

A Brief Guideline on Writing Research paper

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Introduction

Writing a research paper is very different from the kind of writing you may have done in school or university. At school or university, we are assessed by teachers and supervisors. If we write something for our superiors, we may write to satisfy their expectations and to convince them that we know what we are supposed to know. However, when you write a research paper, you are not writing for your teachers or supervisors, but for the world!

The goal of research writing

If you had to write something at school or university, you might have wanted to impress your teacher with your vocabulary, imagination, or mastery of the material. You might have had a mindset to impress.

Writing a research paper is all about communicating your research. Readers of research papers - who may be researchers from anywhere in the world - want to learn and they want to make use of the knowledge they gain. They are not looking to be impressed with big words or grand sentences, which may only distract or annoy them.

Collaborative writing

Publications that are the result of creative writing, such as fiction and non-fiction books, are often authored by a single person. Research papers are outcomes of research studies, which are often done by many

people. So research papers are often authored by more than one person.

If you're working as part of a research team, you may need to collaborate with your colleagues to write a research paper. Some questions to consider:

- How will the writing work be distributed among the authors?
- How will the authors be expected to share drafts of their writing with the team and seek feedback?
- Who will be in charge of putting together the final paper?

Recall the section on authorship in the lesson on ethics for researchers. Every author should ideally have made a substantial contribution to different aspects of the research project, including the writing or revising of the paper.

Dealing with criticism

A research paper is born from an outline or a collection of data, and it ends (hopefully) as a publication in a journal. During this journey, a number of people may review your paper and give you feedback.

A list of potential reviewers is given below.

1. Your research advisor or supervisor
2. The co-authors of your paper, or the people with whom you have jointly conducted your research
3. The editor of the journal to which you submit your research paper
4. Peer reviewers (experienced researchers who are appointed by the journal to review your paper)

All of these people may review your paper! Some of them may point out weaknesses and problematic areas in your research project or in your writing.

Some people find it difficult to deal with such feedback; they may get upset or offended. This is however not a good attitude for researchers to have. They should instead welcome feedback and deal with feedback objectively.

Getting ready to start writing

Getting ready to start writing doesn't mean that you have to open a blank document and write your research paper from start to finish. This is a preparatory stage before you actually write your paper.

Pre-writing activities

Preparing to write, sometimes called pre-writing, can involve a number of activities. Like:

1. Go through the instructions to authors given by your target journal
2. Read published research papers
3. List the key points you want to include in your paper
4. Make an outline with headings and add any data you have

Style manuals

The instructions to authors given by your target journal may ask you to refer to a style manual.

Some examples of style manuals:

- Chicago Manual of Style
- Scientific Style and Format
- ACS (American Chemical Society) Style Guide
- AMA (American Medical Association) Manual of Style
- Publication Manual of the APA (American Psychological Association)

Style manuals are typically books that need to be purchased. They may not be available free of cost.

Using style manuals

If you come across an instruction from a journal that says you need to use a particular style manual, following are appropriate things to do.

1. Find out if your university or department library has the style manual
2. Search online to find out if there is a free version of the style manual
3. If the right style manual is not available in your university/department and needs to be purchased, try to put in a request for the purchase

You don't need to have a personal copy of a style manual, but try to request your university/department library to buy and keep a copy (if they don't have it already).

Improving your writing skills

English is the most common language of research and scientific writing. If a research paper is meant to be read outside the author's linguistic or geographical region, it should probably be written in English.

However, most researchers in the world don't have English as a first or native language. Even those who use English regularly may not be able to write with the clarity and precision that is necessary for communicating research. But there's good news: there are a number of free online resources you can use to improve your writing skills.

For example:

- A Google search for *scientific writing pdf* (<https://www.google.com/search?q=scientific+writing+pdf>) brings up several informative articles and even books, all available as free PDF documents.
- The AuthorAID resource library (<http://authoraid.info/en/resources/>) contains a searchable collection of e-resources on research writing, proposal writing, and other topics.

- Free and high-quality online courses in academic writing or research writing are occasionally offered by Coursera (<https://www.coursera.org/>) and other providers of open online courses.

Getting feedback on your own writing

There is no shortage of free online resources on scientific writing. But it's not so easy to get personalized feedback on your writing.

If you're interested in getting feedback on your writing, try to look for a mentor, for example, through the AuthorAID online mentoring scheme. Experienced researchers and publishing professionals have registered themselves as mentors to provide a voluntary and free service to researchers in developing countries. Mentors often support their mentees in writing up research papers or grant proposals.

Conclusion:

Research writing is the most important means for communicating scientific work. Research and publication complement teaching and training, clinical care, and public health works. There are many reasons for writing. Publication is the most prestigious and productive means of disseminating (spread/disperse) the results of the research. Journal articles reach more readers more rapidly than most other ways of communicating research information. The process of peer review used to select manuscripts for publication is believed to be a screening mechanism that produces articles of higher quality than other ways of choosing what research articles to publish. Publishing in peer reviewed scientific journals is highly encouraged and strongly pursued for academic recognition and career progression. The publication process refines writing skills and give the opportunity to learn from constructive feedback provided by the reviewers. A

published paper is also seen as evidence of your abilities in the methodology as well as data collection and analysis. Paper publication is the key skills that graduate programs look for in applicants. Publication can be listed in the resume or CV which will make it strong. Publications also increases the job prospects.

Scientific publication is an important component of public health practice. Young public health professionals including those from the developing world with limited access to peer-reviewed journals should be encouraged to start writing early and senior professionals, public health associations and institution, and editors of journals should act as role models and provide a continuous support.

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