Writing for Academic Journals

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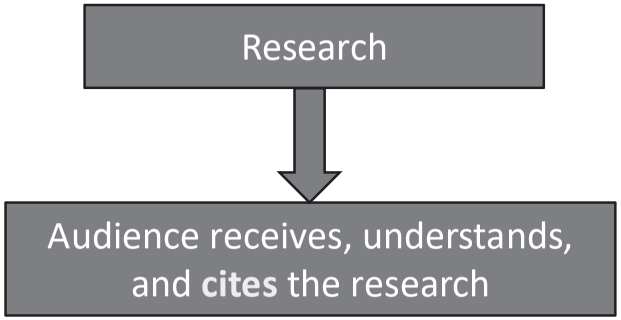
Ask questions or make comments anytime!

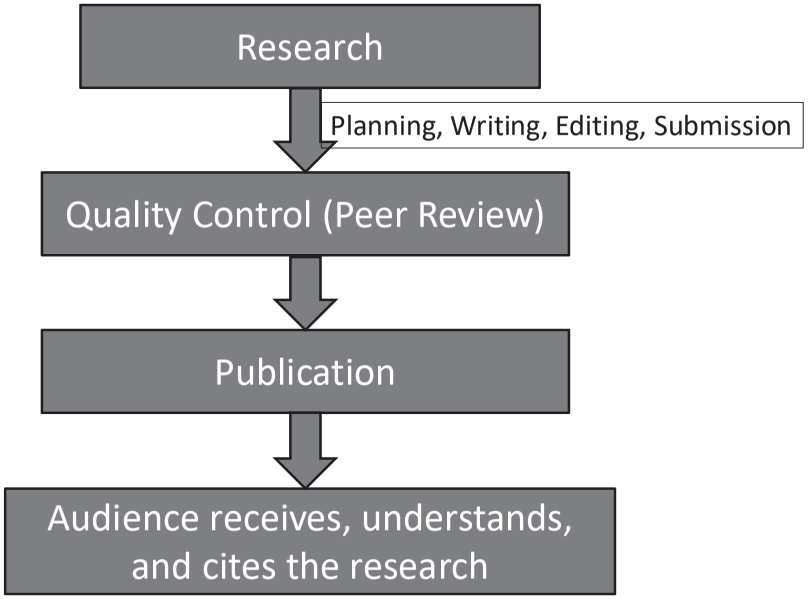
Rick Weisburd

- Born and raised on Long Island (New York)
- B.S. in Biological Sciences from SUNY Albany
- PhD in Oceanography from the University of Hawaii
- Certified *Editor in the Life Sciences* (www.bels.org)
- Israel (2 1/2 years)
- Japan
  - 6 years at 国立環境研究所 Kankyoken
  - 9 years at 筑波大学 Tsukubadai
  - 11 years full time at 株式会社ELSS
    - Plus 10 years part time
- Rick's mission statement: Facilitate improved quality and quantity of Japanese research publication through:
  - Teaching
  - Consulting
  - Provision of high quality editing and translation services
- Rick's motto: **If a job is worth doing, it's worth doing well.**



Research is not **complete** until the results have been both **published and understood.**

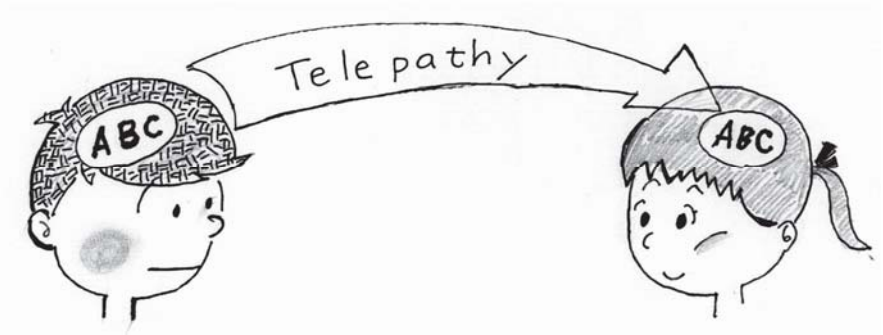
Tip 1: Plan your manuscript when you plan your research and again (Tip 2) after you finishing gathering data

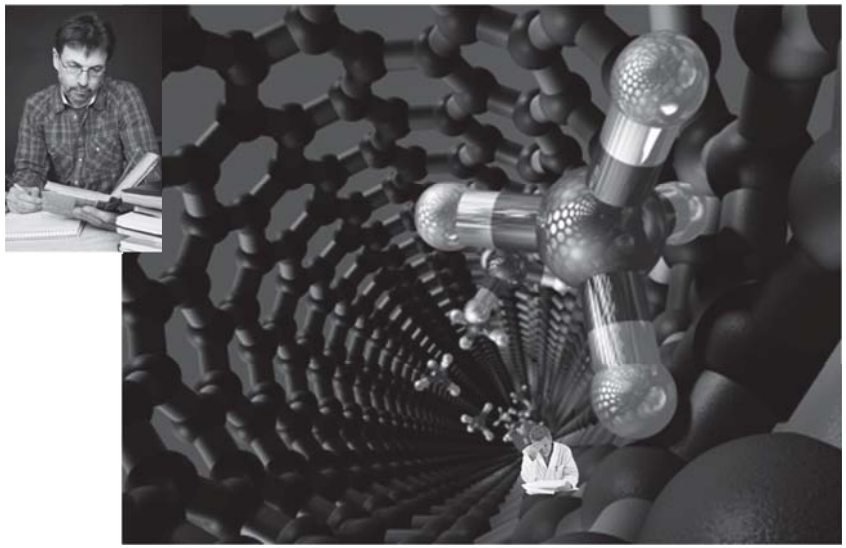


Communication

- Communication is what is understood by the reader
- What is effective Communication?
  - reader understanding is the same as that of the author

Perfect communication





Tip 3: Write with the reader in mind

Create a framework to connect the pieces into a unified whole

Who will read or listen to the story?

- **Who is interested** in the research story?
- What is their **background knowledge**?
  - Education level?
  - Professional experience?
  - Familiarity with key concepts?
- Why are they interested?
  - What will they do with the information?
- What are their native language and culture?
- What journals do they read?
  - Journal editors and reviewers

Tip 4: Frame

Story

- What story do you want to communicate?
- What is the single main focus?
- Why are you telling this story?
- What is the starting point, question, or hypothesis?
- What is the goal or answer?
- What is the technical level of the information?
- From among the available information, which bits should be included and which omitted?
- What arrangement of the information will make it easiest for the audience to understand?

Audience

- Who is interested in the story?
- What is their background knowledge?
- Why are they interested?
  - What will they do with the information?
- What is their native language?
- What journals do they read?

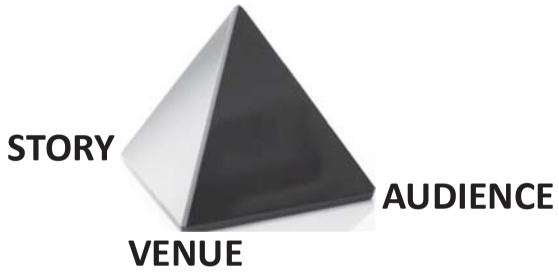
Venue

- Style
- Format
- Constraints
- Timing
- Primacy
- Prestige level

Framing

Story-Audience-Venue foundation for any complex communication

Written or Oral **DELIVERY**



Tip 5: Choose an appropriate Venue

- The research communication process is facilitated and accelerated by appropriate journal choice
  - Choose target journal before drafting your manuscript
  - Stick to that venue's style and format
    - **Read & Follow the Instructions to Authors!**
- Inappropriate venue choice may be the most frequent cause of rejection

Journal Selection

- Gather excellent published papers in your field
  - Where are they published?
  - How are they written?
    - Structure
    - Subheadings
    - Numbers & types of figures and tables
    - Standard phrases
    - First person used?
    - What aspects make it easy for you to understand?
      - Read well written papers not only for meaning, but also structure and grammar

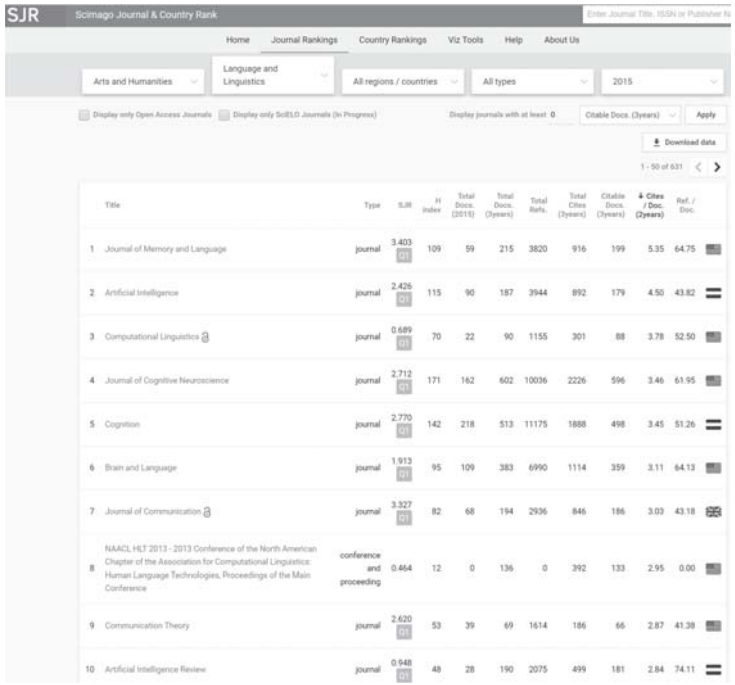
Where to get info about journals?

- Journals themselves
  - **Instructions to Authors (ITA)**
    - Scope statement
    - Types of articles published, length restrictions
  - Table of contents – see what kinds of topics are actually being published
  - Sample published manuscripts

Where to get info about journals? (continued)

- Colleagues and supervisor
- Coauthors
- Journal Citation Reports
  - How often is the average article cited?

  Impact factors , H-index, Field rating



Aims and Scope Statement example

The Journal of International and Advanced Japanese Studies is published by the Master's and Doctoral Program in International and Advanced Japanese Studies, Graduate School of Humanities and Social Sciences, University of Tsukuba. The journal aims to promote open debate through publishing the results of leading research in Japanese Studies and welcomes submissions from the perspectives of cross-national and international studies (encompassing politics, economy, society, media and information studies, culture, linguistics and pedagogy, fine arts, and literature).

国際日本研究 第9号 オンライン / 2017年3月 (ISSN 2189-2598)

全版 (PDF) (6.06 mb)

目　次『オンライン版』　ISSN 2189-2598

http://japan.tsukuba.ac.jp/research/

Two scope exclusions from the Functional Ecology ITA:

- We require that all papers place the research into a broad conceptual and/or comparative context. The results should have **broad conceptual significance**, and **not just be of significance for the focal species or small group of species**.

- Papers may describe experimental, comparative or theoretical studies on any types of organism. Work that is purely descriptive, or that focuses on population dynamics (without investigation of the underlying factors influencing population dynamics) **will not be accepted** unless it sheds light on those areas mentioned above.

Interesting points in the Canadian Journal of Fisheries and Aquatic Science ITA

- "*We encourage papers that lead from a **clearly stated rationale and testable hypotheses, concepts, or questions**, to a concise synthesis of the findings and identifiable conclusions. Such papers should also advance and (or) challenge the current state of knowledge held in a particular area of fisheries or aquatic sciences.*"
  - Discourage descriptive or purely methods papers
- Detailed explanation of author responsibilities and publishing ethics

http://tinyurl.com/5s4yzuy

Types of articles published by Environmental Science & Technology

- ES&T divides its manuscripts between two sections of the journal: research and front matter. The research section includes **Research Articles, Policy Analysis, Critical Reviews, Correspondence/Rebuttal, and Additions and Corrections**. Manuscripts are initially reviewed by the assigned editor and, if appropriate, by other scientists who assess the significance, originality, and validity of the work...
- The front matter consists of **Features, Viewpoints, and Letters to the Editor, along with staff-written Comments, annual informational content, and occasional Perspectives** for special issues…

http://goo.gl/KcFSNT

Length limits

- EST limits the total length of each article type (in word-equivalents):
  - Research articles and Policy analyses: 7000
  - Critical reviews: 10,000
  - Features: 5000
  - Comments and responses: 1000
  - Viewpoints: 1000 words + author affiliations + 5 references + 1 single frame figure with 50 word caption OR a 350 word Table
- Also limits on accessories (figures and tables) and lengths of abstracts
  - Some journals limit length of each section

Templates

- Most journals offer Microsoft Word templates for manuscript preparation
  - If available, download and write into the template file.
  - e.g., for Journal of International and Advanced Japanese Studies

  http://japan.tsukuba.ac.jp/research/templateE.docx

Word has excellent change tracking and commenting features that facilitate editing and collaboration.

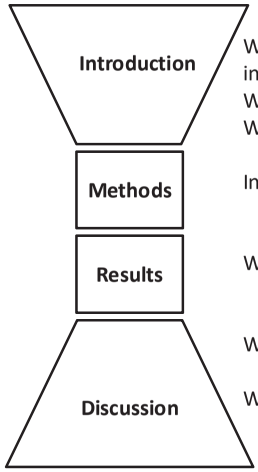
Open access journals: heaven and hell

- Free access
- Required by a rising share of funding organizations
- Directories of Open Access Journals
  - Whitelist: http://www.doaj.org/
  - Blacklist: Beall's list now offline (defunct?)
    - January 2017 archive: https://goo.gl/iC7PtW
    - Includes Leena & Luna
- Judge for yourself
  - Open access journal quality indicators: http://goo.gl/tXsx4W
- Science sting: 4 October 2013 special section
  - Same fraudulent paper submitted to 304 journals

Journal selection summary

- For your research story, choose a journal appropriate to the audience, topic, quality, extent, and article type
- Open access?
- Read, understand, and **follow the ITA**

Rhetorical shape of a research manuscript



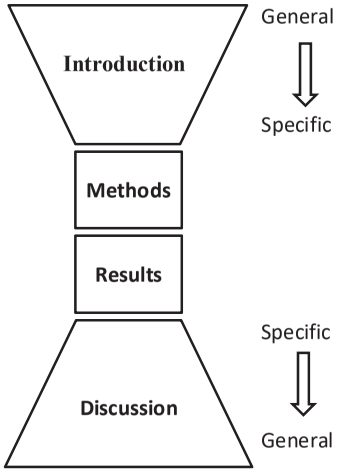
What was the general topic of the research and why is this topic interesting and important?
What was the single specific research problem addressed?
What was the main methodological approach?

In detail, how were the findings obtained?

What were the most important findings?

What is the most important conclusion?
(Best if the conclusion solves the specific research problem)
What is the resulting new understanding of the general topic?

Rhetorical shape of a research manuscript

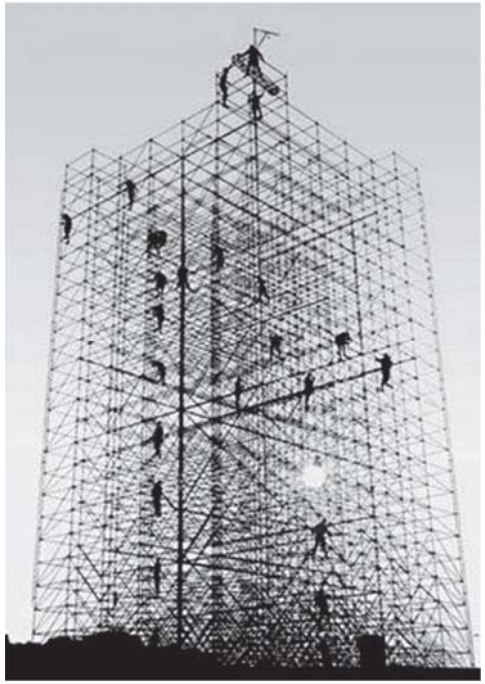


Collect and analyze structure of a dozen good papers from your field

- How are they structured?
- How are they written
  - First person used?
  - Verb tenses in different sections?

Introduction provides overview & perspective

- Introduction to the general topic
- Pertinent background information: what is known
  - Include citation of relevant and important literature
- Nature and scope of specific problem investigated
  - What is unknown and why is it important?
    - **Exigency**
  - **Main question(s) studied or hypothesis tested**
- Study design
  - Brief mention of main methodological approach
- Brief mention of main Results and Conclusions (optional)
  - Some journals do not allow this



A **strong framework** gives readers context to understand complex details as parts of a convincing overall story .

- Sample 1

Materials and Methods

- Precisely how was the data was gathered and analyzed?
- Goal: Reproducibility
  - Can someone repeat your experiments or observations and obtain the same results?

Results

- The new information - the heart of the paper
- Clear and concise
- Simple to explain with words results in the text
- Difficult to explain results in figures or tables
- Don't repeat

Discussion

- **Answer question posed in Introduction**
- From the specific to the general
  - Results obtained
  - Results in literature
  - Established theory and principles
- Clear organization, logic, and flow
  - within each part
  - relating all parts

Manuscript Abstracts answer these questions:

- What was the general topic of the research?
- Why is this topic interesting and important?
- What was the single specific research question or problem addressed by the research?
  - Best if stated as one or more testable hypotheses
- What was the main methodological approach?
- What were the most important findings?
- What is the most important conclusion?
  - Best if the conclusion answers the main research question

sample

Every sentence is infinitely interpretable

- Challenge for authors:
  - minimize misinterpretation

Tip 6: Write to fulfil reader expectations

Does the writer of this sentence want us to approve(良いと思わせたい) or disapprove (悪いと思わせたい) of Don?

a. Although Don's a nice guy, he beats his dog.

The Sense of Structure: Writing from the Reader's Perspective, by George Gopen, 2004.

Does the writer of this sentence want us to approve(良いと思わせたい) or disapprove (悪いと思わせたい) of Don?

b. Although Don beats his dog, he's a nice guy.

Does the writer of this sentence want us to approve(良いと思わせたい) or disapprove (悪いと思わせたい) of Don?

c. Don's a nice guy, but he beats his dog.

Does the writer of this sentence want us to approve(良いと思わせたい) or disapprove (悪いと思わせたい) of Don?

d. Don beats his dog, but he's a nice guy.

Does the writer of this sentence want us to approve(良いと思わせたい) or disapprove (悪いと思わせたい) of Don?

a. Although Don's a nice guy, he beats his dog.
b. Although Don beats his dog, he's a nice guy.
c. Don's a nice guy, but he beats his dog.
d. Don beats his dog, but he's a nice guy.

- Readers tend to give greater emphasis to the final clause because it contains the stress position.
- Readers emphasize the main clause because they expect it to contain the main thought.

- Readers tend to read a clause or a one-clause sentence as being the story of whoever or whatever shows up first.
- Readers tend to read a multi-clause sentence as the story of whoever or whatever show up first in the main clause.

Fourteen qualities of effective research writing

Unity 統一 1. The state or quality of being one; singleness. 2. The state or quality of being in accord; harmony. 3. The combination or arrangement of parts into a whole; unification. 4. Singleness or constancy of purpose or action; continuity.

Logic 論理 3. Valid reasoning 根拠ある理論. 4. The relationship between elements and between an element and the whole in a set of objects, individuals, principles, or events.

Focus 焦点 3. A center of interest or activity. 興味や活動の中心 4. Close or narrow attention; concentration. 5. A condition in which something can be clearly apprehended or perceived.

Linkage 関連 1. a. The act or process of linking. b. The condition of being linked. 2. A connection or relation; an association. ….

Specificity 特異性 1. Explicitly set forth; definite. 3. Special, distinctive, or unique

Precision 精度 1. The state or quality of being precise; exactness. 2. a. The ability of a measurement to be consistently reproduced. b. The number of significant digits to which a value has been reliably measured.

Accuracy 真度 1. Conforming exactly to fact; errorless. 2. Deviating only slightly or within acceptable limits from a standard.

Selected definitions from the American Heritage Dictionary, 4th edition

Fourteen qualities of effective research writing, continued

Consistency 一貫性 1. In agreement 合致する; compatible矛盾のない . 2. Being in agreement with itself; coherent and uniform: *a consistent pattern of behavior*.

Coherence 脈絡 1. Sticking together; cohering.結合力 2. Marked by an orderly整頓された , logical論理的な , and aesthetically審美的な consistent首尾一貫した relation of parts.

Context 文脈 1. The part of a text or statement that surrounds a particular word or passage and determines its meaning.

Clarity 明快 2. Clearness of thought or style; lucidity.

Concision 簡潔 Expressing much in few words; clear and succinct.

Cogency 説得力 Appealing to the intellect or powers of reasoning; convincing: *a cogent argument.*

Credibility 信頼性 1. The quality, capability, or power to elicit belief.

Selected definitions from the American Heritage Dictionary, 4th edition

Curse of Knowledge

Although known to be inefficient in collecting submicrometer-sized aerosols (Hogan et al., 2005), the BioSampler has been used as a reference sampler for many virus aerosol studies (e.g., Lednicky and Loeb [2013] and Dybwad et al. [2014]). Additionally, impinger-based collection methods often inactivate viruses, especially “stress-sensitive viruses,” reducing the usefulness of data acquired by these methods (Agranovski et al. 2005).

First mention of Biosampler and impinger in Lednicky et al., 2016, Aerosol Science and Technology, VOL. 50(7): i–iv

Readers look at particular places in sentences to find:

- Whose story is being told?
- What are they doing?
- What is most to be emphasized in the sentence?
- How does each sentence link backward to the one that preceded it?
- How does each sentence lean forward to the next one?

George Gopen, 2004, The Sense of Structure

Rules are for fools –Van Halen

- Goal: Communicate effectively to readers
  - Tools, rather than Rules
- Breaking patterns or rules can effectively add emphasis

A high concentration of sialic acids, which are a group of substances principally composed of amino sugars attached to polysaccharides, lipids, or proteins, are found in the mammalian epididymis.

- Omit intervening phrase: *which are a group of substances principally composed of amino sugars attached to polysaccharides, lipids, or proteins*

The mammalian epididymis contains a high concentration of sialic acids, principally composed of amino sugars attached to polysaccharides, lipids, or proteins.

Sialic acids are a group of substances principally composed of amino sugars attached to polysaccharides, lipids, or proteins. A high concentration of sialic acids are contained in the mammalian epididymis.

What makes the second sentence difficult to read?

Linear order was not applied in case of forming social capital. Instead Conceptual Model of Social Capital implying opportunity-motivation-ability framework as well as structural wholes as linkages connecting different groups that were not otherwise connected has been used.

How can we improve this sentence?

Linear order was not applied in case of forming social capital. Instead Conceptual Model of Social Capital implying opportunity-motivation-ability framework as well as structural wholes as linkages connecting different groups that were not otherwise connected has been used.

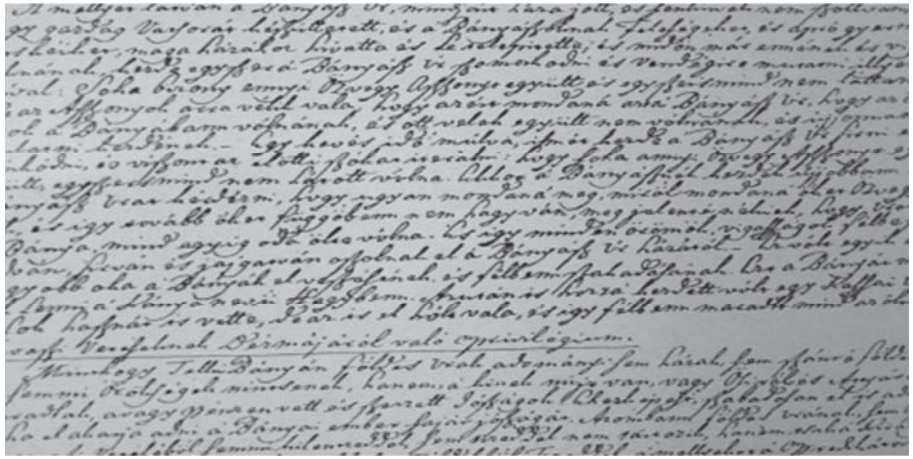
Instead, **I used** the Conceptual Model of Social Capital**: this model** implies an opportunity-motivation-ability framework as well as structural wholes as linkages connecting different groups that were not otherwise connected.

Readers expect every grammatical subject will be followed almost immediately by its verb.

Tip 7: Put the verb soon after the subject

When is a sentence too long?

- When it has more viable candidates for stress positions than there are stress positions available.



Punctuation that adds emphasis by providing syntactic closure

The semicolon (;) separates 2 or more independent clauses whether or not they are joined by a conjunctive adverb such as “however”, “besides”, or “therefore”, but generally not clauses joined by a simple conjunction such as “and”.

The colon (:) separates 2 independent clauses, specifically if the second clause amplifies or clarifies the first.

Scientific Style and Format, 8th edition
http://www.scientificstyleandformat.org/

Weak verbs do not express the action

× *Measurement of the particle diameters **was carried out**.*

× *We **performed** measurements of the particle diameters.*

✓ *We **measured** the particle diameters.*

✓ *The particle diameters **were measured**.*

Tip 8: Use strong verbs

Express **Action!**

➢ Order of decreasing preference:

Verb>Participle (-ing)>Infinitive (to ___)>Noun

- Choose verbs that specifically and succinctly express the action of the sentence
- Note that passive voice and nominalizations can help satisfy reader expectations, especially
  - Familiar info in topic position
  - Important info in stress position

- Readers expect and desire sentences to begin with material that links backward logically to materials that have already appeared in the previous discourse.
- Readers expect and desire sentences to finish with material that leans towards the following discourse.

Sloppiness produces inconsistencies and worse

- Check correspondence between accessories (figures & tables) and text
- Check consistency of reasoning
- Fix non sequiturs

sample

"The first draft of anything is shit!"
Ernest Hemmingway

- **Tip 9: Edit, edit, and reedit!**

Every author is an editor too

- Check consistency, grammar, specificity, etc.
- Are the context and flow clear?
  - sentence to sentence
  - paragraph to paragraph
- Ask your coauthors to carefully read your final draft
- Carefully read every manuscript your name is on
- If you ask someone to edit for you, make sure they know how.

Tip 10: Maintain optimizal cognitive function
Exercise regularly, Sleep enough, etc.

Tips for successful research communication

1. Plan m/s when planning the research
2. Plan again after gathering the data
3. Write with the reader in mind
4. Frame the relationships among audience, story, and venue
5. Choose an appropriate target venue

Tips for successful research communication, continued

6. Write to fulfil reader expectations
7. Put the verb soon after the subject
8. Use strong verbs
9. Edit, edit, and reedit
10. Maintain optimal cognitive function

Recommended References for m/s writing

- Style: Toward Clarity and Grace, Joseph M. Williams, 1995.
  - Available in multiple editions, some with coauthors, some with slightly different titles.
- The Sense of Structure: Writing from the Reader's Perspective, George D. Gopen, 2004.
- Writing Science: How to Write Papers That Get Cited and Proposals That Get Funded, Joshua Schimel, 2011.
- The Gregg Reference Manual: A Manual of Style, Grammar, Usage, and Formatting. 11th Tribute Edition by William A. Sabin, 2010.
- A style guide relevant for your field, for example
  - Chicago Manual of Style
  - Publication Manual of the American Psychological Association
- An English only dictionary