

Reading and Taking Notes on Scholarly Journal Articles

- Set aside enough time in your schedule to read material thoroughly and repeatedly, until you understand what the author is studying, arguing, or discussing.
- There are no short-cuts! You could learn to increase your speed while reading, but it is more important to learn how to comprehend what you read.
- Suspend any judgment or opinion about the reading until you have verified you really understand it.
- How often do we read and say to ourselves 'I have no clue what this author is talking about'? Don't give up, read it again!

Reading with a Purpose

- What is your goal or objective in the reading assignment? How you read should be determined by what you read.

[pleasure reading requires no particular skill level; to learn a new subject requires critical reading skills; reading a biology textbook requires different reflection than reading a history textbook; and reading a journal article requires critical analysis]

- Can I summarize the meaning of this text in my own words?
- What is clear to me and what do I need clarified?
- Can I connect the core ideas to other core ideas I do understand?

What is the system of logic?

- When you can effectively move back and forth between what you are reading and what you are thinking, you bring what you think to bear upon what you read and what you read to bear upon what you think. (Elder & Paul, 2008)
- One reason reading is a passive activity for many students is because they have learned to read without understanding what good reading involves. One important way to understand what we read is to follow the logic behind the author's intent.

How to Understand the Author

- Authors of journal articles always have an argument; they are trying to convince you of something
- Authors can be both good and bad:
 - Good authors present you with new, research-based information
 - Bad authors can be biased and only present one side of the story
- You are an author too! Your thoughts and judgments about journal articles are worthwhile, so don't just take what other authors say on blind faith – ask questions!

How to Approach the Article

- When you read journal articles, think about how you are going to write a paper based on what you read.
- Keep in mind your own research question
- Focus on the information in the article that is relevant to your research question (you may be able to skim over other parts)
- Question everything you read - not everything is 100% true or correct
- Think critically about what you read and try to build your own argument based on it

Reading Strategy

The SQ3R Method

- **Survey**, skim, and scan entire reading assignment. Observe titles, subtitles, charts, diagrams, figures, tables. Preview the conclusion and summary and then the abstract/introduction. Think of this step as a “preview” to a movie you are about to watch.
- **Question** the authors’ purpose and tone. Develop and write out questions about each section of the reading. You’ll want to find the answers as you engage in the reading. Use these questions to guide your reading and your note-taking process.
- **Read** the assignment as thoroughly as possible. Read one section at a time, reflect on what you read, and don’t get too bogged down with details. Search for the main ideas and supporting details. Keep reading!
- **Recite** and recall the information by summarizing and paraphrasing. Did you find the answers to the questions you wrote down earlier?
- **Review** the reading again and over time.

Reading the Article

- (Survey) Look at the structure of the article (most scientific articles follow the same specific format)
 - Abstract (summary of the whole article)
 - Introduction (why the author did the research)
 - Methodology (how the author did the research)
 - Results (what happened)
 - Discussion (what the results mean)
 - Conclusion (what the author learned)
 - References (whose research the author read)
- Read the abstract and conclusion first (these have the main points)
- If you find anything in the abstract or conclusion that is important for your paper, search for the information
- If you need more information, then read through whole sections (usually discussion or results section)
- “Close read” by deciding what parts of the reading are worthy of deeper study. This requires investigating early perceptions and scrutinizing possible significances.

Annotation

{the act of annotating, making notes, commenting upon}

- There are a few major ways to take notes (mapping, outlining, 2-column, word-for-word), but this is a personal style choice. Try different ways, but use the one that fits you best, and engages you in the topic.
- Pay attention to what each section is about. The Abstract, Discussion, and Conclusion sections usually have the most important information.
- Take notes while you are reading (that way you don't have to go back and re-read it when you write your paper)
- Write summarizing notes for main points in the margin, or on a separate piece of paper
- Highlight only very important quotes or terms

Sample Article Annotated

Memory works on 2 levels

①

focus/attention
(what you need to know now)
7-9 items

②

what you know/
can recall
(part of you)

HOW DOES MEMORY WORK?

Human memory works on two different levels: short term memory and long term memory.

Short term memory

This includes what you focus on in the moment, what holds your attention. Most people can only hold about 7 items of information in short term memory at any given moment, although some can hold up to nine. Look at example A below. Then look away and try to hold it in your short term memory.

A = 6593028

Most likely, you can hold it as long as you choose. Now follow the same procedure with example B.

B = 573927450621

It's much more difficult, if not impossible, for most people.

Short term memory is exactly what the name says: short term. To learn information so you can retain and recall it, you must transfer it from short term to long term memory.

Long term memory

This includes all the information that you know and can recall. In many ways, it becomes a part of you. Once information becomes a part of your long term memory, you'll have access to it for a long time.

FROM SHORT TERM TO LONG TERM

How do you move information into long term memory? Two of the ways are: *rote learning* and *learning through understanding*.

continued

mechanical
memorizing
ex: alphabet

understanding
ex: main
ideas & details
of a lecture

often
combined
ex: dates &
concepts

Rote learning means learning through repetition, mechanically, with little understanding. For example, as a child you probably memorized the alphabet and the multiplication tables by rote.

Learning through understanding involves learning and remembering by understanding the relationships among ideas and information. Rather than using *rote memory*, you use logical memory when you learn through understanding. For example, you use logical memory when you remember main ideas and supporting details from a lecture not because you repeat the ideas in your mind, but rather, because you understand them.

Both types of learning and memory are useful and often are used together. For example, in history, you need to relate facts (like dates) which you memorized by rote to your understanding of historical concepts (like the Civil War)

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THE KEYS TO REMEMBERING

You can learn to remember more effectively if you learn and use the four keys described below. Each one helps you to enter information into your long term memory.

1.

Choose to remember. Be interested. Pay attention. Want to learn and know. What you want is an important part of learning. People learn more effectively and remember more when they are interested and want to learn.

How can you choose to remember? One way is to take a few moments to choose to learn before you read or listen to a lecture. Sit calmly, take a few deep breaths, and tell yourself with your inner voice: "I choose to remember what I learn today." Repeat this a few times, and then begin.

2.

Visualize or picture in your mind what you wish to remember. For many people, a mental picture or visualization is clearer and easier to remember than words. For each major concept that you want to remember, create a mental picture and then look at it carefully for a few seconds. Once you've seen it clearly, you'll probably be able to recall it.

If you are not a visual learner, you may find that you need to improve the quality of your mental pictures or images by practicing. Look at a picture, object, or photograph, then close your eyes and try to see it in your mind's eye. Practice this for a few moments each day.

connect new
information
to old
(like filing)

3.

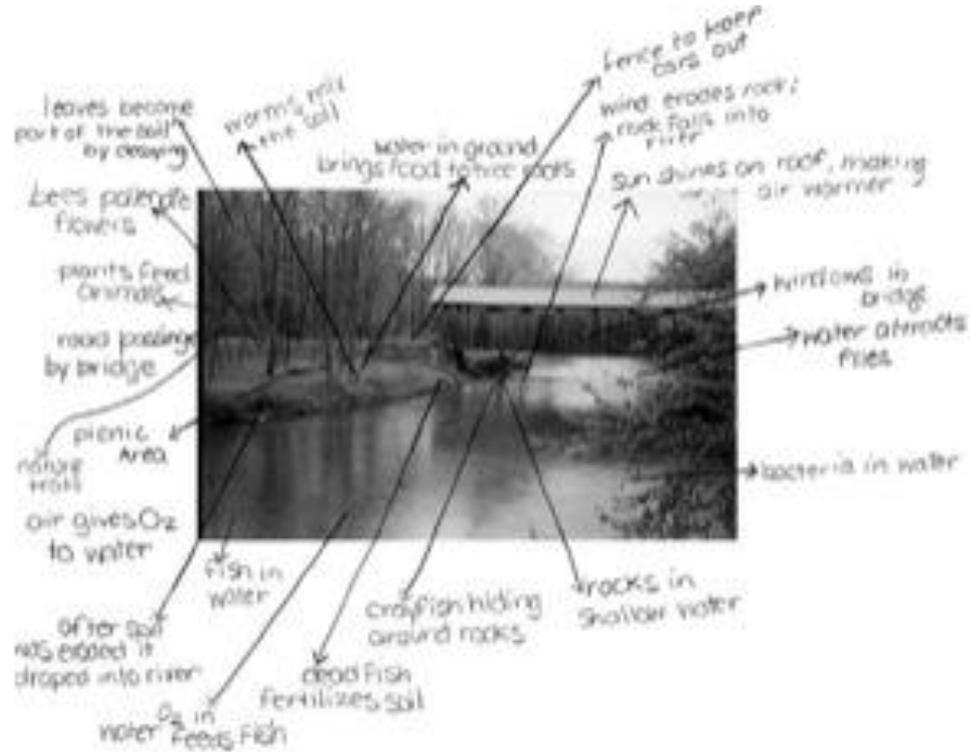
Relate the ideas and information you wish to remember to each other and to ideas and information you already know. When you relate information to other information, you create a chain of memories which lead to one another. When you label an information chain or group of ideas, you create a kind of "file" that makes it easy to locate and remember the information.

You can help yourself to relate information by using mental pictures, visual organizers, or by outlining.

4.

Repeat what you wish to learn until you *overlearn* it. Say it in your own words. Even though you've already learned something, go over it one more time. Research shows that the time you spend on *overlearning* and putting ideas into your own words will pay off by making recall easier and more complete.

If you are having difficulty annotating paragraphs, try annotating something visual for practice.



Photograph of Earth System Science

<http://serc.carleton.edu/eslabs/climate/2a.html>