Scientific writing skills workshop

Introduction to publication process

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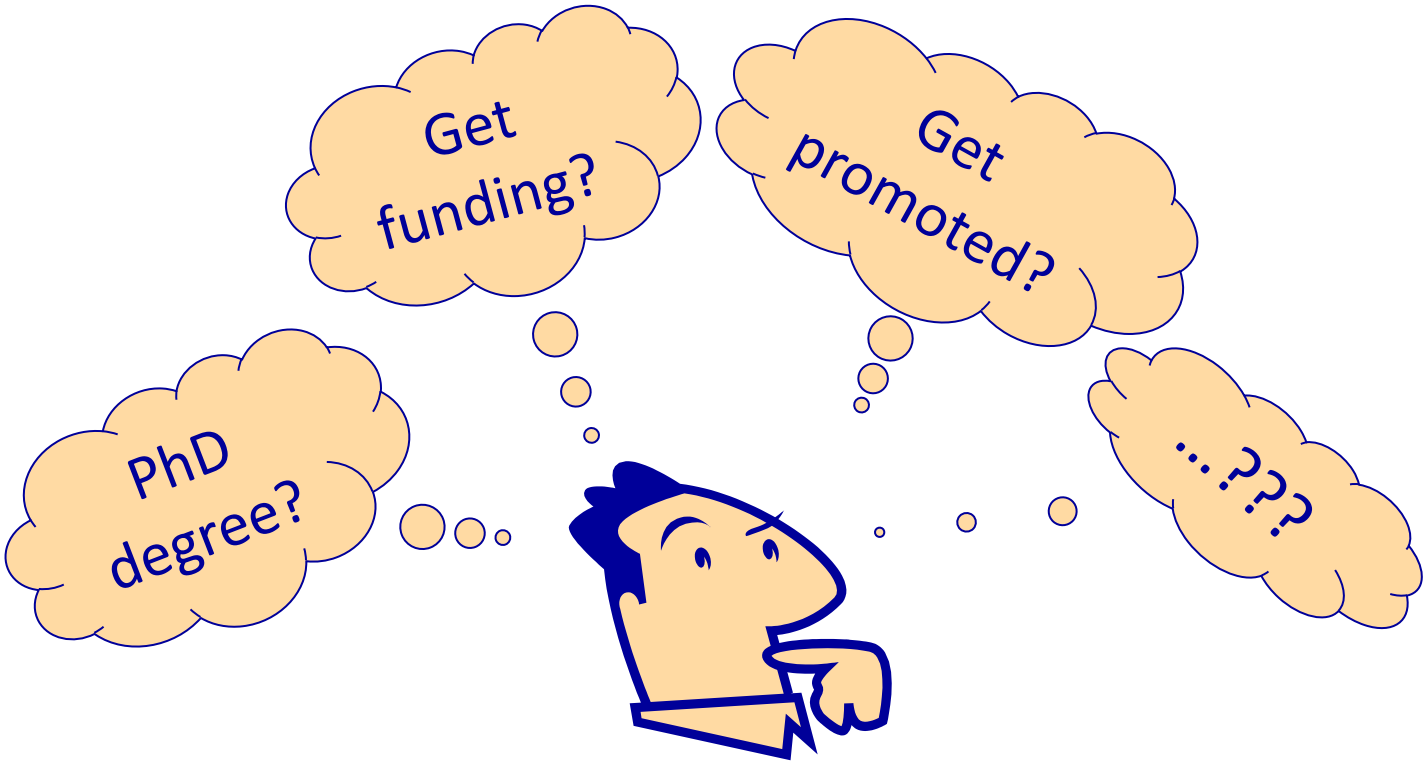
1. Why should you care about scientific writing?
2. What does it take to publish?
3. Is it difficult to write?
4. Structure of the workshop, course, and practical.
5. Teaching methods – “Inverted approach”. (How much effort is it going to take to pass?)
6. Title and abstract

What are your reasons for publishing?



However, editors, reviewers, and the research community DO NOT care about these reasons.

Why do research papers get published?

Because they contribute
something worthy to the overall
body of knowledge.

- A scientific experiment is not complete until the results have been published.

- A scientific paper is a written and published report describing *original research results.*

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A good manuscript is needed

A good manuscript makes readers **EASILY** grasp its ***scientific significance***.

- **Content is essential**
  - Contains a scientific message that is clear, useful, and exciting
- **Presentation is critical**
  - Conveys the authors' thoughts in a logical manner such that the reader arrives at the same conclusions as the author.
  - Constructed in the format that best showcases the authors' material, and written in a style that transmits the message clearly

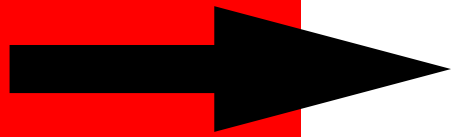
Is it time to publish?

Check the originality of the idea at the very beginning of your research.

- Have you REALLY done something new and interesting?
- Is there anything challenging in your work?
- Is the work directly related to a current hot topic?
- Have you provided solutions to any difficult problems?

If all answers are “yes”, then start preparing your manuscript

- Conduct literature review
- Start the paper
- Conduct study/analyze data
- Organize/summarize results succinctly
- Get early, frequent feedback (in "chunks")
- Formulate your key message
- Apply the "new/useful" test
- Choose your target audience
- Choose your target journal
- Read journal instructions for authors
- Draft (and debug) an abstract
- Write the first draft
- Master the literature
- Relearn, rethink, rewrite
- . . . and rewrite and rewrite
- How long?
- Critically review and finalize the abstract
- Attend to the details
- Submit article to target journal
- Have a Plan B
- Mark your calendar



You need to "OWN" your project!

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“If you don't have time to read, you don't have the time (or the tools) to write. Simple as that.”
— **Stephen King**

“Read, read, read. Read everything -- trash, classics, good and bad, and see how they do it. Just like a carpenter who works as an apprentice and studies the master. Read! You'll absorb it.
Then write. If it's good, you'll find out. If it's not, throw it out of the window.”
— **William Faulkner**

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“Substitute 'damn' every time you're inclined to write 'very;' your editor will delete it and the writing will be just as it should be.”
— **Mark Twain**

“History will be kind to me for I intend to write it.”
— **Winston S. Churchill**

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“There is nothing to writing. All you do is sit down at a typewriter and **bleed**.”
— **Ernest Hemingway**

“Writing is easy: All you do is sit staring at a blank sheet of paper until drops of **blood** form on your forehead.”
— **Gene Fowler**

KEEP CALM

AND

write something

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Flipped classroom reverses the traditional learning environment by delivering instructional content outside of the classroom (WWW pages of S5040). It moves activities, including those that may have traditionally been considered homework, into the classroom.

Students who are not at the developmental stage required to keep on-task with independent learning may fall rapidly behind their peers.

WHY? – Creativity!

- You should spend at least 15 minutes every day writing.
- You will be required to read several textbook chapters every week.
- You will be required to proof-read manuscripts of your colleagues and submit adequate feedback.

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Title

- Make your title specific enough to describe the contents of the paper, but not so technical that only specialists will understand. The title should be appropriate for the intended audience.
- The title usually describes the subject matter of the article: Effect of Smoking on Academic Performance
- Sometimes a title that summarizes the results is more effective: Students Who Smoke Get Lower Grades

Abstract

- An abstract, or summary, is published together with a research article, giving the reader a "preview" of what's to come. It allows other scientists to quickly scan the large scientific literature, and decide which articles they want to read in depth. The abstract should be a little less technical than the article itself; you don't want to dissuade your potential audience from reading your paper.

Abstract 2

- Your abstract should be one paragraph, of 100-250 words, which summarizes the purpose, methods, results and conclusions of the paper.
- It is not easy to include all this information in just a few words. Start by writing a summary that includes whatever you think is important, and then gradually prune it down to size by removing unnecessary words, while still retaining the necessary concepts.

Nature summary paragraph

How to write good...

1. Avoid alliteration. Always.
2. Prepositions are not words to end sentences with.
3. Avoid clichés like the plague. (They're old hat.)
4. Eschew ampersands & abbreviations, etc.
5. One should never generalize.
6. Comparisons are as bad as clichés.
7. Be more or less specific.
8. Sentence fragments? Eliminate.
9. Exaggeration is a billion times worse than understatement.
10. Parenthetical remarks (however relevant) are unnecessary.
11. Who needs rhetorical questions?

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