

# How to Read the Textbook and Other Technical Material

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**SQ3R** (Survey, Question, Read, Recite, Review) is an active-learning technique for reading academic material (McKeachie & Svinicki, 2013). It was introduced by Robinson (1946), and also includes ideas that predate Robinson's work.

The first section of this document provides a summary on how to use SQ3R to read the textbook. The second section on "Reading Textbooks Effectively" provides more detail on how to apply this active-learning technique. (These sections are copied from sources listed at the bottom of each section.)

## SQ3R: Survey, Question, Read, Recite, Review

Reading a textbook well is a skill that good students master. By reading it "well", you're not just watching the words go by, you're finding a way to interact with the material in order to really learn the content. SQ3R is a method that has been developed to help you connect with the content in a meaningful way. SQ3R is applied as follows:

**SURVEY:** Glance over the headings in the chapter to see the few big points that will be developed. Also read the final summary paragraph if the chapter has one. This survey should not take more than a minute or two and will show the main ideas around which the discussion will cluster. This will help you organize the ideas as you read them later.

**QUESTION:** Now begin to work. Turn the first heading into a question. This will give you a specific purpose for reading the material and thereby increase comprehension. It will bring to mind information already known, thus helping you to understand that section more quickly. The question will also make important points stand out at the same time that explanatory detail is recognized as such.

**READ:** Read to answer that question, i.e. to the end of the first headed section. This is not a passive plodding along each line, but an active search for the answer.

**RECITE:** Having read the first section, look away from the book and try to recite the answer to your question ***in your own words***. If you can do this you know what is in the book; if not, then glance over the section again. Repeat these first 4 steps for each section.

**REVIEW:** When the lesson has been read through in this way, look over your notes to get a birds-eye view of the points and their relationship and check your memory of the content by reciting the major subpoints under each heading. This checking of memory can be done by covering up the notes and trying to recall the main points. Then expose each major point and try to recall the subpoints listed under it.

(This section is copied from Michigan State University's guidance on [Reading a Textbook Effectively](https://classes.cs.uoregon.edu/24S/cs422/how_to_read_the_textbook/). This hyperlink was active as of 1-8-2023. The first paragraph in this section has been slightly edited.)

## Reading Textbooks Effectively

Do you feel like you spend too much time reading textbooks? Do you ever feel overwhelmed with the amount of information they contain? Do you have a hard time focusing or figuring out what's important? Textbooks can be tedious and difficult, but they contain many features designed to help you learn. This handout will provide practical strategies to help you read textbooks more effectively. Effective reading strategies can ensure that you truly comprehend the course material, come to class prepared, and perform better on class assignments and exams.

## How textbooks are unique

Textbooks contain numerous features that you don't always encounter in novels, articles, or other types of texts. These features provide a wealth of information and clues about the text. You should always spend a few minutes previewing a chapter or section before you start to read so that you can get an idea of the main concepts in that section. This will help you to have a better purpose and focus going into the reading and will help you to be able to pull out the important ideas more easily.

## Active reading strategies

Many students approach reading textbooks by opening up the book and starting with the first sentence in the chapter. They then typically fall into one of two categories: those who painstakingly read each word and copy pages of notes for hours, or those who casually skim over the words and flip the pages. Though very different, both approaches are passive in that they don't involve active, critical thought—the first approach turns the reader into a copying machine, and the second is much less time-consuming but doesn't include any active engagement with the text. Neither approach leads to a high level of comprehension or retention of what you just read.

Instead, research shows that *active reading strategies* lead to comprehension and retention and help students perform better in classes. Active reading strategies are ones in which you force your brain to actually do something (something effective and research-backed) while reading your textbook. Below are some practical and effective active reading strategies that you can try to get the most out of your reading time.

## Strategies before you read

**Preview.** Look through the text features in the chapter (headings, titles, graphs, bold words, etc.) to gain clues about the main concepts and important elements of the chapter. Pay special attention to these features when previewing your textbook:

- Titles, headings, and subtitles
- Illustrations, graphs, charts, visuals
- Vocabulary lists, glossaries
- End of chapter summaries
- Introductions
- Review questions and practice problems
- Special interest boxes and notes in margins
- Bold words

**Get to know your digital reading platform.** Digital or e-textbooks may have some additional features. Does the digital format encourage a specific reading path, or is it easy to jump around? Can you bookmark pages, or are there other ways to save your progress? If you follow a hyperlink, how do

you get back to where you were before? Getting to know the structure of your e-textbook and seeing how page or section navigation works will save you time in the long run.

**Begin at the end.** Read the summary, vocab list, chapter questions, and practice problems first to gain an idea of the most important aspects of the section and what you are expected to know and understand after reading it.

**Activate prior knowledge.** Make a list of what you already know about the topic and what you want to know about it/questions you have about it.

**Set a purpose.** Based on what you gathered in your previewing, set a purpose for why you are reading this chapter and what you need to understand, know, or be able to do after reading it.

**Make predictions.** Right after previewing, make a prediction about what you think this chapter or section is going to be about.

## Strategies while you read

**Figure out the main idea.** Focus on first sentences and text features for main ideas of each paragraph or section as you read. These often contain the main idea, while the other sentences in the paragraph provide support and details.

**Use questions to find answers.** Convert major headings and topics into questions, then read for answers.

**Finish an entire section or page before taking notes.** When you do take notes, keep them brief, focus on main ideas, and put them in your own words. Check out our [note-taking handout](#) for more recommendations on effective note-taking.

**Try skimming.** Check out our handout about [skimming](#) to read about how to skim effectively and purposefully.

**Generate questions.** As you read, write down questions that you have about the text. Also, create questions that you would ask on a test if you were a professor giving a test about this chapter (use them to self-test later).

**Stop and summarize.** After every section (or page), stop and write a brief summary of what you just read in your own words from memory.

**Keep it short.** Tackle no more than 5-10 pages at a time. Space your reading out across the day and week as opposed to cramming it all into hour-long sessions. Check out our time management handouts to find some calendars and resources to help you chunk your reading.

**Make connections.** Before, during, or after reading, make connections between the material and your own life, the world, and other texts/course material you have learned.

## Strategies after reading

**Re-visit the chapter later.** Instead of re-reading the chapter this time, focus on the main concepts. Make note of how content covered in class connects with the material in the chapter.

**Organize your thoughts.** Make an outline or concept map to help you synthesize and map out information visually. Ideally, start from memory and create all you can without looking at your textbook

to better get a grasp of what you know well and what you need to study; then use your textbook for reference in filling out what you didn't know well. This technique will aid your retention much more than over-relying on the textbook.

**Make flashcards.** Create flashcards for key terms, dates, people, etc. and use them for self-testing. Answer the question/define the word yourself before flipping the card over and looking at the answer.

(This section was copied directly from the [University of North Carolina at Chapel Hill Learning Center web pages](#). This hyperlink is active as of 1-8-2023.)

## Online Sources

There are many online sources describing SQ3R. Many of these are posted by university "learning centers", which are the offices on campus that try to help students develop basic learning skills. Here some summaries of SQ3R from the learning centers at the following schools. All of the materials have been saved as PDFs. The year indicates when the materials were archived.

[Harvard](#) (2022)

[Oregon State](#) (2022)

[Southern Illinois](#) (2022)

[Univ. of Arkansas - Fort Smith](#) (2022)

[Virginia Tech](#) (2022)

## References

McKeachie, W., & Svinicki, M. (2013). *McKeachie's teaching tips*. Cengage Learning.

Robinson, F. P. (1946). *Effective Study*. Harper & Brothers. The full text is available online (in 2022) at: <https://archive.org/details/in.ernet.dli.2015.224377/page/n1/mode/2up?q=sq3r>