



Writing a Scientific Research Paper

Adapted from

M.L. Kennedy, W. J. Kennedy, & H. M. Smith (1996). *Writing in the Disciplines: A Reader for Writers*. New Jersey: Prentice Hall.

Research involves collecting information from multiple sources and then acting on that information by organizing, synthesizing, analyzing, generalizing, or applying it (166).

Getting Started

1. Plan and think about what you want to find.
2. Think through the subject areas covered that might become your focus
 - a. Use different brainstorming strategies to create ideas
 - i. List
 - ii. Cluster / Web
 - iii. Outline
 - iv. Freewrite
3. Once you have defined a topic, you need a plan to guide your search for information
 - a. This is called a *research strategy*
 - i. Allow enough time to create and follow through with your plan
 - ii. Make sure that your plan includes your goals and what you need to do to get there.
 1. Remember you can change your plan and ideas at any time

Beginning your research

1. Identify Research Questions
 - a. Before going to the library try to list questions you hope your research will answer
 - i. You can also use your research to answer specific questions about your topic
2. Brainstorm a list of terms or a Search Vocabulary
 - a. Think of general terms that will help you to start your search
3. Head to the library and find out what is available and where it's located
 - a. Ask the library staff for assistance
 - b. Try and locate the following resources
 - i. General references
 - ii. Books
 - iii. Computer Catalog
 - iv. Library of Congress Subject Headings
 - v. Periodicals
 1. Computer Indexes

4. Evaluate Information Sources
 - a. Take a look at what you've found, skim sources, and check where and when sources were published. Quickly figure out what will be useful and what can be used to aid in further research.
5. Excerpt Information from sources
 - a. Paraphrasing, summarizing, quoting
 - i. Only quote what's needed!
 - ii. This is a good way to get started on a Double Entry Journal
 - b. Organize recorded notes (information)
 - i. Keep a separate set of notes for draft thesis statements,
 - ii. Keep track of organizational plans, or important ideas that you think about during the research process.

The Writing Process

1. Draft a Thesis
 - a. Generate a thesis from your research notes
 - i. Scan notes quickly, noting general trends, main concepts, overall patterns
 - ii. Freewrite for 10 minutes on what you think your research might tell a reader
 - iii. Reduce your freewrite to several sentences that explain what you want to say to your reader (draft thesis).
 1. The purpose of a draft thesis is to focus your research activities.
 2. You still need to be open to change; a draft thesis should change and develop as you uncover more information.
2. Plan the Research Paper
 - a. Figure out what type of paper you need to write.
 - i. Re-read the assignment
 - b. Outline
 - i. Decide on your sections and headings
3. Intro
 - a. Identify briefly the issue(s) that you intend to focus on and provide general information that is appropriate for your audience.
 - b. Explain (briefly) your own view on the issue(s) and how you will support that view (thesis).
4. Summary-Response Pattern (Useful in body paragraphs)
 - a. All examples should be sandwiched.
 - i. Opening statement
 - ii. Example
 - iii. Analysis
 - b. This method makes your ideas and resources very clear to the reader and helps them to follow your argument and organization.
5. Body Paragraphs
 - a. Use topic sentences to relate main ideas back to the thesis.
 - b. Summarize and quote the source, making sure to explain the issue(s).

- c. Give reasons to support your position on the issue(s).

6. Conclusion

- a. Restate important ideas that the reader needs to know or understand
- b. Restate your argument/thesis
- c. Tie up any loose ends
- d. If appropriate, find some way to relate the topic to the reader. This will leave a lasting impression.

7. Revise

- a. Revision can be the most important step of the writing process because it allows you to look at your paper with a clear and critical eye. Also, it helps if you think like a reader.
 - i. Make sure that you put some space between when you stop writing and when you revise.
- b. When revising you need to decide if
 - i. Your topic is sufficiently narrow
 - ii. The reader can understand your research goals?
 - iii. That you present a clear thesis
 - iv. That all of the information and sources used are clear and concise
- c. When revising it is important that you feel comfortable moving ideas and sections of the paper around. If you are worried about losing your work save different files with different drafts, that way you can see what your changes look like and pick the one that is most effective.

8. Editing

- a. Once you have completed revising, you should start editing.
 - i. Make sure that your paper is in the correct format
 - 1. Layout, headings, title page, et cetera
 - ii. Check your reference list and make sure everything is included and cited properly
 - iii. Check your in-text citations
 - iv. Look over your grammar
 - v. Check for typos

9. Done – Turn your paper in

Notes:

Remember that the TLC is able to assist you with any step of the writing process. If you ever get stuck or would like a second set of eyes to look over your paper, stop by and make an appointment.