

Test Taking Strategies and Techniques

(Certification Review Guide)

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We all respond to testing situations in different ways. What separates the successful test taker from the unsuccessful one is knowing how to prepare for and take a test. Preparing yourself to be a successful test taker is as important as studying for the test. Each person needs to assess and develop individual test taking strategies and skills. The primary goal of this chapter is to assist potential examinees in knowing how to study for and take a test. Of equal importance to this study preparation is a basic understanding of how certification examinations are developed. They are based upon a universal knowledge foundation. Test items are selected from generally recognized resources available to the examinee, and specific to the type of specialty area.

STRATEGY #1 - Know Yourself

When faced with an examination, do you feel threatened, experience butterflies or sweaty palms, have trouble keeping your mind focused on studying or on test questions? These common symptoms of test anxiety plague many of us, but can be used advantageously if understood and handled correctly. Over the years of test taking, each of us has developed certain testing behaviors, some of which are beneficial, while others present obstacles to successful test taking. You can take control of the test taking situation by identifying the undesirable behaviours, maintaining the desirable ones and developing skills to improve test performance.

Technique #1: From the following descriptions of test taking personalities, find yourself (Table 1). Write down those characteristics which describe you even if they are from different personality types. Carefully review the problem list associated with your test taking personality characteristics. Write down the problems which are most troublesome. Then make a list of how you can remedy these problems from the improvement strategies list. Be sure to use these strategies as you prepare for and take examinations.

STRATEGY #2 - Develop Your Thinking Skills

Understanding Thought Process: In order to improve your thinking skills and subsequent test performance, it is best to understand the types of thinking as well as the techniques to enhance the thought process.

Everyone has a personal learning style, but we all must proceed through the same process to think.

Table 1
Test Taker Profile

Type	Characteristics	Pitfalls	Improvement Strategies
The Rusher	<ul style="list-style-type: none"> • Rushes to complete the test before the studied facts are forgotten • Arrives at test site early and waits anxiously • Mumbles studied facts • Tense body posture • Accelerated pulse, respiration and neuromuscular excitement • Answers questions rapidly and is generally one of the first to complete • Experiences exhaustion once test is over 	<ul style="list-style-type: none"> • Unable to read question and situation completely • At high risk for misreading, misinterpreting and mistakes • Difficult items heighten anxiety • Likely to make quick, not well-thought-out guesses 	<ul style="list-style-type: none"> • Practice progressive relaxation techniques • Develop a study plan with sufficient time to review important content • Avoid cramming and last minute studying • Take practice tests focusing on slowing down and reading and answering each option carefully • Read instructions and questions slowly
The Turtle	<ul style="list-style-type: none"> • Moves slowly, methodically, deliberately through each question • Repeated rereading, underling and checking • Takes 60 to 90 seconds per question versus an average of 45 to 60 seconds 	<ul style="list-style-type: none"> • Last to finish; often does not complete the exam • Has to quickly complete questions in last part of exam, increasing errors • Has difficulty completing timed examinations 	<ul style="list-style-type: none"> • Take practice test focusing on time spent per item • Place watch in front of examination paper to keep track of time • Mark answer sheet for where one should be halfway through exam based on total number of questions and total amount of time for exam • Study concepts not details • Attempt to answer each question as you progress through the exam
The Personalizer	<ul style="list-style-type: none"> • Mature person who has personal knowledge and 	<ul style="list-style-type: none"> • Risk in relying on what has been 	<ul style="list-style-type: none"> • Focus on principles and standards that support

	<p>insight from life experiences</p>	<p>learned through observation and experience since one may develop false understandings and stereotypes</p> <ul style="list-style-type: none"> • Personal beliefs and experiences are frequently not the norm or standard tested • Has difficulty identifying expected standards measured by standardized examination 	<p>nursing practice</p> <ul style="list-style-type: none"> • Avoid making connections between patients in exam clinical situations and personal clinical experience • Focus on generalities not experiences
The Squisher	<ul style="list-style-type: none"> • View exams as threat, rather than an expected event in education • Preoccupied with grades and personal accomplishment • Attempts to avoid responsibility and accountability associated with testing in order to reduce anxiety 	<ul style="list-style-type: none"> • Procrastinates studying for exams • Unable to study effectively since waits until last minute • Increased anxiety over test since procrastinating study impairs ability to learn and perform 	<ul style="list-style-type: none"> • Establish a plan of progressive, disciplined study • Use defined time frames for studying content and taking practice exams • Use relaxation techniques • Return to difficult items • Read carefully
The Philosopher	<ul style="list-style-type: none"> • Academically successful person who is well disciplined and structured in study habits • Displays great intensity and concentration during exam • Searches questions for hidden or unintended meaning • Experiences anxiety over not knowing everything 	<ul style="list-style-type: none"> • Over analysis causes loss of sight of actual intent of question • Reads information into questions answering with own added information rather than answering the actual intent of question 	<ul style="list-style-type: none"> • Focus on questions as they are written • Work on self-confidence and not on question. Initial response is usually correct • Avoid multiple rereadings of questions • Avoid adding own information and unintended meanings • Practice, practice, practice with sample tests
The Second Guesser	<ul style="list-style-type: none"> • Answers questions twice, first as an 	<ul style="list-style-type: none"> • Altering an initial response frequently 	<ul style="list-style-type: none"> • Reread only the few items of which one is

The Lawyer	<p>examinee, second as an examiner</p> <ul style="list-style-type: none"> • Believes second look will allow one to find and correct errors • Frequently changes initial responses (ie. grades own test) <ul style="list-style-type: none"> • Attempts to place words or ideas into the question (leads the witness) • Occurs most frequently with psychosocial or communication questions which ask for the most appropriate response 	<p>results in an incorrect answer</p> <ul style="list-style-type: none"> • Frequently changes answers because the pattern of response appears incorrect (ie. too many "true" or too many correct responses) <ul style="list-style-type: none"> • Veers from the obvious answer and provides response from own point of view • Reads a question, jumps to a conclusion then finds a response that leads to predetermined conclusion 	<p>unsure. Avoid changing initial responses</p> <ul style="list-style-type: none"> • Take exam carefully and progressively first time, allowing little or no time for rereading • Study facts • Avoid reading into questions <ul style="list-style-type: none"> • Focus on distinguishing what client is saying in question and not what is read into question • Avoid formulating responses aimed at obtaining certain information • Choose responses that allow patient to express feelings which encourage hope, not catastrophe, those which are intended to clarify, which identify feeling tone of patient or which avoid negating or confronting patient feelings • Carefully read entire questions before selecting a response
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Thinking occurs on six levels – the lower level of memory and comprehension and the higher levels of application, analysis, synthesis and evaluation (Sides & Korchek, 1994). Memory is the ability to recall facts. Without adequate retrieval of facts, progression through the higher levels of thinking cannot occur easily. Comprehension is the ability to understand memorized facts. To be effective, comprehension skills must allow the person to translate recalled information from one context to another. Application, or the process of using information to know why something occurs, is a higher form of learning. Effective application relies on the use of understood, memorized facts to verify intended action. Analysis is the ability to use abstract or logical forms of thought to show relationships and to distinguish the cause and effect between the variables in a situation.

As related to testing situations, the thought process from memory to analysis occurs quite quickly. Some examination items are designed to test memory and comprehension while others test application and analysis. An example of a memory questions is as follows:

A normal child is expected to walk by:

- a) 6 months
- b) 10 months
- c) *14 months*
- d) 18 months

To answer this question correctly, the individual has to retrieve a memorized fact. Understanding the fact, knowing why it is important or analyzing what should be done in this situation is not needed. An example of a question which tests comprehension is as follows:

The mother of an otherwise healthy 11-month-old boy voices concern that her son is not walking yet because her older daughter walked at this age. You should know that:

- a) Girls generally walk before boys
- b) *Her son should be walking by 14 months of age*
- c) The mother is demonstrating overanxious behaviour
- d) Her son is delayed developmentally

To answer this question correctly, an individual must retrieve the fact that walking well is not always achieved until 14 months of age, and understand that in this situation, a child of 11 months would not necessarily be expected to have achieved this developmental milestone.

In answering an examination question that requires a higher level of thought, an individual must be able to recall a fact, understand that fact in the context of the question, and apply this understanding to determine why one answer is correct, after analyzing possible answer choices as they relate to the situation (Sides & Korchek, 1994). An example of an application analysis question is as follows:

After administering the Denver Development Screening Test (Denver II), you note that an 18-month-old boy is not walking. The child's mother is voicing concern about this. Your most appropriate action is to:

- a) Repeat the Denver II in 6 months
- b) *Consult with pediatrician*

- c) Reassure the mother that the child's not walking is normal at this age
- d) Recommend exercises to strengthen the lower extremities

To answer this question correctly, the individual must recall the fact at which age walking should be achieved; understand if it is normal or abnormal for an 18-month-old child not to walk as depicted in this situation; apply this knowledge to each option, understanding why it may or may not be correct; and analyze each option for what action is most appropriate for this situation. Application/analysis questions require the examinee to use logical rationale, based on a well-defined principle or fact. Problem solving ability becomes important as the examinee must think through each question option, determining its relevance and importance to the situation in the question.

Building your thinking skills: Effective memorization is the cornerstone to learning and building thinking skills (Olney, 1989). We have all experienced "memory power outages" at some time, due in part to trying to memorize too much, too fast, too ineffectively. Developing skills to improve memorization is important to increasing the effectiveness of your thinking and subsequent test performance.

Technique #1: Quantity is NOT quality, so concentrate on learning important content. For example, it is important to know the various pharmacologic agents appropriate for the management of chronic obstructive pulmonary disease (COPD), not the specific dosages for each medication.

Technique #2: Memory from repetition, or saying something over and over again to remember it, usually fades. Developing memory skills which trigger retrieval of needed facts is more useful. Such skills are as follows:

Acronyms: These are mental crutches which facilitate recall. Some are already established such as PERRLA (pupils equal, round, react to light, and accommodation), C.H.F. for (congestive heart failure), or T.I.A. for (transient ischemic attack). Developing your own acronyms can be particularly useful since they are your own word association arrangements in a singular word. Nonsense words or funny, unusual ones are often more useful since they attract your attention.

Acrostics: This mental tool arranges words into catch phrases. The first letter of each word stands for something which is recalled as the phrase is said. Your own acrostics are most valuable in triggering recall of learned information since they are your individual situation associations. An example of an acrostic is as follows:

Mom Carried Nell Every Place She Went stands for the areas of assessment for a cast check: movement, color, numbness, edema, pulse, sensation and warmth.

ABCs: This technique facilitates information retrieval by using the alphabet as a crutch. Each letter stands for a symptom, which when put together creates a picture of the clinical presentation of the disease. The clinical picture of acute epiglottitis using the ABC technique is as follows:

- a) Aponia
- b) Brassy cough
- c) Complaint of sore throat initially
- d) Dysphagia
- e) Expiratory and inspiratory stridor
- f) Forward leaning position

Imaging: This technique can be used in two ways. The first is to develop a nickname for a clinical problem which when said produces a mental picture. For example, the nickname "bloated blue baby" might be used to trigger visualization of an infant with a congenital heart defect who is cyanotic, edematous, and having breathing difficulty. A second form of imaging is to visualize a specific patient while you are trying to understand or solve a clinical problem when studying or answering a question. For example, imagine a child with cerebral palsy. You are trying to understand the most appropriate feeding position for this child. In your mind, visualize the various positions of supine, prone and semi-prone, imaging what will happen to the child in each position.

Rhymes, music & links: The absurd is easier to remember than the most common. Rhymes, music or links can add absurdity and humor to learning and remembering (Olney, 1989). These retrieval tools are developed by the individual for specific content. For example, making up a rhyme about diabetes may be helpful in remembering the predominant female incidence, origin of disease, primary symptoms and management as illustrated by:

There once was a girl
whose beta cells failed
She grew quite thirsty
and her glucose levels sailed
Her lack of insulin caused her to
increase her intake

And her increased urinary output
was certainly not fake
So she learned to watch her diet
and administer injections
That kept her healthy, growing
and free of complications.

Setting content to music is sometimes useful to remembering. Melodies which are repetitious jog the memory by the ups and downs of the notes and the rhythm of the music.

Links connect key words from the content by using them in a story. An example given by Olney (1989) for remembering the parts of an eye is I R I S watched a P U P I L through the L E N S of a R E D T I N telescope while eating C O R N - E A on the cob.

Additional memory aids may also include the use of color or drawing for improving recall. Use different colored pens or paper to accentuate the material being learned. For example, highlight or make notes in blue for content about respiratory problems and in red for cardiovascular content. Drawing assists with visualizing content as well. This is particularly helpful for remembering the pathophysiology of the specific health problem.

The important thing to remember about remembering is to use good recall techniques.

Technique #3: Improving higher level thinking skills involves exercising the application and analysis of memorized facts. Small group review is particularly verbalization of thought processes and receipt of input about content and thought process from others (Sides & Korchek, 1994). Individuals not only hear how they think, but how others think as well. This interaction allows individuals to identify flaws in their thought process as well as to strengthen their positive points.

Taking practice tests are also helpful in developing application/analysis thinking skills. Practice tests permit the individual to analyze thinking patterns as well as the cause and effect relationships between the question and its options. The problem solving skills needed to answer application/analysis questions are tested, giving the individual more experience through practice (Dickenson-Hazard, 1990).

STRATEGY #3 - Know The Content

Your ability to study is directly influenced by organization and concentration (Dickenson-Hazard, 1990). If effort is spent on both of these aspects of exam preparation, examination success can be increased.

Preparation for studying: Getting organized. Study habits are developed early in our education experiences. Some of our habits enhance learning while others do not. To increase study effectiveness, organization of study materials and time is essential. Organization decreases frustration, allows for easy resumption of study and increases concentrated study time.

Technique #1: Create your own study space. Select a study area that is yours alone, free from distractions, comfortable, with good lighting. The ventilation and room temperature should be comfortable since a cold room makes it difficult to concentrate and a warm room may make you sleepy (Burkle & Marshak, 1989). All study materials should be left in a specific study space. The basic premise of a study space is that it facilitates a mind set that you are there to study. When study is interrupted, it is best to leave study materials just as they are. Don't close books or put away notes as they will have to be relocated, wasting valuable time, when study is resumed.

Technique #2: Define and organize the content. Secure an outline or the content parameters which are to be examined from the examining body. If outline is sketchy, develop a more detailed one for yourself using the recommended texts as a guideline. Next, identify available study resources: class notes, old exams, handouts, textbooks, review courses and books, home study programs, or study groups. For national standardized exams, such as initial licensing or certification, it is best to identify a few resources which cover the content being tested and stick to them. Attempting to review all available resources is not only mind boggling, but increases anxiety and frustration as well. Make your selections and stay with them.

Technique #3: Conduct a content assessment. Using a simple rating scale of:

- 1 = requires no review
- 2 = requires minimal review
- 3 = requires intensive review
- 4 = start from the beginning

Read through the content outline and rate each content area (Dickenson-Hazard, 1990). Table 2 provides a sample exam content assessment. Be honest with your assessment. It is far better to recognize your content weaknesses when you can study and remedy

them, rather than wishing during the exam that you had studied more. Likewise with content strengths: If you know the material, don't waste time studying it.

Technique #4: Develop a study plan. Coordinate the content which needs to be studied with the time available (Sides & Korchek, 1994). Prioritize your study needs, starting with weak areas first. Allow for a general review at the end of the study plan. Finally, establish an overall goal for yourself; something that will motivate you when brought to mind.

Table 3 illustrates a study plan developed on the basis of the exam content assessment in Table 2. Conducting an assessment and developing a study plan should require no more than 50 minutes. It is a wise investment of time with potential payoffs of reduced study stress and exam success.

Technique #5: Begin now and use your time wisely. The smart test taker begins the study process early (Olney, 1989). Sit down, conduct the content assessment and develop a study plan as soon as you know about the exam. **DON'T PROCRASTINATE!**

Table 2
Sample Content Assessment

<i>Category: Provided by Test Giver</i>	<i>Exam Content: Health Problems of Adolescents</i>	<i>Rating: Provided by Examinee</i>
I. Acne		
A. Pathophysiology		2
B. Management		2
1. General hygiene		
2. Medications		
3. Cleansing		
4. Expression of comedones		
C. Nursing Management.....		1
1. Education		
2. Support		
3. Need for follow-up		
II. Dysmenorrhea		
A. Etiology		4
B. Pathophysiology		3
C. Symptomatology		3
D. Management.....		4
E. Nursing Interventions.....		3
III. Infectious Mononucleosis		
A. Definition		1
B. Pathophysiology		2
C. Clinical Signs		1
D. Diagnostic Tests.....		2
E. Management		2
F. Nursing Interventions		1
IV. Sports Injuries		
A. Types of Injuries.....		4
1. Acute		
2. Chronic		
B. Management of Injuries.....		4
1. Acute		
2. Chronic		
C. Injury prevention education.....		3
D. Related health problems		4
1. Nutrition		
2. Menstrual dysfunction		
3. Eating disorders		
4. Substance abuse		
E. Nursing Interventions.....		3
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Getting Down To Business - The Actual Studying: There is no better way to prepare for an examination than individual study (Dickenson-Hazard, 1989). The responsibility to achieve the goal you set for this exam lies with you alone. The means you employ to achieve this goal do vary and should begin with identifying your peak study times and using techniques to maximize them.

Technique #1: Study in short bursts. Each of us have our own biologic clock which dictates when we are at our peak during the day. If you are a morning person, you are generally active and alert early in the day, slowing down and becoming drowsy by evening. If you are an evening person, you don't completely wake up until late morning and hit your peak in the afternoon and evening. Each person generally has several peaks during the day. It is best to study during those times when your alertness is at its peak (Dickenson-Hazard, 1990).

During our concentration peaks, there are mini peaks, or bursts of alertness (Olney, 1989). These alertness ("mini") peaks occur during a concentration peak because levels of concentration are at their highest during the first part and the last part of a study period. These bursts can vary from ten minutes to one hour depending on the extent of concentration. If studying is sustained for one hour there are only two mini peaks; one at the beginning and one at the end. There are eight mini peaks if that same hour is divided into four, 10-minute intervals. Hence it is more helpful to study in short bursts (Olney, 1989). More can be learned in less time.

Technique #2: Cramming can be useful. Since concentration ability is highly variable, some individuals can sustain their mini peaks for 15, 20 or even 30 minutes at a time. Pushing your concentration beyond its peak is fruitless and verges on cramming, which in general is a poor study technique. There are, however, times when cramming, a short term memory tool, is useful. Short term memory generally is at its best in the morning. A quick review or cram of content in the morning can be useful the day of the exam (Olney, 1989). Most studying, however, is best accomplished in the afternoon or evening when long term memory functions at its peak.

Technique #3: Give your brain breaks. Regular times during study to rest and absorb the content is needed by the brain. The best approach to breaks is to plan them and give yourself a conscious break (Dickenson-Hazard, 1990). This approach eliminates the "day dreaming" or "wandering thought" approach to breaks that many of us use. It is better to get up, leave the study area and do something non-study related for longer breaks. For shorter breaks of five minutes or so, leave your desk, gaze out the window or do some stretching exercises. When your brain says to give it a rest, accommodate it! You'll learn more in less stress free time.

Table 3

Sample Study Plan

Goal: Master content on the adolescent health problem test

Test Time Available: 2 Weeks

Objective	Activity	Date Accomplished
Master sports injury content	Read Chapter 26. Take notes on chapter content according to outline	Feb. 5 & 6, 1 hour
	Review class notes and combine with notes taken from text	Feb. 7, 1 hour
	Review combined notes and sample test questions	Feb. 8, 1 hour
Understand content on dysmenorrhea	Read Chapter 23. Take notes on chapter content according to content outline provided	Feb. 9 & 10 1 hour each day
	Review class notes combined with text notes.	Feb. 11, 1 hour
	Review combined notes and sample test questions	Feb. 12, 1 hour
Know material on infectious mononucleosis	Scan Chapter 27. Review class notes, supplementing class notes with text content	Feb. 13, 1½ hours
Know material on acne	Scan Chapter 24. Review class notes supplementing class notes with text content	Feb. 15, 1½ hours
Demonstrate understanding of all material	Review with another person	Feb. 16, 2 hours
	Review all notes	Feb. 18, 2 hours
	Take sample test questions	Feb. 19, 2 hours
Think positively	SMILE • Take frequent breaks • Reward myself after each study session	ON GOING
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Technique #4: Study the correct content. It is easy for all of us to become bogged down in the detail of the content we are studying. However, it is best to focus on the major concepts or the "state of the art" content. Leave the details, the suppositions and the experience at the door of your study area. Concentrate on the major textbook facts and concepts which revolve around the subject matter being tested.

Technique #5: Fit your studying to the test type. The best way to prepare for an objective test is to study facts, particularly anything printed in italics. Memory enhancing techniques are particularly useful when preparing for an objective test. If preparing for an essay test, study generalities, examples and concepts. Application techniques are helpful when studying for this type of an exam (Burkle & Marshak, 1989).

Technique #6: Use your study plan wisely. Your study plan is meant to be a guide, not a rigid schedule. You should take your time with studying. Don't rush through the content just to remain on schedule. Occasionally study plans need revision. If you take more or less time than planned, readjust the plan for the time gained or lost. The plan can guide you, but you must go at your own pace.

Technique #7: Actively study. Being an active participant in study rather than trying to absorb the printed word is also helpful. Ways to be active include taking notes on the content as you study; constructing questions and answering them; taking practice tests and discussing the content with yourself. Also, using your individual study quirks is encouraged. Some people stand, others walk around and some play background music. You should use whatever helps you to concentrate and study better.

Technique #8: Use study aids. While there is no substitute for individual studying, several resources, if available, are useful in facilitating learning. Review courses are an excellent means for organizing or summarizing your individual study. They generally provide the content parameters and the major concepts of the content which you need to know. Review courses also provide an opportunity to clarify not-well-understood content, as well as to review known material (Dickenson-Hazard, 1990). Study guides/certification review books and home study programs are useful for organizing study. They provide detail on the content which is important to the exam. Study groups are an excellent resource for summarizing and refining content. They provide an opportunity for thinking through your knowledge base, with the advantage of hearing another person's point of view. Each of these study aids increases understanding of content and when used correctly, increases effectiveness of knowledge application.

Technique #9: Know when to quit. It is best to stop studying when your concentration ebbs. It is unproductive and frustrating to force yourself to study. It is far better to rest or unwind, then resume at a later point in the day. Avoid studying outside your A.M. or P.M. concentration peaks and focus your study energy on your right time of day or evening.

STRATEGY #4 - Become Test-wise

Most nursing examinations are composed of multiple choice questions (MCQ). This type of question requires the examinee to select the best response(s) for a specific circumstance or condition. Successful test taking is dependent not only on content knowledge but on test taking skill as well. If you are unable to impart your knowledge through the vehicle used for its conveyance, ie. the MCQ, your test taking success is in jeopardy.

Computer based examinations are a new method of testing for some certification examinations. Eventually all of the certification paper and pencil examinations will be replaced with the computer method. Computer based testing has several advantages such as flexibility in taking the examinations at your convenience and earlier notification of the test results. If the certification examination you are planning to take is computerized, the instructions will be provided both prior to the examination as well as at the time of the examination. No computer experience is required, and tutorials or

introductory lessons precede the computer-based testing to familiarize you with the process.

Moreover, the strategies used to develop effective test-taking skills are applicable to both the traditional paper/pencil and computerized forms of the certification examinations (Sides & Korchek, 1994).

Technique #1: Recognize the purpose of a test question. Most test questions are developed to examine knowledge at two separate levels: memory and comprehension or application and analysis. A memory question requires the examinee to recall facts from their knowledge base while an application question requires the examinee to use and apply the knowledge. Memory questions test recall while application questions test synthesis and problem-solving skills. When taking a test, you need to be aware when you are being asked to recall a fact, and when you are being asked to use that fact.

Technique #2: Recognize the components of a test question. Multiple choice questions may include the basic components of a background statement, a stem and a list of options. The background statement presents information which facilitates the examinee in answering the question. The stem asks or states the intent of the question. The options are 3 to 5 possible responses to the question. The correct option is called the keyed response and all other options are called distractors (ABP, 1989). Knowing the components of a test question helps you sift through the information presented and focus on the question's intent (see Table 4).

Technique #3: Identify the key word(s) in a test question. Don't jump to conclusions when you read the stem. Key words are generally included in the stem of a test question, whereas key concepts or conditions appear in the background statement. You should pay particular attention to the key words in the stem and their impact on the intent of the question (See Table 5). Never "read" into a question or make assumptions beyond the information given.

Technique #4: Recognize the item types. Basically two styles of MCQs are used for examinations. One requires the examinee to select the one best answer; the other requires selection of multiple correct answers. Among the one best answer styles there are three types. The A type requires the selection of the best response among those offered. The B type requires the examinee to match the options with the appropriate statement. C type items require the examinee to compare or contrast two related conditions. The X type asks the examinee to respond either true or false to each option (ABP, 1989). Table 6 illustrates these item types. Many standardized tests such as those used for certification are composed of three to five option-A type questions.

Technique #5: Read the directions to the questions carefully. Since an examination may have several types of questions, it is imperative to read the directions carefully. If different item types are used on an exam, they are generally grouped together by type and marked clearly with directions. Be on the lookout for changing item types and be sure you understand how you are to answer before you begin reading the question.

Technique #6: Apply the basic rules of test taking. Examination candidates can avert many problems associated with test taking if they give thought to the mechanics of sitting down, reading the question and noting their answers. Timing yourself to avoid spending too much time on a question, returning to difficult questions, and not changing your answers are all techniques that can improve performance. Table 7 provides helpful hints for the basic rules of test-taking. Review these and apply them to the testing situation.

Technique #7: Make educated guesses. This type of guessing is the selection of an option (answer) when certainty of the correct answer is questionable. Elimination of all

Table 4
Anatomy Of A Test Question

Background Statement:	A 20-year-old women brings her 3-week-old infant to the clinic because she is concerned about the child's crying, especially at night, and the infant's constant feeding demands.
Stem:	Which of the following histories would be most helpful in planning your management?
Options:	(A) Developmental (B) Family (C) Social (D) Dietary

Table 5
Test Question Key Words And Phrases

First	Priority	True Statements
Best	Advice	Correct Statements
Most	Approach	Contributing to
Initial	Consideration	Of the following
Important	Management	Which of the following
Major	Expectation	Each of the following
Common	Intervention	
Least	Assessment	
Except	Contraindication	
Not	Evaluation	
Greatest	Counseling	
Earliest	Facilitative	
Useful	Indicative	
Leading	Suggestive	
Significant	Appropriate	
Immediate	Accurately	
Helpful	Likely	
Closely	Characteristics	

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options except for two of them, followed by a reevaluation of these options based upon your correct knowledge base then allows you to make an educated guess.

There are some examinations that will give credit when correct answers are selected and give no credit for incorrect answers. Directions for this type of examination may state that credit will be given for correct answers, therefore all questions should be answered and you will not be penalized for guessing.

TABLE 6
Item Type Examples

<p>A TYPE Directions for One Best Choice Items: This item-type requires that you indicate the one best answer from the lettered alternatives offered for each item. After you have decided on the one BEST answer, completely blacken the corresponding lettered circle on the answer sheet.</p> <p>#1 You have recommended that a 6-month-old infant receive a DPT immunization. His mother reports that he had a tender red thigh for three days after his last shot and a hard knot that is still there. The infant should receive:</p> <ul style="list-style-type: none">a. No further DPTb. Adult Tdc. Tetanus toxoid aloned. <i>The recommended DPT</i> <p>B TYPE Directions: Each group of questions below consists of five lettered headings followed by a list of numbered words or statements. For each numbered word or statement, select the one lettered heading that is most closely associated with it and fill in the circle beneath the corresponding letter on the answer sheet. Each lettered heading may be selected once, more than once, or not at all.</p> <p>#2-#4</p> <p>Blood test</p> <ul style="list-style-type: none">a. Direct Coombs testb. Direct serum bilirubin concentrationc. Hemoglobin electrophoresisd. Heterophil antibody titere. Osmotic fragility test <p>Important in the diagnosis of:</p> <ul style="list-style-type: none">2. Blood group incompatibility (A)3. Mononucleosis (D)4. Sickle cell disease (C) <p>C TYPE Directions: Each set of lettered headings below is followed by a list of numbered words or phrases. For each numbered word or phrase fill in the circle on the answer sheet under A if the item is associated with (A) only, B if the item is associated with (B) only, C if the item is associated with both (A) and (B), D if the item is associated with neither (A) nor (B).</p> <ul style="list-style-type: none">(A) Diabetic acidosis(B) Insulin shock(C) Both(D) Neither <p>#5 — Elevated bicarbonate level in serum (D)</p> <p>#6 — The duration of the condition before proper treatment is begun may influence the prognosis (C)</p> <p>#7 — Deep breathing (A)</p> <p>#8 — Coma (C)</p> <p>#9 — Moist skin characteristic (B)</p> <p>X TYPE Directions: Each of the questions or incomplete statements below is followed by five suggested answers or completions. For EACH lettered alternative completely blacken one lettered circle in either column T or F on the answer sheet.</p> <p>True statements about fractures in school aged children include:</p> <ul style="list-style-type: none">(A) Assessment of fractures is less difficult in school aged children than adults(B) <i>The initial treatment for sprains and fractures is elevation and application of an ice pack</i>(C) After a plaster cast is applied, little care is necessary(D) <i>Fractures in children heal faster than fractures in adults</i>(E) Clavicular fractures are generally benign
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Other kinds of examinations will only give credit for correct answers, and subtract credit for incorrect answers. Directions for this type of examination will instruct you not to guess, or that there is a penalty for guessing. However, even with this kind of an examination, it is still to your advantage to make an educated guess if you can reduce your possibilities to two options and then select the best of the two. **WILD GUESSING** should be avoided since it may not be to your advantage (Nugent & Vitale, 1997).

Technique #8: Practice, practice, practice. Taking practice tests can improve performance. While they can assist in evaluation of your knowledge, *their primary benefit is to assist you with test taking skills.* You should use them to evaluate your thinking process, your ability to read, understand and interpret questions, and your skills in completing the mechanics of the test.

Technique #9: Be prepared for exam day. It is important to familiarize yourself with the test site, the building, the parking and travel route prior to the exam day. If you must travel, arrive early to allow time for this familiarization. It is helpful to make a list of things you need on the exam day: pencils, admission card, watch and a few pieces of hard candy as a quick energy source. On exam day allow yourself plenty of time to arrive at the site. Wear comfortable clothes and have a good breakfast that morning. The night before the exam, go to bed at a reasonable hour, and avoid excessive drinking or eating (Sides & Korchek, 1994). The idea is to arrive on time at the test site, prepared and as rested as possible.

TABLE 7
Basic Rules For Test Taking

<i>Basic Rule</i>	<i>Helpful Hints</i>
Use time wisely and effectively	Allow no more than 1 minute per question – if you can't answer question, make an intelligent guess
Know the parts of a question Background statement: Informational scenario Stem: Specific question or intent statement	Select the option that best completes question or solves the problem Relate options to question and balance against each other Consider all options
Read question carefully	Understand stem first, then look for answer Underline key words in background information and stem (ie. first, best, initial, early, most, appropriate, except, least, not)
Identify intent of item based on information given	Don't assume any information not given Don't read in or add any information not given Actively reason through question
Answer difficult questions by eliminating obviously incorrect options first	Select the best of the viable, available options using logical thought Reread stem; select strongest option Skip difficult questions and return to them later or make an educated guess.

Select responses guided by principles of communication	Choose therapeutic, respectful, communication enhancing options
Know the principles of nursing practice	Avoid inappropriate, punitive responses Select options that relate to common need or the population in general
Know and use test-taking principles	Select options that are correct without exception Select options which reflect nursing judgement Avoid changing answers without good reason Attempt every question Don't rely on flaws in test construction Be systematic and use problem-solving techniques in answering questions

From "Making the grade as a test-taker" by N. Dickenson-Hazard, 1989. *Pediatric Nursing* 15, p. 304. Adapted from *How to take tests*. (pp 15-57) by J. Millman and W. Paul, 1969, New York: McGraw-Hill Co. and from *Nurse's guide to successful test taking*. (pp 43-53) by M. B. Sides and N. B. Cailles, 1989, Philadelphia: J. B. Lippincott Co. Copyright 1989 A. J. Jannetti, Inc. Reprinted and adapted by permission.

STRATEGY #5 - Psych Yourself Up: Taking tests is stressful

While a little stress can be productive, too much can incapacitate you in your studying and test taking (Divine & Kylen, 1979). Your attitude and approach to test taking and studying can influence your outcomes. Psyching yourself up can have a positive effect and make examinations a non-anxiety laden experience (Dickenson-Hazard, 1990). The following techniques are based on the principles of successful test taking as presented by Sides & Cailles (1989). Incorporation of these techniques can improve response and performance in examination situations.

Technique #1: Adopt an "I can" attitude. Believing you can succeed is the key to success. Self belief inspires and gives you the power to achieve your goals. Without a success attitude, the road to your goal is much harder. We all stand an equal chance of success in this world. It is those who believe they can who achieve it. This "I can" attitude must permeate all your efforts in test taking from studying to improving your skills, to actually writing the test.

Technique #2: Take control. By identifying your goal, deciding how to accomplish it and developing a plan for achieving it, you take control. Do not leave your success or failure to chance; control it through action and attitude.

Technique #3: Think positively. Examinations are generally based on a standard which is the same for all individuals. Everyone can potentially pass. Performance is influenced not only by knowledge and skill but attitude as well. Those individuals who regard an exam as an opportunity or challenge will be more successful.

Technique #4: Project a positive self-fulfilling prophecy. While preparing for an examination, project thoughts of the positive outcomes you will experience when you succeed. Self-talk is self-fulfilling. Expect success, not failure, of yourself.

Technique #5: Feel good about yourself. Without feeling a sense of positive self worth, passing an examination is difficult. Recognize your professional contributions and give yourself credit for your accomplishments. Think "I will pass," not "I suppose I can."

Technique #6: Know yourself. Focus exam preparation and test taking on your strengths. Try to alter your weaknesses instead of becoming hung up on them. If you tend to overanalyze, study and read test questions at face value. If you're a speed demon when taking a test, slow down and read more carefully.

Technique #7: Failure is a possibility. We all have failed at something at some point in our lives. Rather than dwelling on the failure, making excuses and believing you'll fail again, recognize your mistakes and remedy them. Failure is a time to begin again; use it as a motivator to do better. It is not the end of the world unless you allow it to be. It is best to deal with the failure and move on, otherwise it interferes with your success.

Technique #8: Persevere, persevere, persevere! Endurance must underlie all your efforts. Call forth those reserve energies when you've had all you think you can take. Rely upon yourself and your support systems to help you maintain a sense of direction and keep your goal in the forefront.

Technique #9: Motivation is muscle. Most individuals are motivated by fear or desire. The fear in an exam situation may be one of failure, the unknown, or discovery of imperfection. Put your fear into perspective; realize you are not the only one with fear and that all have an equal opportunity for success. Develop strategies to reduce fear and use fear to your advantage by improving the imperfections. Desire is a powerful motivator and you should keep the rewards of your desire foremost in your mind. Whatever motivates you, use it to make you successful. Reward yourself during your exam preparation and once the exam has been completed. You alone hold the key to success; use what you have wisely.

Technique #10: Overprepare. One of the best ways to reduce test anxiety is to overprepare. The more prepared you are the more confident you will be. Overpreparation requires you to study the same information over again even when you know the information. This activity will reinforce your learning and will build confidence and reduce anxiety when it comes time to take the examination.

Overpreparation can not occur unless adequate time is allowed for this process. A last minute cramming approach will not lead to an overprepared test taker. Being over prepared definitely places an individual in control and in a position of power and confidence (Nugent & Vitale, 1997).

This chapter has provided concepts, strategies and techniques for improving study and test taking skills. Your first task in improvement is to know yourself, how you study and how you take a test. You should use your strengths and remedy the weaknesses. Next you need to develop your thinking skills. Work on techniques to improve memory and reasoning. Now you need to organize your study and concentrate on using these new and used skills to be successful. Create a study space, develop a plan of action, then implement that plan during your periods of peak concentration. Before taking the exam be sure you understand the components of a test question, can identify key words and phrases and have practiced. Apply the test taking rules during the exam process. Finally, believe in yourself, your knowledge and your talent. Believing you can accomplish your goal facilitates the fact that you will.

BIBLIOGRAPHY

American Board of Pediatrics. (1989). *Developing questions and critiques*. Unpublished material.

Burke, M. M., & Walsh, M. B. (1992). *Gerontologic nursing*. St. Louis: Mosby Year Book.

Burkle, C. A., & Marshak, D. (1989). *Study program: Level 1*. Reston, VA: National Association of Secondary School Principals.

Dickenson-Hazard, N. (1989). Making the grade as a test taker. *Pediatric Nursing, 15*, 302-304.

Dickenson-Hazard, N. (1989). Anatomy of a test question. *Pediatric Nursing, 15*, 395-399.

Dickenson-Hazard, N. (1990). The psychology of successful test taking. *Pediatric Nursing, 16*, 66-67.

Dickenson-Hazard, N. (1990). Study smart. *Pediatric Nursing, 16*, 314-316.

Dickenson-Hazard, N. (1990). Study effectiveness: Are you 10 a.m. or p.m. scholar? *Pediatric Nursing, 16*, 419-420.

Dickenson-Hazard, N. (1990). Develop your thinking skills for improved test taking. *Pediatric Nursing, 16*, 480-481.

Divine, J. H., & Kylene, D. W. (1979). *How to beat test anxiety*. New York: Barons Educational Series, Inc.

Goroll, A., May, L., & Mulley, A. (Eds.). (1988). *Primary care medicine* (2nd ed.). Philadelphia: J. B. Lippincott.

Millman, J., & Pauk, W. (1969). *How to take tests*. New York: McGraw-Hill Book Co.

Nugent, P. M., & Vitale, B. A. (1997). *Test success*. (2nd ed.). Philadelphia: F. A. Davis.

Olney, C. W. (1989). *Where there's a will, there's an A*. New Jersey: Chesterbrook Educational Publishers.

Sides, M., & Cailles, N. B. (1989). *Nurse's guide to successful test taking*. Philadelphia: J. B. Lippincott Co.

Sides, M., & Korchek, N. (1994). *Nurse's guide to successful test taking* (2nd ed.). Philadelphia: J. B. Lippincott.