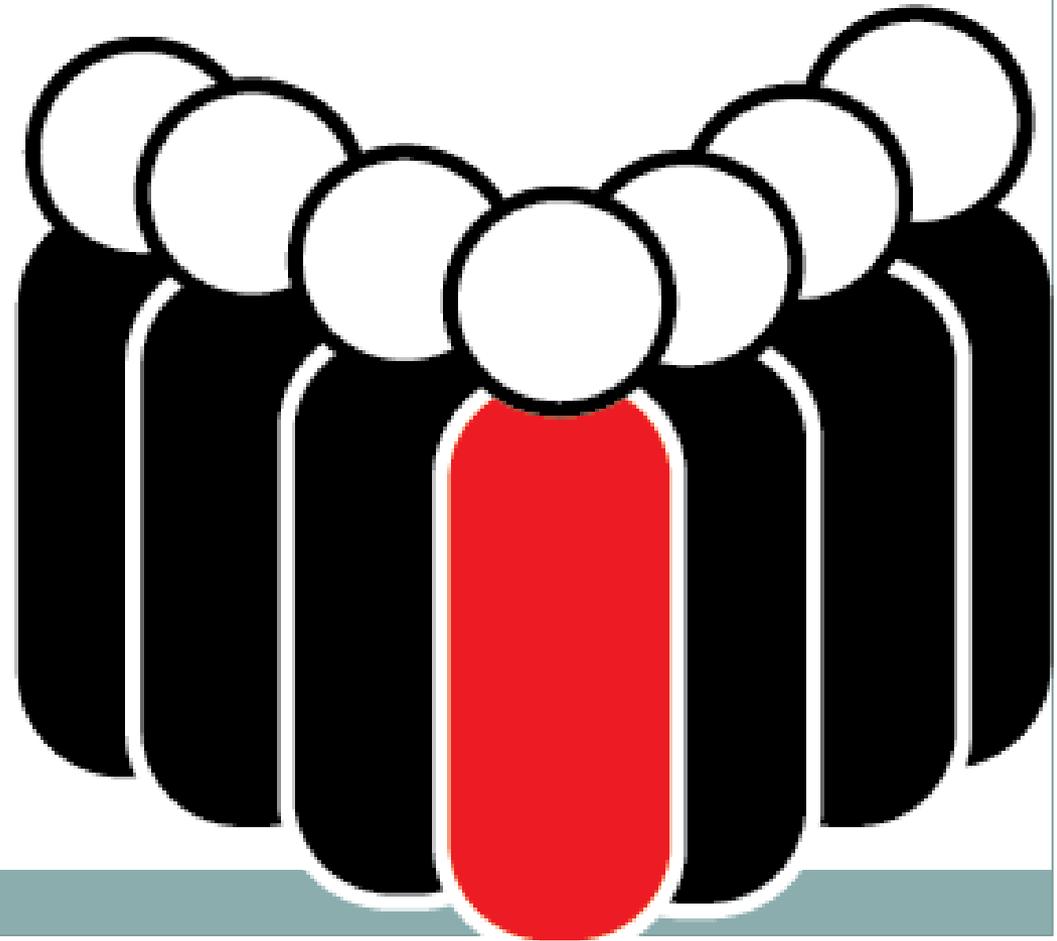
Scene (Integrity)



Cast

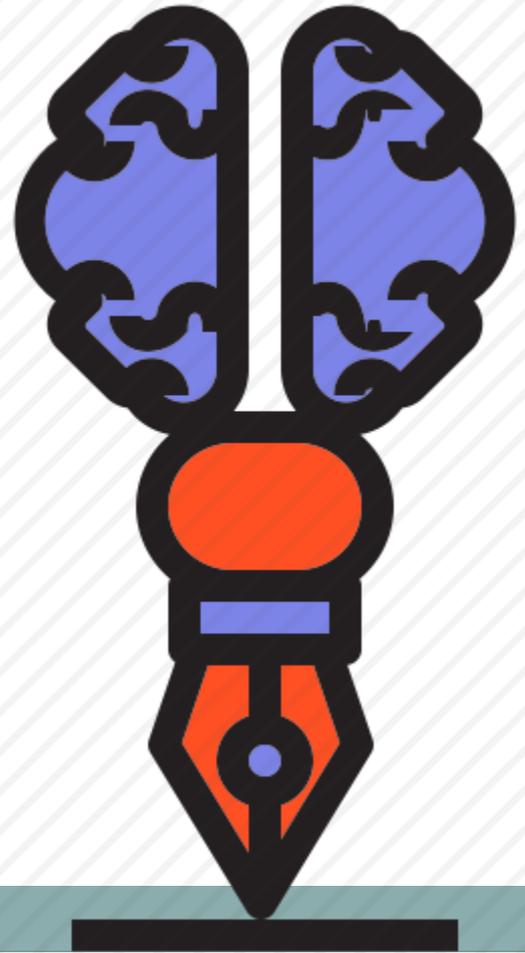
They are students & sometimes experts.

Writer and reader are peers.



Thoughts & Language

Language is fully up to the task of representing even the most complex concepts with accuracy and precision.



Acronyms

ISI (Institute for Scientific Information)

- Speed up the reading ability
- Ease the understanding of the content

Can I use acronym?

Acronyms

1. Never use in titles (like CD)
2. Avoid acronyms in the abstract
3. Always spell out the acronym the first time it is used
4. Do not repeat the definition again
5. Standard abbreviations for measurement units/ chemical names
6. Multilayered acronym (**VHDL = VHSIC hardware description language**)
7. Some commonly used acronyms become their own words (laser, sonar)



Chapter 3



Structure and Organization

CREATIVE WRITER



Secret!

The standard structure of a scientific paper

IMRaD format

Two main advantages:



Writer



Reader

• Title and Authors

• Abstract

• Keywords

• Main text (IMRAD)

▪ Introduction

▪ Methods

▪ Results

▪ And

▪ Discussions

• Conclusion

• Acknowledgement

• References

• Supplementary Data

A new *Pardosa* species from northern Iran (Araneae, Lycosidae)

SEPIDEH SHAFaIE¹, OMID MIRSHAMSI^{1,2,7}, MANSOUR ALIABADIAN^{1,2},
MAJID MORADMAND³ & YURI M. MARUSIK^{4,5,6}

¹Department of Biology, Faculty of Sciences, Ferdowsi University of Mashhad, Mashhad, Iran

²Research Department of Zoological Innovations (RDZI), Institute of Applied Zoology, Faculty of Sciences, Ferdowsi University of Mashhad, Mashhad, Iran

³Department of Biology, Faculty of Sciences, Isfahan University, Isfahan, Iran

⁴Institute for Biological Problems of the North, Portovaya Street 18, Magadan 685000, Russia

⁵Department of Zoology & Entomology, University of the Free State, Bloemfontein 9300, South Africa

⁶Zoological Museum, Biodiversity Unit, University of Turku, FI-20014 Turku, Finland

⁷Corresponding author. E-mail: mirshams@um.ac.ir

Abstract

A study of *Pardosa pontica* (Thorell, 1875) in Iran indicates two distinct morphospecies. A detailed comparison of these morphospecies and types of *P. pontica* reveals that populations from Mazandaran, Golestan and North Khorasan Provinces of Iran and Balkan Welayaty of Turkmenistan belong to a newly described species, *P. mirzakhaniae* sp. n., and populations in western and easternmost Iran belong to *P. pontica*. Although the two morphospecies differ in colour, size and spination, no molecular differences in 16S rRNA and COI were detected.

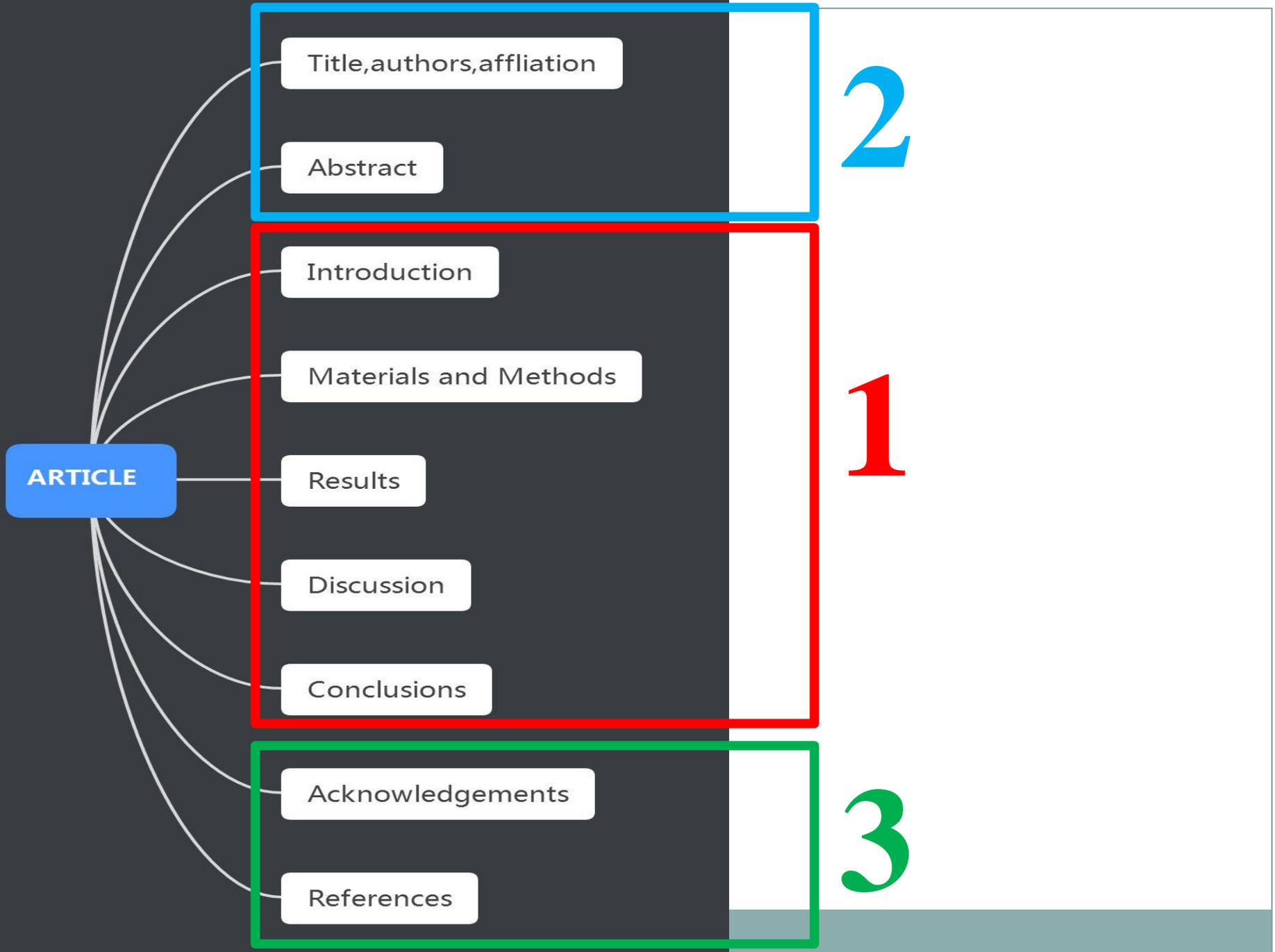
Key words: wolf spiders, Aranei, Pardosini, *monticola*-group, Middle East, Mazandaran, redescription

Introduction

Pardosa C.L. Koch, 1847, with 550 species, is the third largest spider genus and the largest among Lycosidae (World Spider Catalog 2017). It is distributed all over the world except Australia (Kronstedt & Marusik 2011) and has highest species diversity in the Palearctic, Nearctic and Africa. *Pardosa* is currently subdivided into about 30 species groups (Zyuzin 1979; Dondale & Redner 1990). One of the largest species groups is *Pardosa monticola*, with about 34 species distributed in the Holarctic (Marusik & Fritzen 2009, Ballarin *et al.* 2012, Marusik *et al.* 2012). Although the group is well-defined by the shape of copulatory organs (Zyuzin 1979), it is difficult or even impossible to separate species within the group by the shape of male palp or epigyne (Ballarin *et al.* 2012, Marusik *et al.* 2012). The male palp is uniform in the *monticola*-group, and by contrast the shape of epigynal septum is highly variable within the same species. Despite such problems, the *monticola*-group has been well-studied in Caucasus (Zyuzin & Logunov 2000), Central Asia (Ballarin *et al.* 2012) and Iran (Marusik *et al.* 2012).

Roewer (1955a) was the first who reported *Pardosa* in Iran. Among four species mentioned in this paper, only *P. agricola* (Thorell, 1856) belongs to the *monticola*-group. Further species new to the country were recorded by Marusik *et al.* (2012) and Zamani (2015). Currently, 21 *Pardosa* species are known from Iran (Shafaie *et al.* 2017); seven of them belong to the *monticola*-group.

Pardosa pontica (Thorell, 1875), belonging to the *monticola*-group, is the most widespread species of the genus in Iran. It is known from western (West Azerbaijan Province) to easternmost Iran (Razavi Khorasan Province). While studying specimens apparently belonging to this species, we noticed differences in the colour pattern between different populations. Therefore, we conducted a detailed examination of somatic characters and the shape of the copulatory organs as well as used molecular data to compare the morphospecies. Results indicate that the populations from Mazandaran, Golestan and North Khorasan Provinces of Iran and Balkan Welayaty of Turkmenistan belong to a new, undescribed species, which is described here.



ARTICLE

Title, authors, affiliation

Abstract

Introduction

Materials and Methods

Results

Discussion

Conclusions

Acknowledgements

References

2

1

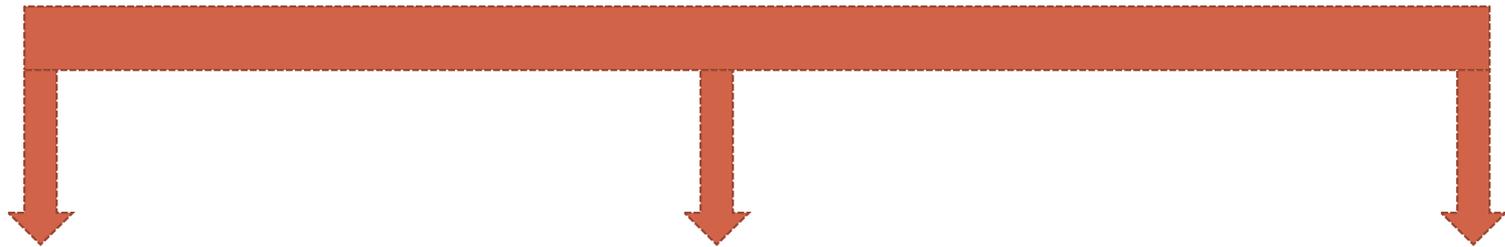
3

1. Introduction

What is the paper about & **Why** should the reader care?

Motivating part to read the following.

It starts with the general and then moves to the specific.



Make a territory

Make a niche

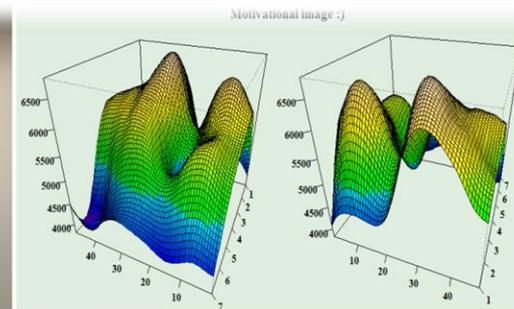
Occupy the niche

Some common pitfalls in writing an introduction!

1. Providing unnecessary background information
2. Exaggerating the importance of the work/ research questions



2. Methods



Theory

It describes how the results were generated (**Sufficiently detailed**).

- Not require step-by-step instructions (reference to prior papers)!
- Standard or well-established methods, naming the method may be sufficient!
- New methods (a much more detailed description)!

A good method section should describe:

- What was done and how it was done?
- Why was this method chosen?
- Statistical considerations (sampling- analyzing methods)
- Describe the data-reduction procedures

Pitfalls



Short with no details/ Even rarely explain why this method?

- Nobody reproduces other people's work anymore!
- Some researchers may not want their results to be reproduced.
- Some of them may not want the validity to be questioned.
- Others may want to hide necessary details for commercial reasons.

Or so long method section!

3. Results & Discussion

How to write this section?

Moving from the specific to the general, short using figures, tables and graphs (to use less words).

Why do we write results and discussion?

1. Emphasize on a novel results that never published before
2. Answer the questions mentioned in the introduction (Fill the gaps)
3. Compare with other publications results (progress in science)

Pitfalls



- Presenting in chronological order (not logical order)
- Presenting results that are never discussed
- Presenting discussion that does not relate to any of the results
- Ignoring negative results or problems

4. Conclusion

Show **the importance of your results** with evidence.

It should be reader-focused, avoiding all the things like “I” or “we” !



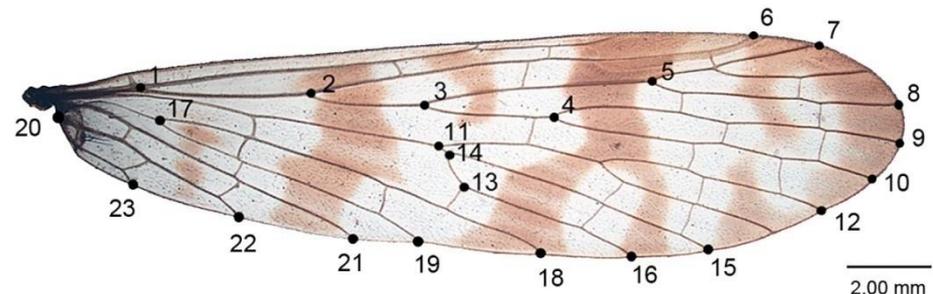
Conclusion characters:

- Short but comprehensive
- Provide the key messages the author wishes to convey
- Provide a future perspective (Roadmap & recommendations).

Pitfalls



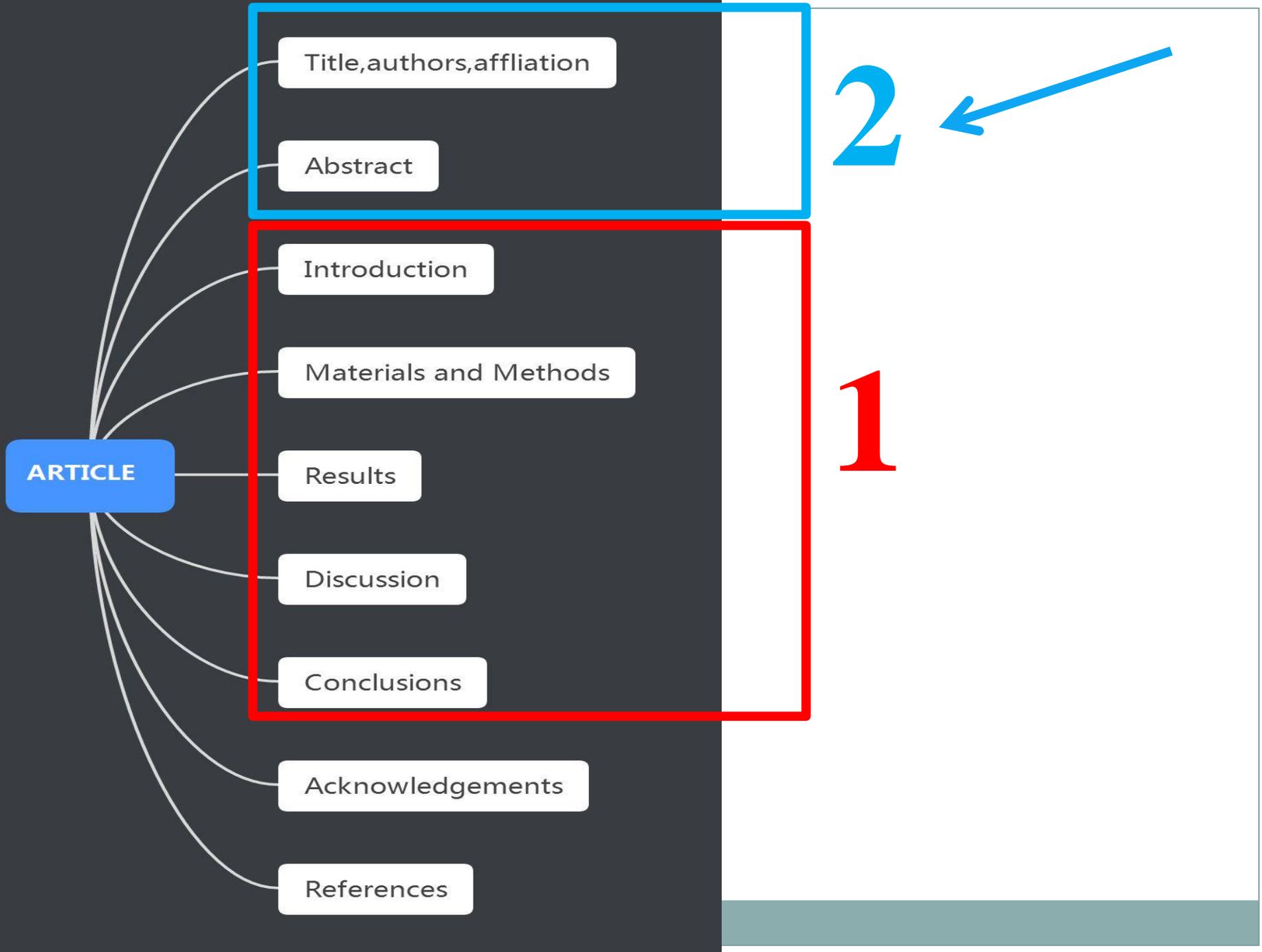
- Repeating the abstract
- Repeating background information from the introduction
- Failing to address all of the questions set out in the introduction
- Repeating the arguments made in the results and discussion
- Introducing new evidence not found in the results and discussion



Chapter 4.



Abstract ,Title & Keywords



ARTICLE

Title, authors, affiliation

Abstract

Introduction

Materials and Methods

Results

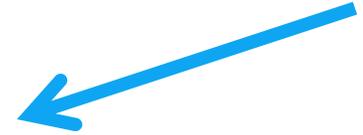
Discussion

Conclusions

Acknowledgements

References

2



1

Online Search – Digital Library



Title

Attract Reader

Abstract



Prevent Mismatching

A wooden signpost with a brown post and a semi-circular top, set against a light green background. The signpost has a large orange arrow-shaped sign attached to it. The sign contains the text "Finding True Readers" in white. At the base of the post is a dark green silhouette of grass.

Finding True Readers

Abstract



If it has not contain 5 topics



Too wordy abstract

How to write a technical abstract?

The common approach: **The Newspaper Lede!**

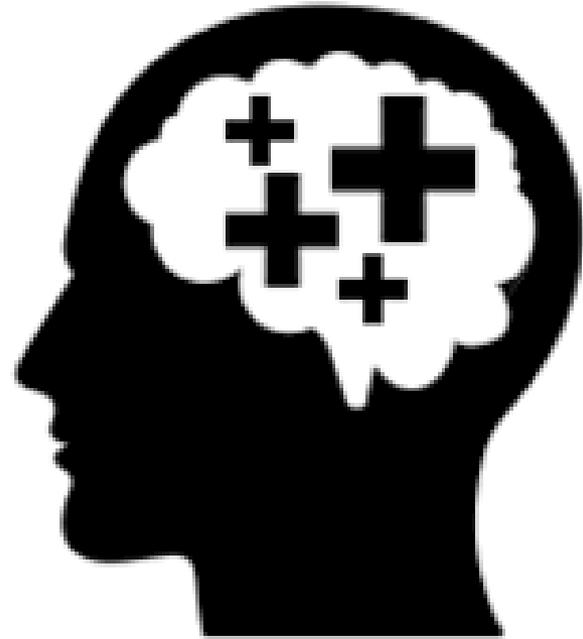


My favorite approach (better): **Structured Abstract!**

Background – Aim – Approach – Results – Conclusion

Advantages of a structured abstract

- More informative
- Easier to read
- Easier to search
- Facilitate peer review
- Are preferred by editors and reviewers



How can I write a structured abstract?

- Write 5 elements accordingly.
- Simply delete the subheadings and combine all into one paragraph.
- Reread this new abstract and change, if needed.

But why do they overemphasize on write after 1st part?

Important Additional Thoughts on Abstracts

There is a 3-part test which should be applied to your abstract:

- Can all of the information found in the abstract also be found in the body of the paper?
- Is all of the information in the abstract consistent with the body of the paper?
- Is all important information of the paper found in the abstract?



DOs



DON'Ts

- Brief, informative and independent
- No citations
- No abbreviation or acronyms
- No figure, graph or table
- Do not use the words which need to explain
- Pay attention to your readers and the journal scope (Optic ...)

Title

Once the abstract is finished, it is time to write the title.

It is probably impossible to define a universal procedure for creating a good title.

Guidelines:

- Should reflect the aim and approach of the work
- Maybe include the background
- Rarely use results and conclusions
- As specific as possible and describing the full range of the work
- Attract readers to cite your article.

A good test for your title is to answer these questions:

- Does the title of your manuscript reflect the whole topic?
- Is it comprehensive, useful and special enough?
- Would someone be motivated to read the whole paper?

Be clever but avoid being overly clever with the title.

Always pay attention to the international audience.

The overall goal should be a title that is clear and informative.

Keywords



In an “electronic world”, keywords determine whether your article is found or not!

Secret to choose the best keywords:

Write good abstract, title and then choose proper key word!

Effective approach:



Chapter 5.



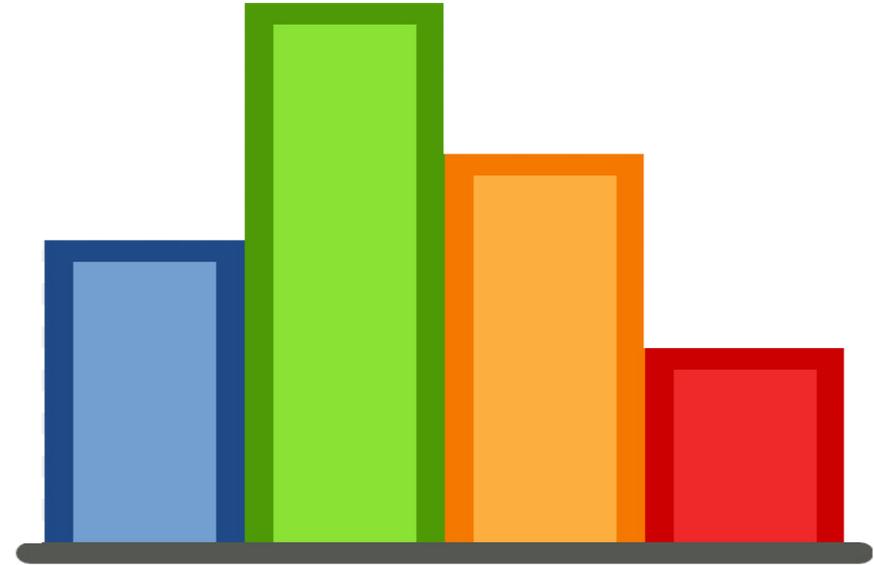
Figures, Graphs and Tables

Fewer words, more data!



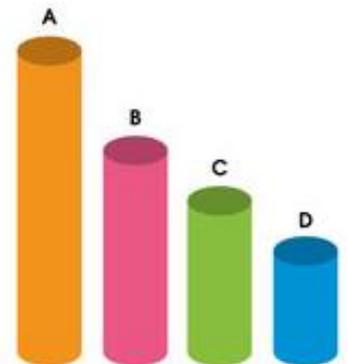
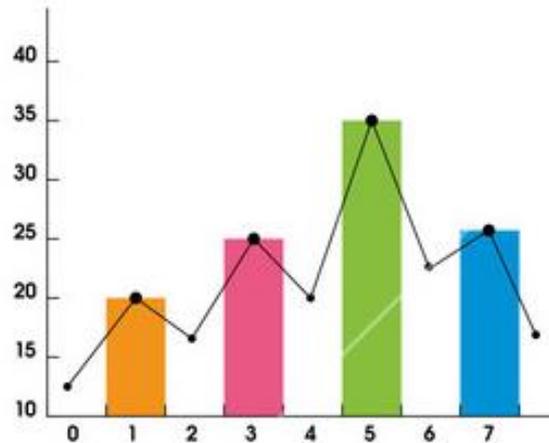
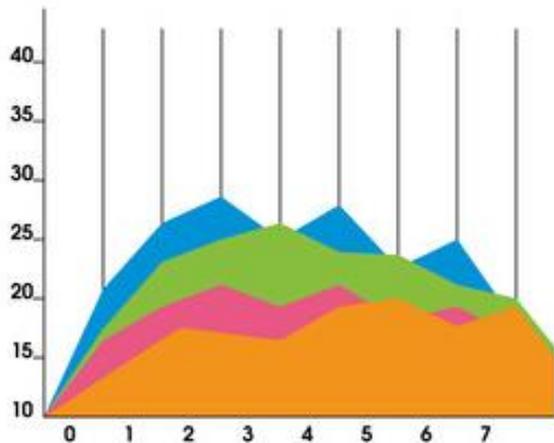
The goals of using figure, graph & table

1. Document the data
2. Make comparisons
3. Integral part of the tale
4. Allow for inferences of cause and effect
5. Integrate with the text to enhance the overall communication of the paper



5 steps to create a graphical display

1. Choose the data to be presented
2. Define the message to be conveyed
3. Pick a style of graph that supports the message
4. Construct the graph seeking clarity
5. Revise it until it is right



12a

0,2 mm

13a

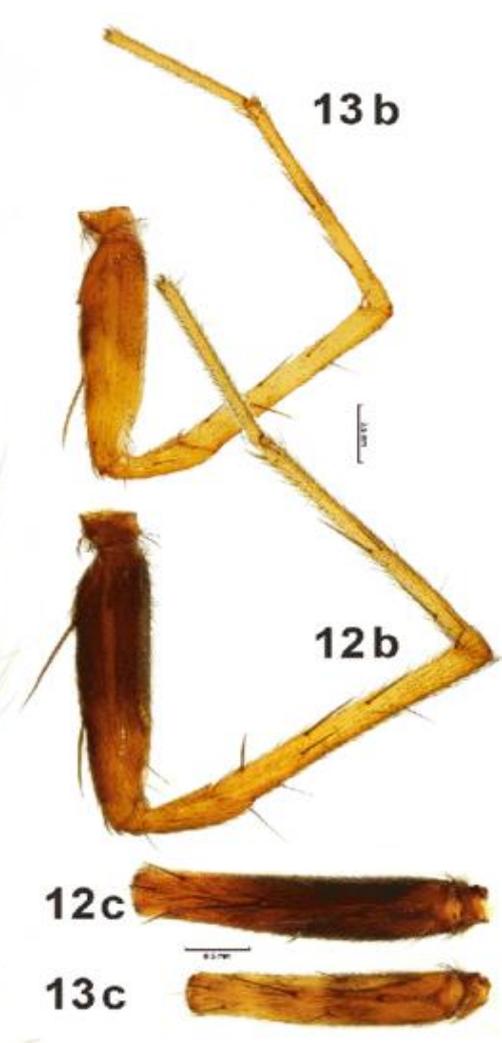
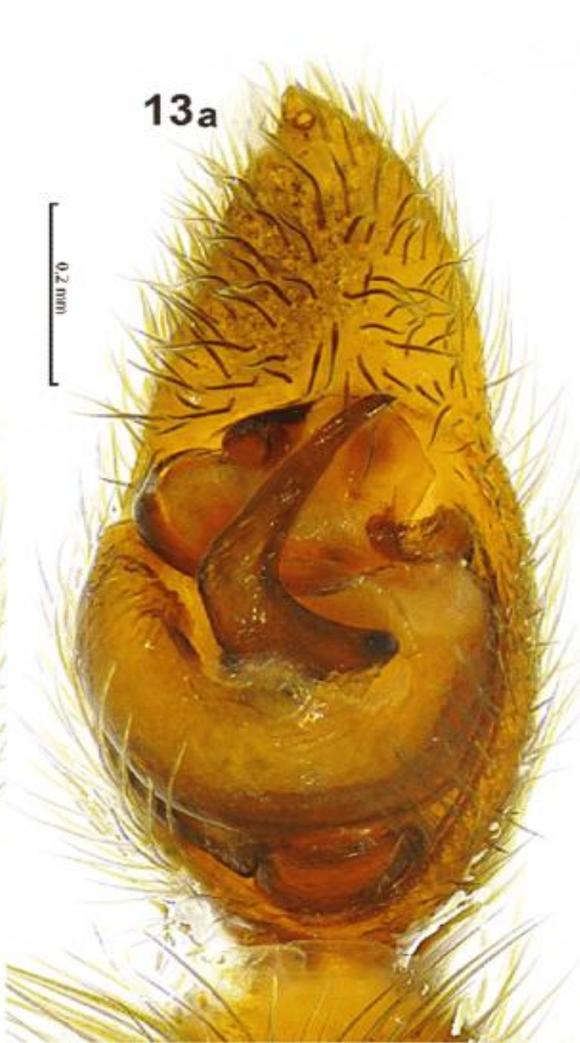
0,2 mm

13b

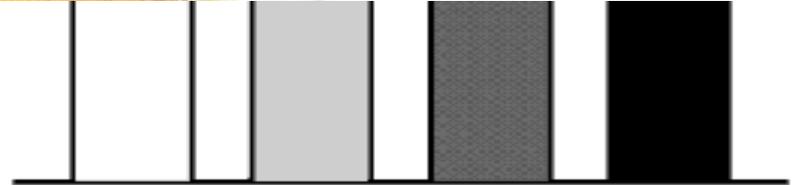
12b

12c

13c



Poor



Good

Always read the journal guideline!

Goal of using tables: Compare the data

Pay attention to multidimensional datasets.

They should be comprehensive enough.

Title and captions are so important.

Task 1:The table below shows the percentage of the population by age groups in one town who rode bicycles in 2011.

Age group	Female	Male
0 – 9	51.3	50.3
10 – 17	42.2	24.6
18 – 39	17.1	9.7
40 – 59	12.3	8.0
60+	18.5	13.2

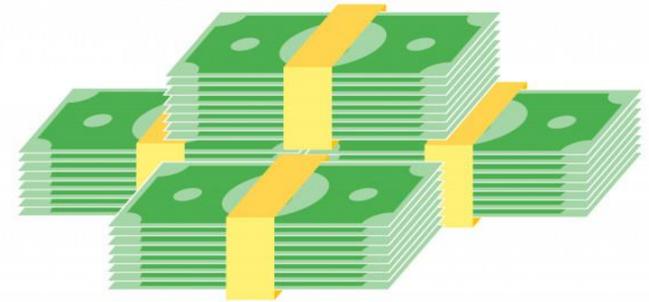
Chapter 6.



Acknowledgment

Acknowledgments

Thanks for who helped you (Organization, person, money source).



Chapter 7.



Citations

Citation (A kind of Dataset)

Online or Printed Peer review Journals

Importance of previous works as a powerful dataset

Journals, Texts, Conferences, Dissertations, News papers, Web sites

No Universal format (APA, Harvard, ...)

The main goal of citation:

Providing a comprehensive scientific source!



The goals of citation



1. Enable the readers to do critical analysis and decide
2. Establish web of specialists and connections
3. Inform the owner of this idea or organization
4. Provide examples of alternate ideas & data to compare
5. Acknowledge and give credit to sources relied and intellectual honesty

Why the citation is so important?

Think about master, PhD students or specialists!

Ask yourself:

Does this citation give enough credit to my paper or



And also the credit of a citation gain or lost by your paper!

The Problems linked to Citation

1. Verify (**34-67% major and minor mistakes**)
2. Spurious citations
3. Biased citations
4. Self-cites
5. Excluding contrary evidence

Chapter 8.



What an editor looks for?

Rejection

The most horrible thing for an author!



A paper must meet four important criteria:

1. Scope
2. Quality
3. Novelty
4. Significance



Chapter 9.



Picking the right journal

which journal to submit?

- ❑ Communication level
- ❑ Journal prestige
- ❑ Acceptance rate
- ❑ Review process
- ❑ Publishing time



Avoiding the wrong journal





BE

CAREFUL

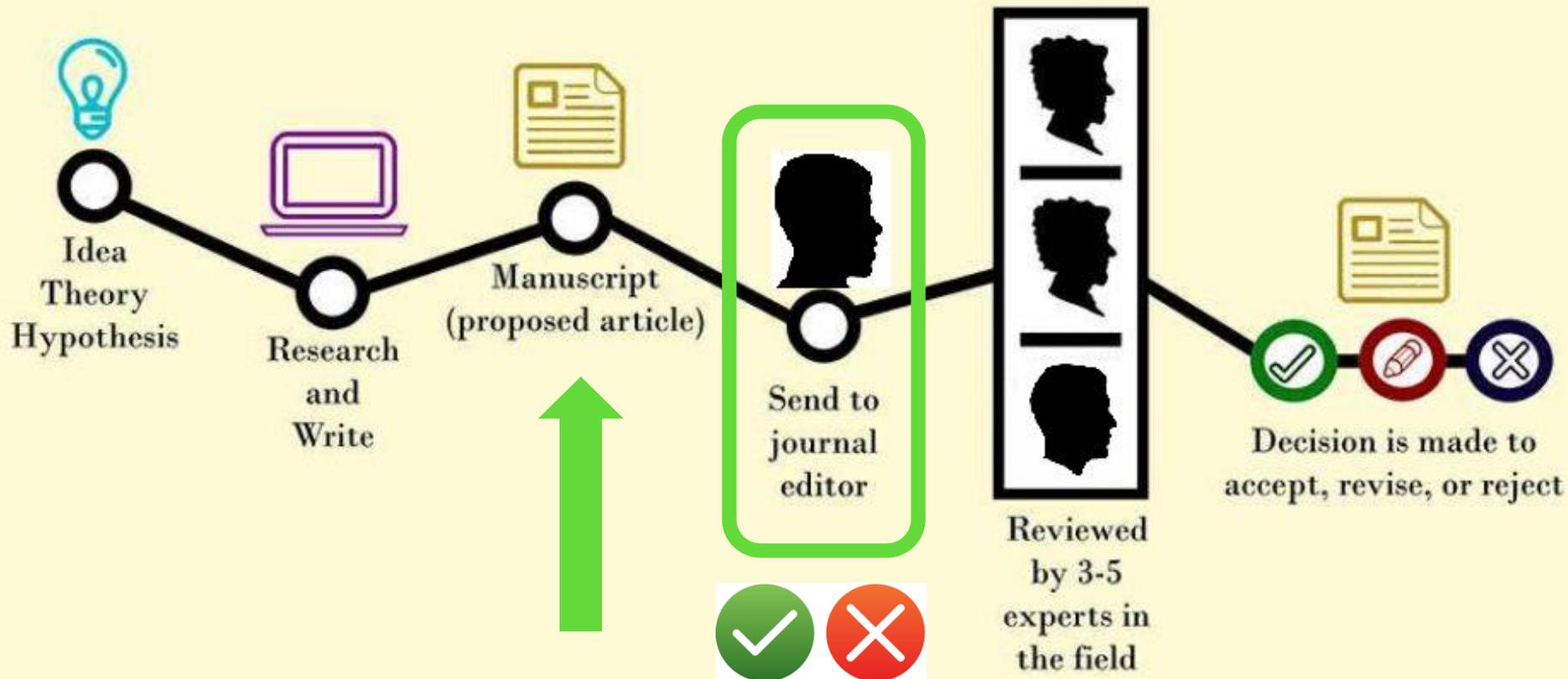
Chapter 10.



Cover letter

The Purpose of the Cover Letter

The Peer Review Process



Suggested reviewers

Please enter the name and e-mail of up to 3 possible reviewers.

A rich text editor toolbar with various icons for editing text. From left to right, the icons are: a pair of scissors (cut), a document with a plus sign (insert), a document with a plus sign and a yellow arrow (paste), bold (B), italic (I), underline (U), bulleted list, numbered list, link, unlink, help (question mark), HTML, a document with a plus sign, and a tree icon with a hand cursor.

Save and continue

Cancel

* Denotes required field

Chapter 11.



Review Process

What is Peer Review?

Peer review is defined as “the critical assessment of manuscripts submitted to journals by experts who are usually not part of the editorial staff.



The Goals of Peer Review

1. Helping editors (filtering bad papers)
2. Helping authors (quality)
3. Helping readers to read high quality papers



Poor Review

- ✚ Critic review with no details
- ✚ Accept or decline with no challenge

Responsibilities

- 1. Author** (unpublished, overlap, co-author`s confirmation, choose the best journal and manuscript, check the guideline & fees)
- 2. Editor** (clear editorial process, respectful, non-conflicted editor, deadline, choose on-time reviewers, highest ethical standards)
- 3. Reviewer** (inform editor for any problem, be on-time, professional, documented evidences, keep confidential)

Chapter 12.

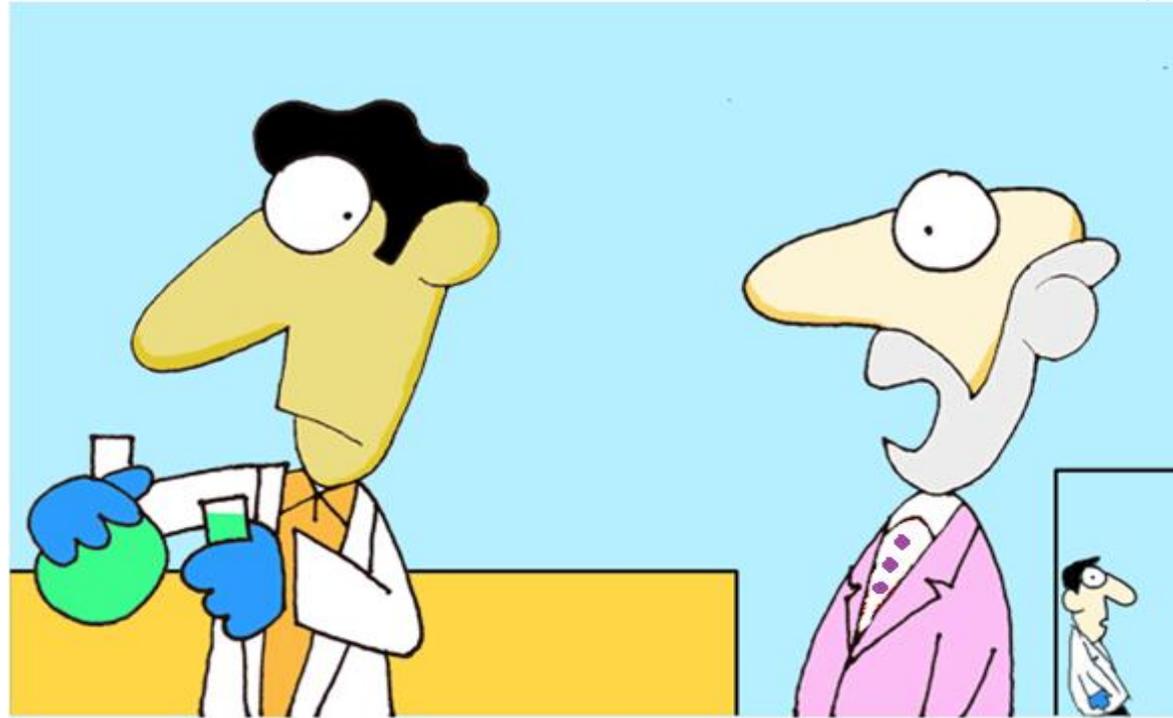


The ethics of scientific papers

The primary ethic of scientific publication

Writing accurate, informative & clear is the first rule!

- Prevent generating more advanced results by others
- Commercial interests
- Competitive reasons
- Hide the faults



“No, it’s my wife’s turn to be the first author on your paper.”

Author responsibilities

Before	During	After
Ethical research	Treat respectfully	Reply all questions
Accurate & clear writing	Reply when you are refreshed	Share the data
No plagiarism	Be thankful for comments	Organize & archive
Original paper	Reply all comments	
Co-author confirmation	Co-author confirmation	
The best journal	No New Journal	
Journal guideline		
Check the fees		

Chapter 13.



Plagiarism

Plagiarism

Major & minor plagiarism

A sloth and lazy person!



Plagiarism types

1. Copying another`s ideas
2. Copying another`s images



Plagiarism types

3. Copying another`s words

4. Duplicate publication or self- plagiarism





Questions?



Or for questions later, please contact

sepideh.shafaie@mail.um.ac.ir