Textbook Study Reading

SQ4R
RESEARCH SHOWS:
STUDY-READING SYSTEMS DO WORK

Because reading alone is a short-term memory operation, reading alone is not studying. If reading your texts causes you to fall asleep, lose concentration, frequently re-read the same page, or simply not recall what you have read, study-reading may solve your problems. There are many variations on the original SQ3R system: SQ4R, OARWET, PANORAMA, etc. All are very similar, providing an initial overview of the material, a purpose-setting step, intensive reading, followed by immediate and later memory checks. At SMU we choose to teach the version know as SQ4R.

Many study-reading systems and their parts have been tested to find out if students benefit from using them. The results of such research suggest that students who are taught to use a study-reading system understand and remember much better than other students. One study tested the effectiveness of the SQ3R system. The comprehension and reading rate of a group of college students were measured before and after learning and using SQ3R. The average reading rate increased by 22% and comprehension improved by 10%. Another study considered a group of upperclassmen at a major university who learned SQ4R and used it for a full semester. At the end of the semester, every student in the study had a higher GPA, faster reading rate, improved comprehension and, on the average, spent 30% less time on studying than before!

If you consider how we learn, the success of study-reading systems becomes understandable. One major way to learn is through repetition. Consider the way you learned the multiplication tables. Through repeated practice, you learned $2 \times 2 = 4$, $8 \times 9 = 72$, and so on; the key was repetition. Study-reading systems provide the meaningful and active repetition necessary to insure learning. The multiple steps in a study-reading system provide four or five encounters with each main idea in the reading. Compared with the usual once-through approach to reading a textbook assignment, study-reading is much more intense and produces much more reinforcement and learning.

### Why SQ4R?

<table>
<thead>
<tr>
<th>Move From . . .</th>
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<tbody>
<tr>
<td>Passive Learning</td>
<td>Active Learning</td>
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<tr>
<td>Surface Understanding</td>
<td>Deep Processing</td>
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<td>Poor Concentration</td>
<td>Purposeful Focus</td>
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<tr>
<td>Reading + Rereading + Rereading</td>
<td>One Thorough Reading + Brief Review</td>
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<tr>
<td>Forgetting</td>
<td>Long-Term Retention</td>
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<td>Eyes-Only Reading</td>
<td>Multi-Sensory Learning</td>
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Study-reading systems have many psychological advantages over ordinary reading:
* First, the pre-reading step gives you a mental organization or structure -- you know what to expect.
* Second, you always feel that you are looking for something specific, rather than wandering aimlessly down a page.
* Third, when you find the information you are seeking, you have a feeling of real accomplishment.
* Fourth, when you are able to recall information in the recall steps, you will feel secure in having learned.
* And finally, a study-reading system uses all of your senses or learning channels. You will see, say, hear, and write as you move through each section of your text. The more learning channels you use, the more deeply you concentrate and learn the material.

Rates of Forgetting College Textbook Material

<table>
<thead>
<tr>
<th>Without Review</th>
<th>With Review</th>
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<tr>
<td>Percentage of Material</td>
<td>Percentage of Material</td>
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<tr>
<td>Immediate Review</td>
<td>One Day</td>
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<tr>
<td>Immediate Review</td>
<td>One Day</td>
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SQ4R Study-Reading Technique

S - Survey
Q - Question
R - Read
R - Recite
R - Rite
R - Review

S  SURVEY

To determine the organization of the chapter and preview what’s coming, “X-ray” the “bones” of the chapter:

* look at and think about the TITLE; what do you already know about this?
* read the INTRODUCTION and SUMMARY (or first two and last two paragraphs)
* look over each page’s HEADINGS; sub-headings; boldface; titles of graphs, charts, etc.
* take no more than 5 MINUTES to survey an average chapter

Q  QUESTION

To set a purpose for reading and to get actively involved in reading:

* pose a question, mentally or in writing, BEFORE you read the first section of the chapter
* if available, use questions PROVIDED by the professor, your text, or a study guide
* or turn a chapter HEADING, sub-heading, or boldface term into a question, using “who, what, where, why, when, how?” (example: Heading = The Treaty of Versailles; possible questions = When was it signed? Who signed it? What were the important terms?)
**R  READ**

Read to find the answer to the question you posed in Step Q and other key ideas:

* read only a SHORT section, one paragraph to one page, depending on difficulty
* read QUICKLY and SELECTIVELY, improving your comprehension by seeking an answer to your question and other important information in this section
* then proceed to the RECITE and “RITE” steps (see below) before reading further
* continually changing pace as you read one short section -- from QUESTION to READ to RECITE to “RITE” -- prevents boredom, enhances concentration, and brings far greater learning than the usual reading of a full chapter.

**R  RECITE**

To find out what you have gained from reading a section:

* answer your question ALOUD, in your OWN WORDS, for an immediate self-test of comprehension
* if you can’t say it, you don’t know it!
* reciting is your most powerful tool for REMEMBERING information; it requires the complete, multi-sensory concentration needed to move information from short- to long-term memory

**R  “RITE”**

To prepare your text for later review, follow RECITE with any of these steps:

* if the material is fairly easy, UNDERLINE or HIGHLIGHT, using the “telegrammatic” system
* if it is detailed or complex, make very brief NOTES in the margin or in your notebook
* in either case, record key names, dates, terms and definitions
* mark any confusing portions so you can ask the professor, TA, or tutor for clarification

NOW MOVE TO THE NEXT SECTION OF TEXT. RETURN TO THE “QUESTION” STEP AND PROCEED THROUGH “READ,” “RECITE,” AND “RITE.”

**R  REVIEW**

At the end of the chapter, do an immediate, brief review to double retention.

To cut total study time by up to 90%, add later, brief reviews:

* take about 5 MINUTES to review the full chapter, “re-surveying” it by again looking over all headings, sub-headings, and boldface -- adding your own notes, highlighting, or underlining
* A WEEK LATER, review again briefly to strengthen long-term memory
* review again EACH WEEK UNTIL YOU ARE TESTED, adding new chapters as assigned
“TELEGRAMMATIC” UNDERLINING OR HIGHLIGHTING:
One Road to Better Comprehension

In the “RITE” step of SQ4R, you may choose to underline, highlight, take marginal notes, or actually outline a textbook chapter. Difficult texts or those you must know in great detail may demand marginal notes or outlines, but underlining or highlighting will work well for easier or more general material. To improve comprehension and prepare for effective review, avoid random marking. Instead, use the technique called “telegrammatic” underlining or highlighting.

The objective: your underlined or highlighted words should give you a sufficient, correct summary of the material. The model is a telegram, that old-fashioned, pre-telephone and pre-e-mail form of communication. Because the sender pays for a telegram by the word, a message is reduced to just the bare essentials. By phone, you might call a friend to say “Hi, I’ll be in San Antonio this weekend for a conference. Can we get together and catch up on all the news? I’ll be staying at the Menger Hotel from Thursday evening through Sunday afternoon. I can’t wait to fill you in on...” By telegram, you would say “At San Antonio Menger Thursday to Sunday. Call me.” --- a total of just nine words. That telegram is your model for effective underlining or highlighting.

Here is an example of the usual, rather random underlining most of us do and an example of “telegrammatic” underlining. Read aloud just the underlined words in Example A.

A

RODS AND CONES

Since the retina is the sensitive organ for seeing, it deserves closer attention than the other structures of the eye. If we examine it with a microscope, we can see that it is made up of extremely tiny cells of two basic types -- rods and cones. The rods are cylindrical in shape, but the cones are rather tapered. Our best estimate is that the eye contains between 110,000,000 and 125,000,000 rods and between 6,300,000 and 6,800,000 cones. This tremendous number of rods and cones, however, does not spread uniformly over the entire retina. Rather the cones are most numerous in a highly specialized region of the retina known as the fovea, and the rods occur most frequently about 20 degrees away from the fovea. The fovea is a slightly depressed area of the retina.

Now read aloud just the underlined words in Example B.

B

RODS AND CONES

Since the retina is the sensitive organ for seeing, it deserves closer attention than the other structures of the eye. If we examine it with a microscope, we can see that it is made up of extremely tiny cells of two basic types -- rods and cones. The rods are cylindrical in shape, but the cones are rather tapered. Our best estimate is that the eye contains between 110,000,000 and 125,000,000 rods and between 6,300,000 and 6,800,000 cones. This tremendous number of rods and cones, however, does not spread uniformly over the retina. Rather the cones are most numerous in a highly specialized region of the retina known as the fovea, and the rods occur most frequently about 20 degrees away from the fovea. The fovea is a slightly depressed area of the retina.

Imagine that you are reviewing this reading before a quiz or exam. Which of these examples would give you the sufficient, complete summary of the material? Which one “sends you a telegram?” Keep this model of a telegram in mind as you underline or highlight. You’ll need to think a bit more, but that helps you to focus intently on the information as you underline or highlight, improving both comprehension and later review and recall.