

Creative Scientific Writing for Publication

“Writing-up Your Research and Critical Writing”

Paul Siegel



The scientific paper

The audience

New knowledge

Logic

Clarity

Conciseness

Comments on scientific writing

Accountability

- faculty student

- multiple authorships

 - senior, ordering, corresponding

- acknowledgments

Type of writer

- creative

- well behaved who follows rules, thus reflecting training and discipline

Multiple submissions – a no-no

How to enhance rejection of your paper

Inappropriate for the journal

A title that has little relation to the text

Failure to state the objective

Summary or abstract that misrepresents
the results

Using confusing abbreviations

How to enhance rejection of your paper

Omitting details of methods not readily available

Ignoring your results in the discussion

Ignoring journal style and format

Nature, Science differs greatly from
Genetics, Animal Science

Inconsistencies between the text and references

Some guidelines

Choose a journal appropriate for your work

Have others critique your paper prior to submission

When designing an experiment, think about where it will be published

- know the literature on the topic and update
 - write or outline the materials and methods
-

Types of papers for original literature

Original scientific paper

Preliminary note

Subject review article

Original scientific paper

Written in such a way that a qualified researcher in the same study area, is able, on the basis of the information given to:

- a) reproduce the experiments and secure the results within limits of experimental error specified by the author
 - b) repeat the author's observations and judge the findings
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Preliminary note

This is when the text contains one or more novel items, but is insufficiently detailed for checking the observation

Subject review article

This type is not publication of “new scientific information”. It is a survey of one particular subject, in which new information already published is assembled and discussed. Good reviews are very valuable.

Writing a paper

Syntax:

Should be simple with words found in an ordinary dictionary. Make certain that neologisms (new word usage) used are part of the international scientific vocabulary; usually write in past tense; 1st vs. 3rd person

Examples of wordiness

perform an analysis

analyze

due to the fact that

because

would seem to imply

implies

found to be in agreement

agreed

in spite of

although

modified from Malmfors et al. (2001)

Confusing words when writing in English

accept (receive)

except (omit)

regime (political)

regimens (protocol, rules)

principle (rule)

principal (main)

between (2 items)

among (>2 items)

allot (assign)

a lot (many)

affect (influence)

effect (result)

then (next)

than (compared to)

The parts

Title

Abstract or Summary

Introduction

Materials and Methods

Results

Discussion

Acknowledgements

References

Tables and Figures

Supplementary Material

Writing – Title

Tells you what the paper is about

Eliminate waste words and have it relevant to the paper
(observations, effect of, studies on)

For a running head be sure to know journal specifics

Writing – Abstract

Should start by describing the problem (objective), follow with approach, key results, and a brief conclusion

Writing – Introduction

Should include brief comments of a historical or critical nature to the subject, and a concise stating of the objective. It is not a long review of the study area.

Writing – Materials & Methods

Describe so others can repeat –

- give sex, numbers, genetic stocks, etc.
for the animals

- provide experimental procedures and
husbandry

- provide statistical procedures and alpha
levels

Check journal style re supplementary items

Writing – Results

Prepare tables and figures
and write from them

State what you found

Writing – Discussion

Point out highlights and
integrate with the literature

Don't go beyond your data

Writing – References

Be sure journal style is followed

Be careful when merging files

Be sure text and reference
sections agree

Writing – Acknowledgments & Authorship

They vary considerably among laboratories. My view is that the individual who writes the first draft is senior (name first) author. Thereafter it may be alphabetical, order of contribution (greatest first), reverse order of seniority, etc. One does not list as an author someone unless their contribution is substantial. They, however, can be acknowledged. Remember, multiple authors share joint responsibility for the paper.

The role of the corresponding author may differ from that of the senior author.

Summary

History has shown that there is no single style across journals –

Namely there are many and in each there will be many potholes.