

STUDY SKILLS



READING EFFECTIVELY

INTRODUCTION

Success in a baccalaureate nursing program requires adjustment to a new lifestyle and to new academic demands. In making this adjustment, effective study skills are paramount. The following presentation is to acquaint nursing students with a number of the

Nursing students are keenly aware of the vast amount of reading material required each semester. Francis P. Robinson developed the effective reading approach SQ3R, an acronym for his five step method—Survey, Question, Read, Recite, and Review.

Below are the **5 STEPS** of the **SQ3R**:

Survey

First, get yourself oriented to the material. For a book:

- ✚ Check out the table of contents, preface, and acknowledgements.
- ✚ If there is a summary chapter, quickly glance through it.
- ✚ Take the bulk of the reading piece by piece.
- ✚ Skim through a chapter, reading the headings and summary paragraphs to familiarize yourself with the main subjects.

Question

Next, initiate an answer seeking attitude to a focus to your reading.

- ✚ Use the course objectives to give a purpose to your reading.
- ✚ Create your own objectives from old exams.
- ✚ Turn headings and topic sentences into questions. Doing so anticipates test items and stimulates an answer seeking approach.

REMEMBER: Your reading should always be purposeful.

Read

Then read to answer a question or to fulfill an objective.

Recite When you have read the material relevant to answering a question or objective, turn away from the material and write a content summary or outline—from memory.

Writing out your answer is critical.

To be effective, this step must occur quickly—concise outlines are essential.

Review After making any outlines or charts:

- ✚ Review your answers to the objectives.
- ✚ Test your recall of the details found in the text.
- ✚ Review the material (10 minutes of review in every hour of studying is a good rule to follow).

OUTLINING

In answering a question or objective, you may decide to create an outline. To create a useful outline, follow these three basic steps:

1. Identify the subject of the material and begin to note the details about it. Here is an example:

Connective tissue underlies the skin and serves as a binding for the blood vessels and various organs.

This sentence is about connective tissue—that's the subject. The principle details are that it is found underneath the skin and binds blood vessels and organs.

2. Organize the details in a manner that recognizes the relationships among them. A good way to do this is to develop a hierarchical organization of the material. For example, consider the following passage:

In connective tissue, the collagen and elastic fibers are embedded in an amorphous matrix called ground substance. The ground substance is largely carbohydrate in the form of large polymers called mucopolysaccharides and glycosaminoglycans.

Collagen, elastic fibers, and ground substance can be grouped together as details about components of connective tissue. The labels or categories that you create serve 2 functions:

- ✚ They represent dimensions which can be used to compare and contrast subjects along similar lines.

For example, you can compare and contrast the components of different tissue.

- ✚ They provide key associative links to aid recall. For example, you can ask yourself, "What are the details that falls under the specific labels or categories?"

3. As you hierarchically organize facts and collect details under labels or categories, use outline to graphically display the organization and meaning

you have derived. For example, the reading passage presented earlier can be outlined as follows:

I. Tissues

A. Connective

1. Components

- a. collagen
- b. elastic fibers
- c. ground structure

(1) components

- (a) mucopolysaccharides
- (b) glycosaminoglycans

(2) Structure

- (a) amorphous matrix

REMEMBER: Outlining does take time, but reading and re-reading the text is both more time-consuming and more ineffective as a study technique.

MAKING CHARTS

When you are required to learn and retain many details, charts can be more helpful than outlines. By way of illustration, consider the following outline:

- I. Vitamins
 - A. Vitamin A (retinol)
 - B. Vitamin D (calciferol)
 1. Physiologic function
 1. Physiologic function
 - a. Absorption of calcium & phosphorous
 - a. Production of rhodopsin
 - b. Calcification of bones
 2. Requirement
 2. Requirement
 3. Food sources
 2. Requirement
 3. Food sources
 - a. Liver, cream, butter, whole milk
 - a. Fish oils
 4. Deficiencies
 - b. Fortified milk
 - a. Effects of:
 - (1) Night blindness
 - a. Effects of:
 - (2) Dry and scaly skin
 - (1) Rickets
 - b. Etiology
 - (2) Faulty bone growth
 - (1) Poor absorption (celiac disease)
 4. Deficiencies
 - b. Etiology
 - (2) Altered metabolism (fever)

- (1) Dietary deficiency
 - 5. Excessive intake:
- (2) Deficient absorption
 - a. Effects of:
- 5. Excessive intake:
 - (1) Dry, rough skin
 - a. Effects of:
 - (2) Joint swelling
 - (1) Calcification of soft tissues
- 6. Clinical applications

Step 1 to designing a chart is to identify the subjects and labels. The subjects will be the row headings; the labels will be the column headings. Looking over the outline yields:

<u>Subjects</u>	<u>Labels</u>	
Vitamin A	Physiologic function	Deficiencies
Vitamin D	Food sources	Excessive intake
	Requirement	Clinical applications

Step 2 in making a chart manageable to learn, the rule of thumb is: *One should memorize or learn material in units of 4 or less.* Applying this rule to our 2 subjects and 6 labels, we can organize the chart in the following way:

<u>Subjects</u>	<u>Labels</u>
A. Vitamin A	A. Normal functioning <ul style="list-style-type: none"> 1. Physiology 1. Requirements 2. Food sources
B. Vitamin D	B. Abnormal functioning <ul style="list-style-type: none"> 1. Deficiencies 2. Effects of excessive intake 3. Clinical applications

Table 2 Completed chart with all details and headings

TITLE: NORMAL AND ABNORMAL FUNCTIONING OF VITAMINS A AND D

VITAMIN	NORMAL FUNCTIONING			ABNORMAL FUNCTIONING				
	PHYSIOLOGY	REQUIREMENTS	FOOD SOURCES	DEFICIENCIES		EFFECTS OF EXCESSIVE INTAKE	CLINICAL APPLICATION	
				EFFECTS OF	ETIOLOGY		DEFICIENCIES	OTHER DISORDERS
A (RETINOL)	Production of Rhodopsin	Adult Male-5000 Female-4000	-Liver -Cream -Butter -Whole milk	-Night Blindness -Dry skin	-Diet deficiency - Metabolism (fever)	-Dry skin -Joint swelling	5000 to 50000 i.u. daily	-Dermatosis -Acne -Psoriasis
D (CALCIFEROL)	-Absorption of Calcium and Phosphorus -calcification	400 i.u.	-Fish oil -Fortified milk	-Rickets -Faulty bone growth	-Diet -Deficient absorption	- Calcification Of soft tissue	-Prophylactic 1000 to 4000 i.u.	

REMEMBER: Constructing charts does take time. However, the search for organization and meaning that goes into the creation of a chart is the basis for effective learning and retention.

MEMORIZING

During your career as a student, you will be required to commit a great deal of information to memory. The key to effective memorization is organization. The more background information you have the more adept you will be at organizing the material.

Memorizing charts and outlines

Before you memorize charts and outlines from the text, you must organize the material to make it meaningful and responsive to course objectives. After organizing the material, you can proceed to the actual memory. Follow these steps:

Basic Cycle

1. First, choose a “do-able” selection of material for memorization. How much you try to memorize at once depends on the complexity of the content, how familiar it is to you, and how well it is learned. Set limited goals for each attempt at the material. It will be more rewarding to finish many small goals successful than to struggle for the same period with a large set of details.
2. Now look at this chosen selection of information until everything seems familiar.
3. When nothing seems new, cover it up and write out everything you remember as quickly as possible on scratch paper. Sketch out diagrams as fast as you can. REDUCE WRITING TIME BY USING ABBREVIATIONS—writing things out precisely takes too much time. Do not substitute recitations to yourself for writing it out. Writing more nearly duplicates the exam situation—it “commits” the details to memory more fully.
4. If you know that you have missed something, begin the cycle again. If you are sure that what you have written out is accurate and complete, move on to the next cycle.

Comparison Cycle

1. Compare the information on your scratch paper with the original sources.
2. Note your errors and fill in the correct answer or missing information with a different colored ink—this will flag the information in memory and provide a reference point for later recall.

3. (a) If you have made no more than 3 corrections (use your best judgment as to the number of errors), move on to the next cycle.
- (b) If you made more than 3 corrections, repeat the Basic Cycle—you have not learned it yet.

Retention Cycle

1. Wait two or more hours—you are in the critical period of forgetting now.
2. After you have looked at the title or topic heading, write out everything related to it that you can remember.
3. Repeat the Comparison Cycle and mark corrections in a different colored ink. Repeat the Basic Cycle if you have made more than 3 errors. Do not panic if you have to start over. You have learned it once and each subsequent trial will go more quickly.

Review Cycle

1. A review can never hurt memory—repeat the Retention Cycle. The trick is to schedule several reviews over time.

Memorizing Figures and Diagrams

Prior to memorizing the information contained in figures and charts, be sure that the material is organized. There are 2 basic ways of organizing this information. First, one can identify specific areas on a figure and organize details according to their location. The second approach is to develop clusters of details and then associate locations to details. Consider the following examples:

[Superior Skull Answers](#) is a diagram of the superior view of the skull. In preparing to memorize the diagram, one could cluster together similar details and then associate locations to each similar detail. The details of [Superior Skull Answers](#) could be organized into 2 clusters.

3 SUTURES	3 BONES
coronal	frontal
sagittal	parietal
lambdoidal	occipital

Memorization would proceed from cluster to cluster, associating location to the details.

<http://jacketmagazine.com/20/px/ear-1.jpg> is a diagram of the ear. In preparing to memorize this diagram, one could organize the parts by location.

EXTERNAL EAR	MIDDLE EAR	INNER EAR
1. Eardrum (Tympanic membrane)	1. Eustachian tube	1. Cochlea
	2. Auditory ossicles a. Malleus b. Incus c. Stapes	2. Semicircular canals
		3. Nerves a. Auditory b. Facial c. Vestibular

Memorization would proceed by considering a location and associating details to it.

The actual memorization sequence for each of the 2 diagrams would be identical to the process described for outlines and charts. For example, you begin to memorize the diagram of the ear by “looking at” the external ear until it does not seem new or unfamiliar. Then, sketch the diagram out quickly, labeling the parts of the external ear as you draw them. When comparison of your sketch with the original diagram indicates that you have memorized the parts of the external ear, you would move on to the middle ear and repeat the cycle; repeat the cycle with the inner ear.

REMEMBER: Your sketch is not supposed to be a work of art—do it quickly and use abbreviations.

GETTING THE MOST OUT OF LECTURES

Being an effective listener in lectures strongly resembles being an effective reader. In both activities, you seek to answer a question or objective and you are an active participant searching for meaning. To get the most out of lectures, follow these steps:

STEP 1 Prepare for a lecture: read relevant material, familiarize yourself with the vocabulary and main concepts, and identify a set of questions or objectives you want answered during the lecture. Listen for answers.

STEP 2 Record what is said on only one side of the note paper. The blank side can be used for rewriting confused sections or adding information. Or, draw a line down the page about one-third of the way over from the left edge. Record the lecture to the right of the line, and use the blank column to add information.

STEP 3 Write down everything that is said—in the language used by the instructor. Do not worry about understanding it now. You can do that later when you sit down to review your notes.

STEP 4 Immediately after class, fill in the gaps of material you missed. If you cannot remember what was said, consult your instructor or classmates. Do this step as soon after the lecture as you can.

STEP 5 Do a first review of the notes by reorganizing them into a brief outline. Write in the space left open or in the left column. These outlines should be brief, and consist of subjects and labels which organize details in the notes.

STEP 6 As you become more adept with the outline format, begin to use it to record lectures. If you get lost in the midst of a lecture, go back to recording everything that is said. Start outlining again as you catch up or the content begins to make sense. Do not worry about the part you did not understand—you can come back to it later.

REMEMBER: You will spend several hours every week attending lectures. It is in your best interest to practice listening skills that facilitate your use of time. Previewing the information and reviewing the lecture material in light of your objectives are very useful.

TAKING EXAMINATIONS

As a nursing student, you will be tested on what you have learned. In all likelihood, you will be asked multiple choice questions.

Answering multiple choice questions is a decision-making process—in fact, a series of decisions. You must first determine what the item stem is asking. Then follows a series of decisions about the alternatives: which ones to eliminate, which ones appear correct, which ones are uncertain about. Finally, you must choose your answer and decide whether you want to return to the item if you have time left over.

One best answer: This is one of the most frequently used multiple choice formats. It consists of a question or open-ended statement, followed by 3 to 5 alternatives—one of which is the correct answer. You must choose the most appropriate or best answer.

To focus on the subject and intent of the question, underline the key words as you read. As you read the alternatives, place beside them:

- T if the alternative is true
- F if the alternative is false
- ? if you are uncertain whether the alternative is true or false

Read all the alternatives before marking an answer. **REMEMBER** that this is a one best answer question. If you decide that you are not entirely comfortable with the alternative you marked and wish to review it if you have time later, circle the question number in your test booklet—not on your answer sheet—for easy reference.

The following test question illustrates this technique:

ONE BEST ANSWER

Directions: Each of the questions or incomplete statement below is followed by 5 suggested answers or completions. Select the best answer.

1. In which order are the blood coagulation factors activated?

T	(A)	XII, XI, IX, X, thrombin, fibrin
F	(B)	IX, X, XI, XII, thrombin, fibrin
F	(C)	thrombin, IX, X, XI, XII, fibrin
F	(D)	X, IX, XII, XI, thrombin, fibrin
F	(E)	XII, XI, IX, thrombin, X, fibrin

Decisions regarding each alternative are recorded in the margin with Ts and Fs. Note in the example that decisions have been made about all the alternatives. Although the first alternative was true, a better one may have followed.

One best answer, negative stem: In this type of question, one best answer is required but there is a negative in the stem. For example, you may be asked a question with the format, “Which of the following is not characteristic of X?” or “All of the following are characteristic of X except.” In order to avoid the potential confusion from the use of a negative, follow these steps:

1. Circle and cross out the negative in the question.
2. Read the question as a positive statement.
3. Evaluate each alternative using the true/false technique as shown previously.
4. Choose the alternative which is false. This will be the correct answer.

For example, consider the following question:

Which of the following is not a diagnostic characteristic of anorexia nervosa?

- A) a distorted body image
- B) loss of body weight
- C) binging followed by purging
- D) an intense fear of becoming obese

Following Step 1: we cross out the word “not” in the question.

Following Step 2: we read the question as, “Which of the following is a diagnostic characteristic of anorexia nervosa?”

Following Step 3: we evaluate each alternative as true or false:

- T A) a distorted body image
- T B) loss of body weight
- F C) bingeing followed by purging
- T D) an intense fear of becoming obese

Following Step 4: we choose C as the correct answer since C is the alternative which is false.

Case history—one best answer: This type of question consists of a brief description of a clinical problem or patient. Several questions—usually one best answer—may follow the case history to test your knowledge of different aspects of the disease or problem. Case histories may include signs and symptoms of disease, patient history, laboratory results, diagnosis, treatment, and the course of the illness.

As you read the case history, it is helpful to use slash marks and headings to divide up and identify the types of information found in the stem.

Matching: Matching items consist of a list of 3 to 5 alternatives which are followed by two or more stems. One and only one of the alternatives is correctly associated with each stem, but the alternatives may be used once, more than once, or not at all. This item format is designed to test your ability to distinguish between closely related details.

In order to reduce the matching items to an orderly series of true-false decisions, write out A..B..C..D..E in the margin as shown in the example. Beside the item number, record T, F, or ? decisions regarding alternative.

MATCHING

Directions: Match the nerve fibers in Column A with the cell bodies in Column B. Each of the alternatives in Column B may be used once, more than once, or not at all.

A B C D E

Column A

Column B

- | | | |
|-----------|--|----|
| F F F F T | 1. Afferent nerve in sinus nerve | A. |
| | Nucleus of Edinger-Westphal | |
| F F T F F | 2. Efferent fiber to frontalis | B. |
| | Nucleus Ambiguous | |
| T F F F F | 3. Preganglionic efferent fiber in oculomotor nerve | C. |
| | Facial Nucleus | |
| F F F ? ? | 4. Afferent fiber supplying palatine tonsil | D. |
| | Ciliary ganglion | |
| ? F F ? ? | 5. Postganglionic efferent fiber to sphincter of pupil | E. |
| | Inferior ganglion of glossopharyngeal | |
| T F F F F | 6. Preganglionic efferent causing accommodation | |

Matching pairs: These items consist of 2 answers plus the alternatives “both” and “neither” followed by several stems. Knowing the relationship between one alternative and the stem is not sufficient. You must make decisions regarding each alternative to make the correct choice. To clarify how your answer sheet should be marked, first write out a mini-chart beside the directions, as shown in the following example.

MATCHING PAIRS

Directions: Each set of lettered headings below is followed by a list of numbered words or phrases. For each numbered word or phrase select:

A B

T F A if the item is associated with (A) only

F T B if the item is associated with (B) only

T T C if the item is associated with both (A) and (B)

F F D if the item is associated with neither (A) nor (B)

Questions 1-3

- (A) compulsive eating
- (B) loss of appetite
- (C) both
- (D) Neither

A B

T ? 1. Anxiety in a person may be indicated by:

F T 2. Depression in a person may be indicated by:

T ? 3. Bulimia is characterized by:

As demonstrated above with matching items, write A and B in the margin to the left of the questions and record T, F, or ? as you make decisions regarding each alternative. The correct answer is the letter corresponding to the matching pattern.

You can note from the example that having partial information does help you eliminate alternatives. In question 3 above, the student has determined that (A) is associated with bulimia, but is uncertain about (B). By regarding the pattern in the mini-chart, it is apparent that B and D can be eliminated, since these two assume that choice A is false. The choices are now A or C.

A similar technique can be used to handle the multiple true-false items—sometimes called “multiple multiples”—which is a frequently used format that is troublesome.

Multiple true-false: Multiple true false questions have a stem followed by 3 to 5 alternatives, one or more of which are correct. As with matching pairs questions, you must make definitive decisions regarding each alternative in order to select the correct answer. These questions test your ability to contrast and compare similar aspects of a disease or process or system. The following are typical instructions for this type of question.

MULTIPLE TRUE-FALSE

Directions: For each of the questions or incomplete statements below, one or more of the answers or completions given is correct. Select:

1 2 3 4

T T T T

A if only 1, 2, and 3 are correct

T F T F

B if only 1 and 3 are correct

F T F T

C if only 2 and 4 are correct

F F F T

D if only 4 is correct

T T T T

E if all are correct

You can write in a mini-chart on your test as we have done in the example. This chart of possible T and f decisions provides a handy reference to determine the correct pattern among the alternatives.

Despite their seemingly complexity, these questions enable you to make good use of partial information. In the mini-chart above, you should be able to note that one decision regarding an alternative can imply several other decisions as well. For example, if you know that alternative 4 is false, then alternatives 1 and 3 must be true—and you only need to make a decision regarding alternative 2 to determine the correct choice of patterns.

How do we know this? Look carefully at the mini-chart. You will see that whenever alternative 4 is false, alternative 1 and 3 are true. Similarly, 1 and 3 are always the same—when one is true, so is the other, and vice versa.

A completed test question would appear like this:

Patient instruction as to the “danger signals” of pregnancy should include:

T (1) vaginal bleeding

T (2) headaches

T (3) visual changes

F (4) color changes in areola

By visually comparing the T-F pattern next to the question with the mini-chart in the directions, you can see that the correct answer is A.

STRATEGIES FOR GUESSING

No matter how well prepared you are for an exam, there are likely to be questions on which the correct answer is just not clear to you.

What do you do? When you are able to eliminate some alternatives but do not have a hunch as to which of the remaining are correct, it is unwise to waste time pondering over the correct choice. Instead, choose the first or last among the remaining (?) alternatives consistently throughout the test. And decide before the test begins whether you will always choose the first remaining alternative or the last remaining alternative. If you cannot eliminate any alternative, choose either A, B, C, or D consistently throughout the test. Marking the same letter alternative on each question where you have no information or hunches gives you the best statistical chance of choosing the correct answer.