

ORIENTATION AND INTRODUCTION

LESSON 4 Applying Critical Thinking to Reading



LESSON OVERVIEW

LESSON THESIS

Lesson 4 provides one very specific answer to the third question, “How can I Apply Critical Thinking to My Student Experience?” by introducing a strategic reading protocol known as “SQ3R.” SQ3R is a step-by-step process for applying critical thinking skills every time we read.

LESSON OBJECTIVES

1. Comprehend the steps within the “SQ3R” reading protocol.
2. Apply the SQ3R critical thinking skill-set to academic reading tasks.
3. Utilize the SQ3R protocol to extract specific information from an article or text.

INTEGRATION AND RATIONALE

A high literacy rate is a necessity for nations to grow and develop. The ability to read efficiently and effectively attains even greater importance for students and for members of the professions—such as Air Force officers. Reading remains the primary means for continued growth, both professionally and intellectually. It allows us to acquire and process information, and if we have read well, apply that knowledge in new and creative ways.

SQ3R: APPLYING CRITICAL THINKING TO THE READING PROCESS

The emergence of a literate society, according to the cultural historian Benedict Anderson, has made it possible for "rapidly growing numbers of people to think about themselves, and to relate themselves to others, in profoundly new ways."¹ The printing press has influenced the development of nation states, what Anderson calls "imagined communities."² They are "imagined" because "the members of even the smallest nation will never know most of their fellow-members, meet them, or even hear of them, yet in the minds of each lives the image of their communion."³ This almost mystical social phenomenon is largely possible because the majority of a nation's members are literate. By reading about their shared history and culture, a population learns about itself.



In addition to its importance in the development of societal and national affinity, the ability to read also plays a vital role in academe. The graphic skills of reading and writing are often called the handmaidens of the learning process. But these academic skills are also the monarchs of their realm—the physical and virtual classroom. And while writing may be the "Queen of the Liberal Arts," reading is still the king.

In this lesson you will be introduced to SQ3R, a well-known study skill that focuses on reading comprehension. You may already be aware of SQ3R. If so, consider Lesson 4 as a refresher, especially if you have not used this technique since your college days.

1 Benedict Anderson, *Imagined Communities*. (London: Verso, 1991), 36

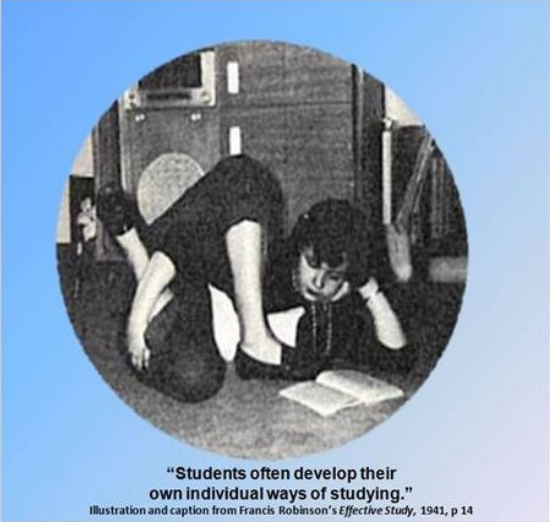
2 Ibid, 6.

3 Ibid.

SQ3R: AN ATYPICAL WAY TO STUDY

Typical Study Methods

Dr. Francis Robinson, developer of SQ3R
1941



"Students often develop their own individual ways of studying."
Illustration and caption from Francis Robinson's *Effective Study*, 1941, p 14

Have you ever noticed how most students study? Everyone has his own techniques and most of these techniques are not very efficient.

Most readers feel that they understand the material as they read; the trouble comes later in trying to remember it. On finishing they push the book aside with a sigh. As to what ideas were discussed, the typical reader has a nebulous feeling that there was much he had understood, but it now is jumbled. Rather than dwell on this discomfiting fact, he prefers to say, "Well that's done! Now for the next lesson."

Francis P. Robinson. *Effective Study*. (New York: Harper & Bros., 1941), 14

"SQ3R" is an acronym for *Survey, Question, Read, Recite, and Review*. "SQ3R" was developed in 1941 by Dr. Francis P. Robinson, a psychology professor at Ohio State University. As noted in the above quotation from his book, *Effective Study*, Robinson believed that most of us do not know how to read efficiently.⁴ He designed SQ3R to help students make the most of the time they spend with an article or book. There are other heuristic techniques that promote effective independent study, but few if any are as easily employed by students and scholars regardless of where they are and what materials they have on hand.

SQ3R: THE CRITICAL THINKING SKILL THAT HELPED TO WIN THE WAR

It may surprise you that SQ3R has a long and storied history reaching back to the early days of World War II. SQ3R was not widely employed until nearly one year to the day

⁴ Francis P. Robinson. *Effective Study*. (New York: Harper and Brothers, 1941).

after the Japanese attack on Pearl Harbor when the War Department created the Army Specialized Training Program or ASTP.



It was December 1942 and no one knew how long the war would last. There were fears at the time that the number of college graduates in technical fields would eventually become depleted. The worst case scenario was that if the war stretched too far into the future, the Army and other services would face a shortage of draftees with college degrees. Louis Keefer, author of *Scholars in Foxholes*, explained that the Army “sent more than 200,000 soldiers to some 227 colleges to take highly [accelerated] courses in various branches of engineering, medicine, dentistry, personnel psychology, and 34 different foreign languages.”⁵

Participating universities worried that they could not meet the challenge and many developed new programs to increase the learning potential of their Soldier-Students and speed up the process. A 2002 article in *Reading Today* explained that Ohio State University, one of the 227 colleges chosen as an ASTP education center, created a Learning and Study Skills program to address the huge influx of students in uniform. Dr. Francis Robinson was selected to head up the new program and he used it to try out new techniques and methodologies to “teach military personnel to learn better by reading.”⁶ One of those techniques was SQ3R, the reading protocol he had introduced in his book just one year before.

In the 1961 revised edition of his book, *Effective Study*, Robinson described his experience working with the ASTP:

In World War II, soldiers assigned to the Army Specialized Training Program were a highly select group in terms of intelligence, previous scholastic record,

⁵ Louis E. Keefer, “The Army Specialized Training Program in World War II,” ASTP 3890, Papa’s Web, <http://www.pierce-evans.org/ASTP%20in%20WWII.htm> (accessed 17 July 2012).

⁶ Thomas G. Sticht, “The Reading Formula that Helped Win World War II,” *Reading Today*, October/November 2002, 18.

and present knowledge, but their study skills were no better on the average than those of other college students. Inquiry brought out that being brighter than their classmates, they had been able to get by in high school with their wits and personality. ...[S]tudies show that [even] good students pay little attention to boldface headings in books... . Of course, some people like to do things the hard way, but others...like to learn easier and more efficient ways of doing things.⁷

The ASTP proved to be an ideal platform for trying out Robinson's reading protocol. By all accounts, SQ3R helped ASTP students keep up with their studies in a fast-paced educational environment. While it has its critics, SQ3R remains a universally popular reading strategy that has stood the test of time because it requires no preparation in advance by the teacher or the student except to obtain the requisite reading material. Perhaps even more important is SQ3R's capacity to get readers to activate their prior knowledge and effectively incorporate critical thinking skills into the reading process.⁸

In the video presentation that follows, you will be introduced to this critical thinking protocol. As mentioned before SQ3R stands for *Survey, Question, Read, Recite, Review*. The video presents the nuts and bolts of this effective process for teasing out important details from an article or chapter and relating them to what you already know. As you listen and watch, you will notice that several aspects of SQ3R present a direct application of *inferencing* and *self-regulation* skills through reflective questioning. Linkages to other critical thinking skills will also become clear as you view the video.

All academic programs—particularly those at the post-graduate level—require a great deal of reading. SQ3R can help you derive a deeper understanding of the facts and concepts you read about, so that you will be better able to apply those details and ideas effectively in discussions and in formal writing.

REQUIRED LESSON MATERIAL

Video Presentation: “SQ3R: Applying Critical Thinking”

Watch an animated presentation that introduces SQ3R, a critical thinking protocol and study skill.

(You must be online to access this content.)

[“SQ3R: Applying Critical Thinking”](#) (Flash version only)

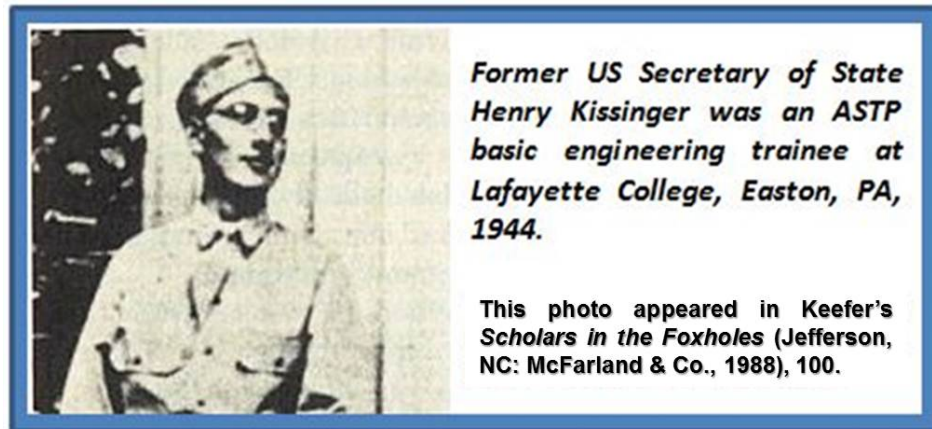
Video Script and Slides (pages 8 to 15) The video presentation’s script and slides are available below. **(To access the script, click on the bookmark in the bookmark column on the left or scroll down to the end of the PDF.)**

⁷ Francis P. Robinson. *Effective Study, Revised Edition*. (New York: Harper and Brothers, 1961), 11.

⁸ Ibid.

In the Lesson 4 Progress Checks, you will have an opportunity to practice SQ3R. You will be asked to use the protocol to extract key information from a journal article.

ASTP REDUX



While the ASTP lasted only about a year, it helped mold many young scholars who would go on to prominent places in government, business, journalism, and entertainment. The list includes former New York Mayor Ed Koch and the late Sen. Frank Church of Idaho (politicians), the late Andy Rooney and Roger Mudd (journalists), and actor/director Mel Brooks. But perhaps the most famous “ASTPer” is former Secretary of State Henry Kissinger. Kissinger was assigned to Lafayette College in Easton, PA. In his book on the ASTP, Lewis Keefer includes the reminiscences of Kissinger’s roommate, Charles Coyle, who recalled that the future diplomat “didn’t just read books, he devoured them.”⁹ Coyle went on to provide an example of Kissinger’s total involvement in the reading process

He’d be slouching over a book and suddenly explode with an indignant, German-accented “[BS]!” blasting the author’s reasoning. Then he’d tear it apart, explosive words prevailing, and make sense of it.¹⁰

If we take his roommate at his word, Dr. Kissinger was clearly incorporating SQ3R methodology into his study regimen by engaging in a dialogue with a book, arguing with the author, and lending his voice to the learning process.

⁹ Louis E. Keefer. *Scholars in Foxholes: The Story of the Army Specialized Training Program in World War II*. (Jefferson, NC: McFarland & Co., 1988), 99.

¹⁰ Ibid, 99.

CONCLUSION

SQ3R is a study skill that can improve reading comprehension. It was developed by Francis Robinson of Ohio State University during World War II for students in the Army Specialized Training Program (ASTP). ASTP was an Army program designed to provide academically inclined high school graduates with a highly accelerated introduction to the applied sciences and foreign languages. Robinson believed that most students did not have a plan or purpose when they studied. He devised SQ3R to help students read and study more efficiently by providing them with a protocol that activated prior knowledge and promoted critical thinking through purposeful reflection.

The SQ3R protocol can be summarized as follows:

Survey

Preview and skim the article before reading to activate prior knowledge and interest. Ask questions.

Question

Throughout the reading process, engage in an inner dialogue with yourself and the author. Ask questions, draw inferences, and make predictions.

Read

Read the article, chapter, or book. Ask questions.

Recite

Answer the questions you posed. Evaluate your predictions. Ask questions. Summarize what you have read.

Review

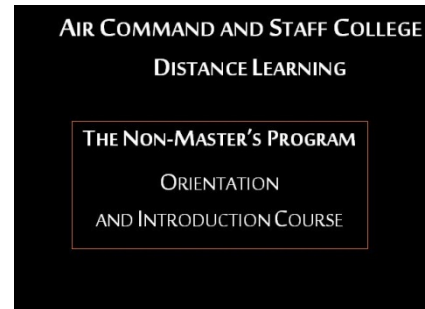
Survey again. Ask questions. Connect what you have read to your own experience.

The next lesson explains how to apply your critical thinking skills to culturally complex environments.

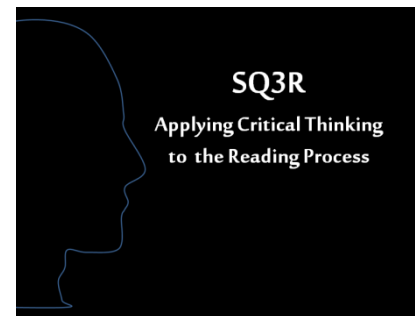


SQ3R Script (Revised)

Slide 1
ACSC-DL 6.0 Slide
Music only

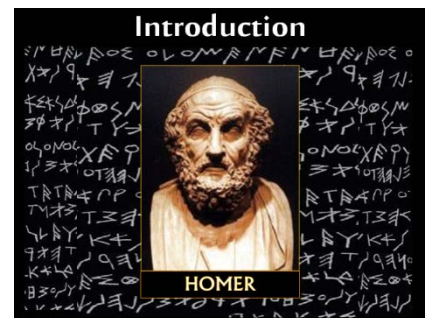


Slide 2
SQ3R
Music only



Slide 3
Introduction:

The literary tradition of the West begins with a Greek bard and poet born about 800 years before the birth of Christ. Because the alphabet of the Greeks was known only to a small coterie of priests and scholars, the great blind poet was almost certainly illiterate. And because he could not read, Homer sang the 12,000 hexameter lines of “The Odyssey” and the even longer “Iliad” from memory. Homer’s audiences listened raptly to his voice, immersed in his stirring tales of gods and men. For today’s audiences, however, reading has replaced listening—the eye has usurped the ear. Today’s writers no longer require the great feats of memory and performance employed by Homer and the lesser troubadours of antiquity. But, like Homer, the authors of our age do have a voice. As readers, we must strive to hear their voices with our eyes.

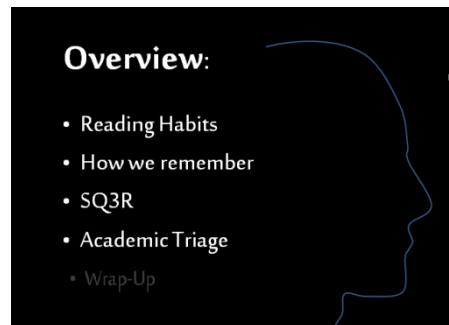


In a world flooded with written and visual data, the ability to read efficiently and effectively is an essential skill for every citizen of a literate society. It attains even greater importance for students and members of the professions. Skillful reading—reading that squeezes key data from an article—is the primary means for attaining professional and intellectual growth. Our brains have the power to do this and more if we harness critical thinking to the reading process. This lesson will introduce you to some simple procedures that will make you more adept at deciding what information should be remembered and train you to become better at retaining it. We call this process SQ3R.

Slide 4

Overview

We will begin by talking about your reading habits and how you remember. Next we'll go step by step through this critical thinking process we call SQ3R. We'll also talk about how it can be used for "academic triage"—those times when you are pressed for time and need to extract and retain key data very quickly. The lesson will end with a short review of the process.



Overview:

- Reading Habits
- How we remember
- SQ3R
- Academic Triage
- Wrap-Up

Slide 5:

How do you read?

How do you read? Like this? It has happened to most of us. Reading—especially non-fiction—can sometimes be monotonous at best and occasionally—dare we say it?—downright boring. Have you ever finished reading an entire paragraph and then asked yourself, “What have I just read?”—and discovered you couldn’t remember anything.



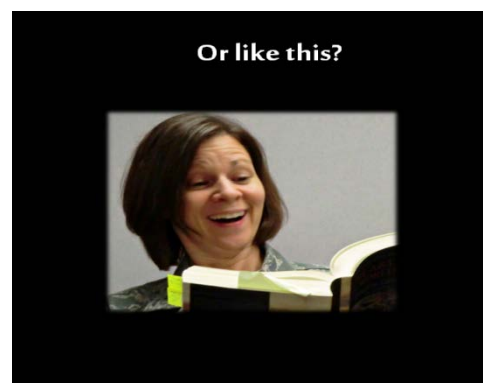
How do you read?

Like this?

Slide 6:

Or like this?

Reading non-fiction articles and books can be a challenge. Wouldn't it be wonderful if we could read like this person? What can we do to make those dry scholarly articles and book chapters that we have to read engaging? Even interesting? How do we know what to focus on? What's important? What isn't?



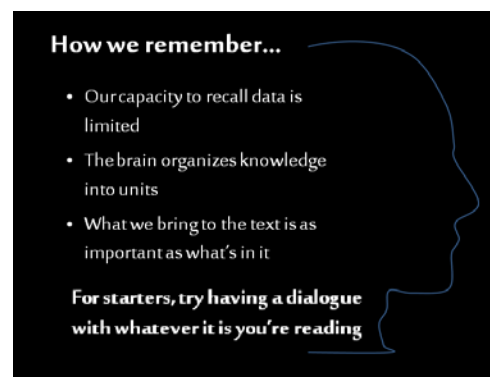
Or like this?

Slide 7:

How we remember...

Our capacity to recall data is limited (Heading Only: DO NOT READ)

Our capacity to recall data is limited, yet Homer was able to remember and recite more than 12,000 lines of verse. Even today the Homeric tradition lives on as bards in Turkey and in the Balkans can still recite long epic poems from memory. So even though our ability to remember has its limitations, we know it's possible to remember a great deal more than we normally do when we read. Which begs the question: How DO



How we remember...

- Our capacity to recall data is limited
- The brain organizes knowledge into units
- What we bring to the text is as important as what's in it

For starters, try having a dialogue with whatever it is you're reading

we remember?

***The brain organizes knowledge into units* (Heading Only: DO NOT READ)**

Cognitive psychologists theorize that our memory data is organized in units of knowledge. In order to add data to these units, we must relate what we've read to what we already know.

***What we bring to the text is as important as what's in it* (Heading Only: DO NOT READ)**

What WE bring to the book or article WHILE READING is as important as the information the writer wants to convey.

***Try having a dialogue with whatever it is you're reading* (Heading Only: DO NOT READ)**

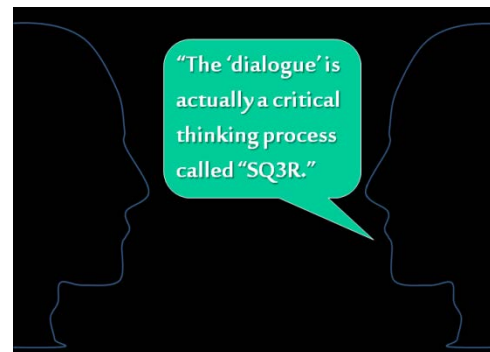
It's true the writer is not present, but we can hear his or her voice in the text. To make the information stick, we have to lend our own voices to the process. This means having a dialogue with whatever it is you're reading.

Slide 8:

Dialogue

"How would someone go about having a dialogue with an article about air power," you might ask.

A good question. This is where SQ3R comes in. It's a critical thinking protocol that will jump start your conversation with the text.



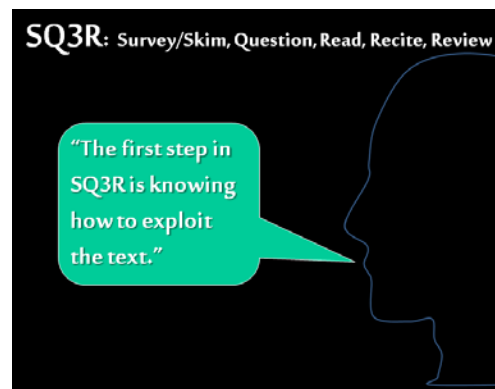
Slide 9:

Exploit the Text (1)

In the SQ3R protocol:

- The S stands for Survey and Skim
- The Q stands for Question
- The 3 Rs are Read, Recite, and Review

But the first real step in SQ3R is knowing how to exploit the text. Once you exploit the text, you will be able to hear—and respond—to the voice of the author

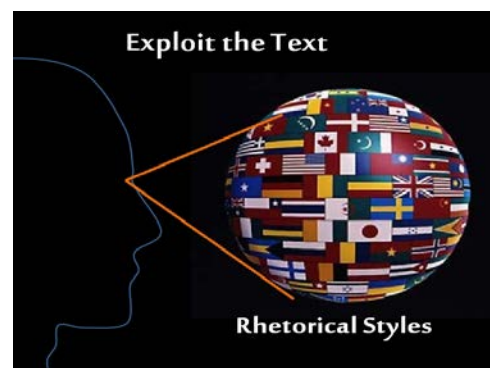


Slide 10:

Exploit the Text (2): Rhetorical Styles

Once you know how an academic text is organized, you can use it to glean the most important information it has to offer and incorporate that data into your own units of knowledge.

Literary and scholarly traditions around the world have their own special rhetorical styles, each reflective of their respective cultures. Academic writing in the English-speaking world has a unique organizational pattern that typifies the way we communicate in many social contexts.

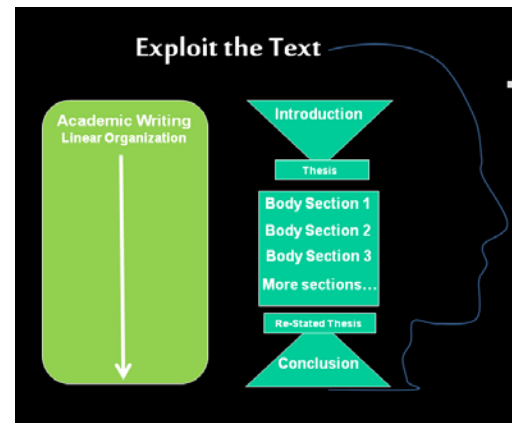


As you might expect, the pattern for English speakers is direct and linear.

Slide 11:

Exploit the Text (3)

An article will usually begin with an Introduction that expounds broadly on the selected topic, and then moves inexorably toward the specific point or points to be argued or presented. As an alternative, some authors may choose to open an article with an anecdote or some other attention-grabbing device, rather than a general statement. But in all cases, the purpose of the Introduction is to draw readers in and lead them to the main points. The Introduction also casts a net that is wide enough for readers to begin the process of relating what they know in general about the topic.



In academic articles, the Introduction inevitably leads to the Thesis Statement. The thesis is the point or points the author will discuss in the article. The Thesis Statement may be one or more sentences long and generally introduces all the main points the author will present. The Thesis Statement is most commonly found at the very end of the introduction.

The next section in this linear, straightforward organization is the Body. The Body typically contains a section for each main point described in the thesis. In short articles or chapters, a main point can be just one paragraph long. For longer pieces it can comprise several paragraphs or even pages.

The final section in an academic paper is the Conclusion. The Conclusion is like the Introduction turned upside down. It typically begins with a brief restatement of the Thesis and then rehashes some of the points made within the article as it moves toward more general statements. There are, of course, exceptions to this general organizational pattern. Some academic papers will end with a “Discussion” section or an “Implications for Further Study” section. But all academic articles will begin with an Introduction and a Thesis Statement and end with some form of Conclusion.

Slide 12:

Intro to the Steps in SQ3R

As mentioned earlier, the steps in the SQ3R protocol are:

- Survey and Skim
- Question
- Read
- Recite
- and Review



Slide 13:

Survey

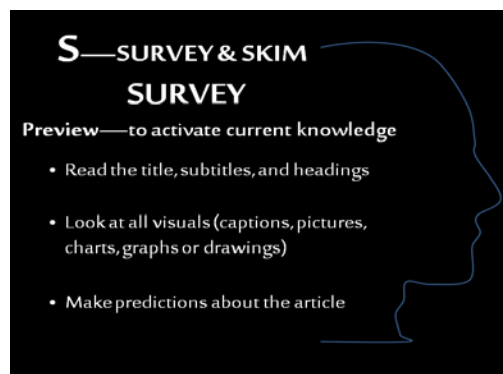
Let's look at Survey first. What we do as we Survey is to preview the article. But this kind of preview goes a bit deeper than a 2-minute movie trailer. The primary purpose of Surveying or previewing the article is to activate your current knowledge.

You do this by:

- Reading the title, subtitles, and headings if there are any.
- You also need to look at all the visuals inserted in the article or chapter. This includes pictures, charts, graphs and drawings. Also, make sure you read all the captions to the pictures and charts.

This will activate your units of knowledge and begin the data assimilation process.

You should also make predictions about the article. Make guesses as to what the article is about. Begin questioning the author in your mind as you look at the non-written visual elements of the text.



Slide 14:

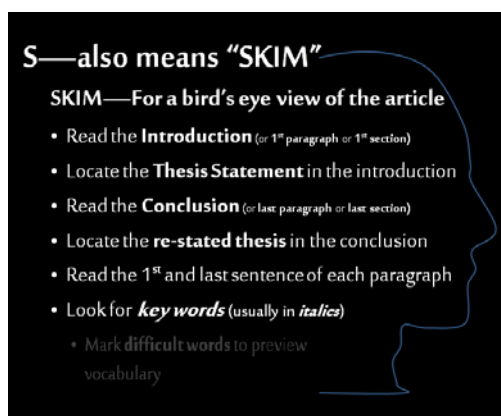
Skim

Skimming is the other side of the “S” in SQ3R. The Skim gives you a “birds-eye view” of the article or chapter. Do this after you’ve finished your survey. This type of skim is not the simple method of running your eyes down the page to extract key information. The SQ3R skim requires discipline, but it will help you to understand and absorb key points. This step by step process will allow you to extract key information in a relatively short timeframe.

- First, read the Introduction (or the 1st paragraph or in longer pieces, such as book chapters, the entire 1st section).
- Next, locate and read the Thesis Statement in the introduction. Underline, highlight, or make a note of the thesis and the main points.
- Then, skip to the end of the article or chapter and read the Conclusion (or the last paragraph or the last section)
- Finally, see if you can locate the re-stated thesis within the Conclusion

Now we come to the real heart of skimming. Here, once again we exploit the text to extract key information. You may recall from your elementary or middle school days that a topic sentence contains the main idea of a paragraph. It acts much like a thesis statement in this context. You may also recall that the topic sentence is usually—but not always—the first sentence in a paragraph.

With this in mind, go back to the beginning of the article’s body and read the 1st and last sentence of each paragraph. The last sentence in a paragraph often acts like a conclusion within the paragraph. It also sometimes acts as a hook moving the reader on to the topic in the next paragraph. Either way the last sentence often contains valuable information that can help you to get a firm grasp of the article’s main ideas.



In addition, as you read, look for *key words* (usually in *italics*). Highlight, underline, or note these and any other difficult words you encounter. However, keep moving at a good pace and don't stop to look the words up while you are skimming.

Slide 15:

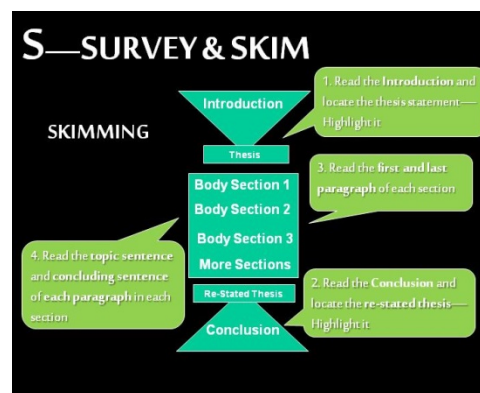
S—Survey and Skim

Let's review how to survey and skim an academic article using the SQ3R protocol:

- After surveying the article or chapter by looking at pictures, charts, and graphs, and reading any captions that appear, make predictions about the article's topic and main points.

Now you're ready to skim.

- First, read the Introduction and locate the thesis statement, and highlight or underline it.
- Then read the Conclusion and locate the re-stated thesis. Highlight or underline it.
- Next, if you're reading a longer article that has several sections in the body, read the first and last paragraphs of each section.
- Finally, read the topic sentence and concluding sentence of each paragraph in each section



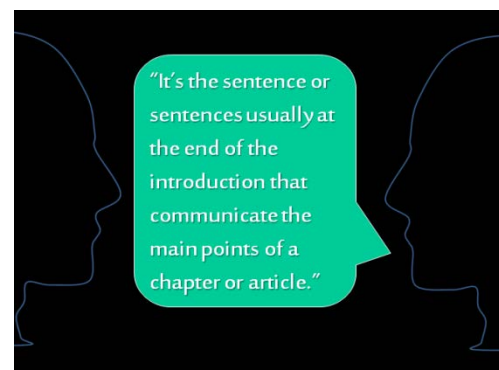
Slide 16:

Thesis Statement Review

You might still be a bit hazy about what a Thesis Statement is. It isn't something that every high school or college composition class teaches. And if you haven't done any academic writing for a while you may have forgotten. So, before moving on to the "Q" of SQ3R, let's do a short review.

The thesis statement is the sentence or sentences that usually appear at the end of the introduction that communicate the main points of a chapter or article.

The thesis is also usually found in the first few sentences or paragraphs of the conclusion.



Slide 17:

Thesis Statement Quiz

Now, let's see if we can find the thesis statement in a journal article.

Transition Shock by Janet M. Bennett, Ph.D.

One of the difficulties in considering culture shock is the tendency to treat it as an exotic ailment with origins rooted in faraway places. In fact, culture shock bears a remarkable resemblance to the tensions and anxieties we face whenever change threatens the stability of our lives. Alvin Toffler has described the phenomenon of disruptive change within a culture as "future shock."¹ Gail Sheehy has focused on the painful crises in individual life cycles, what we might term "passage shock."² These and other forms of "shock" (including culture shock) might be subsumed under the general category *transition shock*.

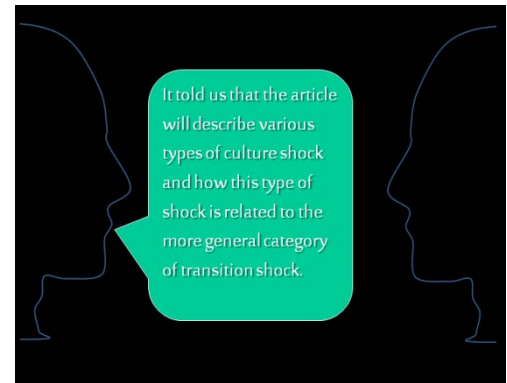
This article will relate various concepts of culture shock to the general category of transition shock and will suggest how this frame of reference is useful in understanding the causes, effects, and coping mechanisms of culture shock.

Slide 18:

Thesis Statement Answer

Were you able to locate the thesis statement in the introduction? What did it tell us about the article?

You're right. It told us that the article will describe various types of culture shock and how this type of shock is related to the more general category of transition shock



Slide 19:

Q—R1—Question and Read

The "Q" stands for "Question," and this is what turns reading into a dialogue with the author. You should start questioning right from the beginning. When you Survey you can frame your predictions as questions. This will make you feel as though you are in a conversation—or in some cases an argument—with the writer.

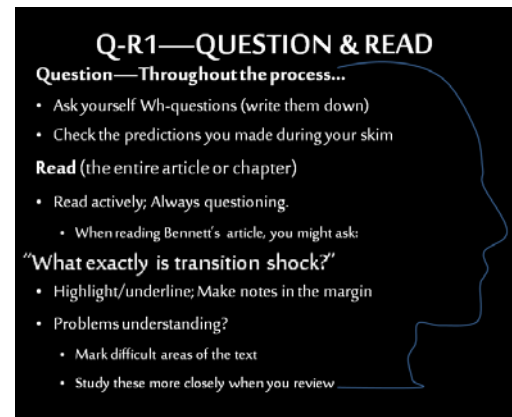
After you finish Surveying and Skimming, you now read the entire article or chapter, asking questions throughout the process

- Ask yourself Who, What, When, Where, or How questions. It's also a good idea to write them down as they come to mind
- Also, as you read, check the predictions you made during while you were skimming to see if your guesses are correct.

For example, when reading Janet Bennett's article, you might ask:

"What exactly is transition shock?"

While you read, highlight or underline key areas Make notes in the margin. If you have problems understanding, mark those difficult areas of the text and study them more closely during your review



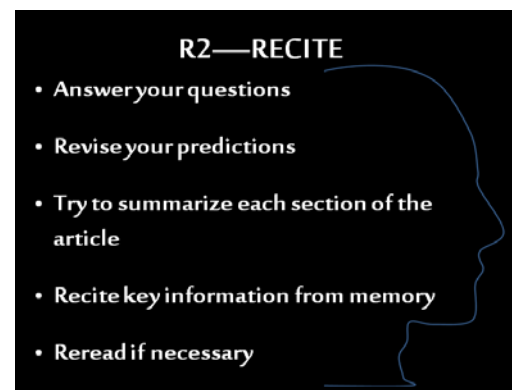
Slide 20:

R2--Recite

Once you've finished reading the article or chapter, look at the questions you jotted down as you surveyed, skimmed, and read. See if you can answer them now.

Think back to the predictions you made. How close were they to what the author actually said.

To help you put it all together, write a short summary of each section of the work.



Then, do your best to recite key information from the article without looking back. You might also try constructing an oral summary and recite it to yourself.

If you are still having problems understanding main ideas and important vocabulary, read the article again.

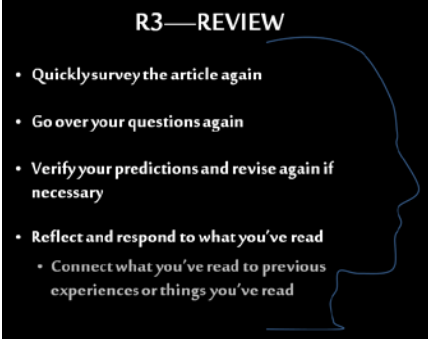
Slide 21:

R3—Review

In this final step, survey the article or chapter once again and review your questions. Verify your predictions and revise.

If you haven't already done so, see if you can connect what you've read to your experience or other things you've read.

What? You say you don't have time for all this? SQ3R can also help you perform some "academic triage."



R3—REVIEW

- Quickly survey the article again
- Go over your questions again
- Verify your predictions and revise again if necessary
- Reflect and respond to what you've read
 - Connect what you've read to previous experiences or things you've read

Slide 22:

Academic Triage

What is academic triage? It's those times when life gets in the way and you can't be as thorough a reader as you would like to be in a perfect world. When circumstances or events are conspiring against you, use SQ3R to your advantage.

First exploit the text! Do just the Survey, Skim, and Question steps of the protocol. No time for even that? Do as much of the full SQ3R process as you have time for. You will draw much more from an article by just the survey, skim, and question steps than if you plow through the first five pages of a 15-page article and have to stop for lack of time.



ACADEMIC TRIAGE

When you don't have time:

- Survey and Skim
- Question (during the survey and skim)

NO TIME FOR EVEN THAT?

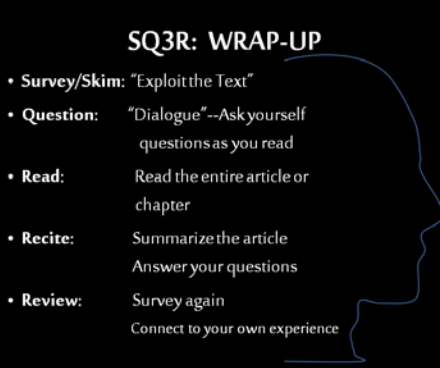
- Do as much of the full SQ3R process as possible

Slide 23:

Wrap-Up

SQ3R will not transform you into a latter day Homer, but it will help you become a more active reader—one who makes predictions and questions while reading—and lead you quickly to key information in an article or chapter. Remember to always exploit the text. Locate the introduction and conclusion and the thesis statements within those sections.

Engage in an active dialogue with yourself—and the author—as you read. Read the article or chapter or then quiz yourself with the questions you've asked and summarize the article to ensure comprehension. When you review, survey the text again and try to link its content to your own experience.



SQ3R: WRAP-UP

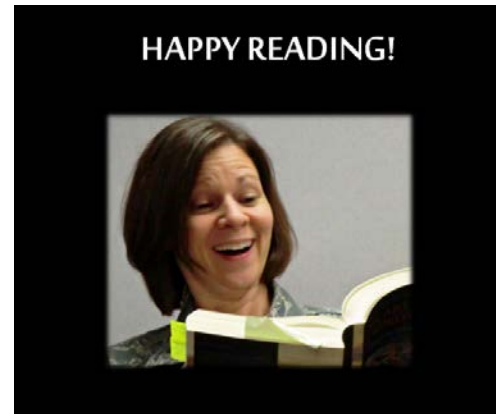
- **Survey/Skim:** "Exploit the Text"
- **Question:** "Dialogue"—Ask yourself questions as you read
- **Read:** Read the entire article or chapter
- **Recite:** Summarize the article
Answer your questions
- **Review:** Survey again
Connect to your own experience

Remember it is still important to read the entire article to get the full benefit of the author's ideas, but when life gets in the way, SQ3R can help you perform academic triage.

Slide 24:

Happy Reading

Good luck as you progress through program and Happy Reading!



Slide 25:

SQ3R Coat of Arms

