

Critical Thinking and Learning Cultures: Teaching, Learning, and Taking Tests

THIS CHAPTER AT A GLANCE...

Learning Cultures: Everyone Teaches, Everyone Learns

**Teaching Yourself: Grab the Spoon
Accessing, Analyzing, and Applying
Information**

Learning, Unlearning, and Relearning

Making the Most of Clinical Learning

Teaching Others: Promoting Independence

**Improving Grades and Passing Tests the First
Time**

NCLEX® Facts and Strategies

Critical Thinking Exercises

Think, Pair, Share

Key Points/Summary

References

LEARNING OUTCOMES

After completing this chapter, you should be able to:

1. Give five strategies for developing learning cultures.
2. Describe the relationships among learning cultures, critical thinking, and safety.
3. Clarify your responsibilities related to teaching patients, yourself, and the caregivers you supervise.
4. Explain the relationship among health literacy, identifying salient points, and teaching and learning efficiently.
5. Address the roles of memorization and reasoning in developing critical thinking.
6. Identify strategies to help you teach and learn effectively.
7. Explain why competency-based education is essential to patient safety.
8. Use the Authority, Bias, Citations, Dates (ABCD) method to evaluate the reliability of web pages and other works.
9. Explain why you need test-taking skills, as well as knowledge, to succeed in school and at work.
10. Use strategies that help you improve your test scores and pass the NCLEX® on the first try.

KEY CONCEPTS

Learning culture, bias, remediation, relearning, salient points, mentor, preceptor, competency-based education, health literacy, reasonably prudent. See also previous chapters.

LEARNING CULTURES: EVERYONE TEACHES, EVERYONE LEARNS

Building learning cultures that embrace the motto that “Everyone teaches, everyone learns” is central to promoting critical thinking in schools, health care organizations, and other businesses. Engaging in critical thinking in today’s rapidly changing world requires continuous learning and testing of that learning. Whether you’re 18 years old or 80, embracing lifelong learning is the key to personal and professional success. This chapter helps you develop the teaching and learning skills you need to survive and thrive in today’s fast-paced, ever-changing world. It also gives you strategies you can use to make it easier to succeed in testing situations (both routine and standard tests such as NCLEX®).

GUIDING PRINCIPLE

Building learning cultures—school and work environments that encourage learners and employees at all levels to ask questions, share information freely, and create teaching and learning opportunities—is the foundation for developing critical thinking, improving outcomes, and keeping patients safe.

Building Learning Cultures

Here are five strategies to building and maintaining learning cultures.¹

1. **Start by changing single attitudes and behaviors—these then lead to becoming a culture.** Stress that being vigilant for safety issues and fostering research, quality improvement, and evidence-based practice are everyone’s job. Create an environment in which peer-to-peer observations and exchange are appreciated in the spirit of enhancing organizational and personal performance. For example, if you see someone doing something that’s unsafe, it’s appropriate to say, “This looks risky (or unsafe); can I make a suggestion?”
2. **Make teaching and learning a key part of daily activities** of your workplace or school (address this in organizational values and performance evaluations). Don’t assume that experts know it all or that students have little to offer. Don’t assume you know more than your patients. They may be your best teachers.
3. **Promote self-esteem and confidence; be approachable and show that you care about learners’ experiences.** Staff, teachers, and leaders should relate to learners with kindness, showing genuine interest in them as people.
4. **Uphold a good team spirit** in which everyone works together toward common goals in a climate of trust and respect. Help learners feel they belong to the team.
5. **Tailor teaching strategies to individuals, not tasks.** Encourage each person to learn in his or her own way. Promote independent learning in a safe environment; a lot of learning happens with trial and error and self-correction.

TEACHING YOURSELF: GRAB THE SPOON

When I was younger, I wanted to be “spoon-fed” what I needed to know. After all, isn’t that what teachers are paid to do? Then I learned to teach myself. I realized that often teachers were trying to “feed me” more than I could learn at one time. Sometimes it felt like I got “food” all over my face but not in my brain. I realized that I could teach myself better than anyone else can. Skilled teachers help us “grab the spoon” and teach ourselves. When you encounter something new, take charge, ask questions, and use strategies that are “in synch” with your learning style preferences, as we discussed in the previous chapter. Remember, when you figure things out *in your own way*, you’re thinking critically.

As important as it is to be an independent learner, keep in mind that teaching yourself doesn't mean learning in isolation. It means knowing how to learn in groups, develop partnerships, and connect with others. To make the most of learning, reach out to educators, mentors, preceptors, role models, and other professionals.

GUIDING PRINCIPLE

You are accountable for determining the limits of your own knowledge. To keep patient safety top priority, always ask for help when you're unsure. Before you perform nursing actions or give medications, ask yourself, "Do I know why this particular action, treatment, or medication is indicated for this particular patient?" If you don't, find out.

ACCESSING, ANALYZING, AND APPLYING INFORMATION

Whether you're a health care provider or a consumer, accessing, analyzing, and applying information is now a part of everyday life. Knowing how to find reliable, relevant information makes the difference between being overwhelmed and feeling confident that you have the best information for your situation. It also can make the difference between whether you give substandard care or care that's safe, efficient, and based on the best available evidence.

Finding trustworthy information on the Internet can be a challenge. For example, think about the following summary of a post on the John Hopkins Sheridan Libraries website:

The Internet gives data from all over the world. Because so much information is available, and because that information can appear to be fairly "anonymous", you must develop skills to evaluate what you find. When you use academic library resources, the books, journals and other resources have already been evaluated by scholars, publishers and librarians. When you use the Internet, none of this applies. There are no filters. Because anyone can do a Web page, you'll find documents that have a wide range of quality, written by authors who have a wide range of authority. Excellent resources are found along side of the most questionable. For this reason, the Internet is the perfect example of the saying, Let the reader beware.²

Whether you're looking for electronic or print information, here are some strategies to help locate relevant, reliable information:

- **Make connections with people in key roles.** Introduce yourself to librarians, educators, and informatics nurses.
- **Ask for help if you get stuck.** Educators, pharmacists, dieticians, and other professionals often point you in the right direction.
- **Verify information with the primary (original) sources.** For example, if someone or a reference tells you that something is so, look for a resource to confirm it.
- **Compare the information with at least two other reputable sources on the same topic.** Remember, "More than one source, more likely of course."
- **Develop information processing skills** so you can grasp what's most important and access it quickly if needed.
- **Use a model to determine the reliability of your resources.** For example, use the following common ABCD approach.

ABCDs of Evaluating Websites and Other Works

ABCD is a mnemonic (memory jog) that's frequently used to evaluate web pages and other works.³
AUTHORITY: How well known is the author?

- Is the author a well-regarded name you recognize? What are the author's qualifications?
- Does the document provide a way to send questions (e.g., an e-mail address)?

- Did you link to this site or document from a site you trust?
- Are you led to additional information about the author?
- Are there statements about the review process for publication (peer-reviewed publications—those published only after they've been reviewed by peer experts—are most reliable)?

BIAS: Does the site or document try to persuade, rather than inform?

- What organization sponsors the site or document? Is the organization reliable?
- Is the page actually an advertisement disguised as information?

CITATIONS:

- Are full citations given to support the work?
- If so, did you compare the author's content with the content in the citation?

DATES:

- How recent are the dates that are listed?
- Does the information you need demand more current data than is given in the documents you have?
- For web citations is there a seal of approval posted? For example, the Health on the Net Foundation (<http://www.hon.ch/>) gives a seal of approval to websites that meet high standards. TRUSTe (<http://www.truste.com/>) gives a seal that guarantees privacy.

LEARNING, UNLEARNING, AND RELEARNING

To quote Alvin Toffler, author of *Future Shock*, “The illiterate of the twenty-first century will not be those who cannot read and write, but those who cannot learn, unlearn, and relearn.”⁴

Relearning things previously done well is now a common challenge for patients, families, and the rest of us. Just think of the relearning you do each time you get a new computer or phone! Changing charting systems is another example. I remember a colleague who was on a unit that was converting from paper to electronic charting, moaning, “But, I love my paper!” Now, she laughs because she loves her electronic health records.

Relearning—often called remediation—is associated with failure (perhaps because most definitions say that remediation is the process of fixing something bad or defective). Rather than placing blame, we simply must be alert to skills that may not be as sharp as they once were. Relearning is an opportunity to improve, as you can see in the following powerful case.

SCENARIO SMART PUMPS AREN'T “SMART” ON THEIR OWN

An alert nurse leader of a neonatal intensive care unit (NICU) noticed that she was hearing a lot of IV smart pump alarms. IV smart pumps have software that sounds an alarm if you enter incorrect information in the dose field. If an alarm goes off, you know to double-check what you entered. To determine why there seemed to be an increase in alarms, the leader ran printouts from all the pumps, detailing what happened when the alarms went off. After analyzing the printouts, she learned that the most common reason for the alarms was an error in calculating decimal points. Based on these results, it was clear that the nurses' math skills weren't up to par, and all of them were required to complete a course that included decimal point calculation. The alarm rate decreased dramatically.

GUIDING PRINCIPLE

Remember: Use it or lose it. If you don't use skills, you lose them. For example, if you depend on calculators, without ever double-checking the math yourself, you'll forget basic skills such as multiplication and division.

Identifying Salient Points

The previous case scenario is a great example of identifying salient points. Salient points are the most important things that must be learned to accomplish a skill or achieve an outcome. For example, with safe medication administration, knowing how to calculate doses correctly is a salient point. With so much information available, be sure to ask, “Have we identified the salient points we must teach or learn?” “Have we identified what is contributing to undesirable learning outcomes?”

What I Learned from *Candy Crush*™

I’m not exactly a whiz at playing the popular computer game, *Candy Crush*™. At one point I was stuck on the same level for 2 months! I was frustrated with my inability to learn. To regain enjoyment in the game, I decided to play some lower levels. I was amazed how I breezed through the lower levels that had once been a challenge! I realized how much my skills had improved. This was a very personal experience in applying the educational strategy of “if you’re stuck, go back to earlier learning.” This strategy reduces frustration and helps people who feel stuck gain confidence and realize how far they’ve come. It also ensures that salient points taught early in the process have indeed been learned.

Strategies to Process, Manage, and Remember Information

Never read without taking notes—you retain very little. Making notes helps you process the information so you understand and remember it better. Don’t highlight your way through articles—pick out only a few main ideas that stand out from all the others.

Make the information “your own” by asking yourself questions like, “How well do I understand what’s known and what’s unknown about this topic?” “What are the relationships between key concepts?” and “What questions does this information raise for me?” Think about what you’re reading!

Draw maps to identify relationships among key concepts.

Revise your notes and maps at least once to force yourself to do more in-depth thinking about what’s most important. Organizing and reorganizing information to find new relationships gives you more in-depth understanding and will help you remember the content better.

Always ask, “What’s the best way for me to learn this?” (See Chapter 2, Box 2-5, Strategies for Learning Style Preferences.)

Critical Thinking and Memorization

Critical thinking takes more than memorizing facts—you must know how to *apply* information in the context of various situations. Yet, nursing requires a lot of memorization, especially in the beginning. You must be able to *recall* facts to progress to higher levels of thinking, such as *analyzing and applying information*. For example, if you can’t recall what *normal* health assessment findings are, you won’t be able to analyze your patient’s data to decide whether there are any *abnormal* findings.

Strategies to Boost Your Memory

Work to understand information before you try to memorize it. Once you make sense of the information, you can identify the most important things to remember.

Don’t try to memorize everything. Separate what’s nice to know from what you **MUST** know. This gets rid of clutter and helps you identify salient points and avoid information overload.

Look for relationships among the facts, and group related facts together. Your brain remembers groups of information better than isolated facts. This is like putting information in folders, rather than cluttering your desktop with individual documents. Looking for relationships between and among the facts also helps you remember because you are using the information. Drawing maps is a great way to help you visualize and remember relationships (see Appendix B, Concept Mapping: Getting in the “Right” State of Mind).

Organize and reorganize information. This helps you see different patterns, and you remember because you’re using the information.

Review the information in two ways: just before you go to sleep and just after you’ve had some sleep (some experts believe your brain moves data into long-term memory better if reviewed late in the day; others point out the benefits of memorizing when your brain is rested and fresh).⁵

GUIDING PRINCIPLE

To test your memory, quiz yourself without your notes.

Create memory hooks—put the information into context. For example, suppose you’re studying pneumonia in class and you cared for Fred, who had pneumonia when you were doing your clinical experience. Visualize Fred and how he compared with the textbook picture. Fred becomes your memory hook. If you don’t have a real situation to connect with, play around with the information until something comes to mind that helps you remember (e.g., a rhyme, a picture, or a story). For example:

1. **Use a mnemonic** (a memory jog that makes an association between something that’s easy to remember and something that’s hard to remember). *Example:* TACIT helps you remember what to assess for medications (Therapeutic effect, Allergic or Adverse reactions, Contraindications, Interactions, Toxicity/overdose).
2. **Create an acrostic** (a catchy phrase that helps you remember the first letters of the information you’re trying to remember). *Example:* Maggie Chewed Nuts Every Place She Went gives the first letters of things you must assess in neurovascular assessment: Movement, Color, Numbness, Edema, Pulses, Sensation, and Warmth.

Use your preferred learning style and as many senses as possible. *Examples:* As you read or write, say the words out loud and listen to what you’re saying. Sing what you’re trying to remember to the tune of a favorite song. Light a scented candle.

MAKING THE MOST OF CLINICAL LEARNING

You begin to learn critical thinking in school, but you develop it on the job with strong educators, clinical experience, and dialogue about lessons learned. Today, we know the importance of having preceptors who are academically and experientially qualified to facilitate critical thinking skill development. Using a common tool or reference as a “talking point” to promote ongoing dialogue about what’s going well and what needs to be improved is key.

Clinical learning experiences are challenging because you’re trying to juggle learning with actual patient care. From the minute you arrive on the unit to the minute you leave, so much happens that it can feel like “sensory bombardment.” One of my favorite cartoons exemplifies the sensory bombardment learners often feel. In the cartoon, a perfectly coiffed, calm nurse is pouring herself a cup of coffee. Behind her, there’s a nurse who looks completely frazzled with wide-open eyes and hair standing up. Not seeing what’s behind her, the calm nurse asks, “So how was your first day?”

The following sections give you the insights and strategies you need to make the most of clinical learning.

Competency-Based Education

Competency-based education—an important method to use when teaching anything that requires safety—is now the norm in clinical education. **Competence has four interrelated components: knowledge, skills, behavior, and judgment.**⁶ With competency-based learning, you first work to gain the knowledge and skills you need to do the work in a given role. Then, before you “pass,” you must show that you can put your knowledge and skills into action. You must demonstrate that you have (1) the behaviors needed to effectively manage every situation you’re likely to encounter in that role and (2) the judgment to address situations in which straightforward answers aren’t apparent.⁷ For example, let’s look at the important competency of mastering sterile technique. If you can demonstrate a sterile procedure in a specific situation, but you don’t know the underlying principles, you’ll have two issues: (1) You’ll be unprepared to learn other procedures in which sterility is essential, and (2) you’ll be unsafe to practice because you won’t be able to adapt the procedure when circumstances change (as we all know they do).

GUIDING PRINCIPLE

Competency—the ability to accomplish specific skills safely and effectively under various circumstances—isn’t just the product of completing required courses, nor is it measured by simply passing a test or completing a checklist.⁷ Rather, true competency is confirmed *after* you complete the tests and checklists *and* you consistently display appropriate behaviors and sound judgments at the point of care (e.g., the bedside).

Clinical Learning Strategies

The following are key strategies to help you develop your clinical reasoning skills.

- **Keep references—texts, hand-held electronic devices, pocket guides, and personal “cheat sheets”—handy.** Until you have a large storehouse of experiential knowledge in your brain, you’ll need to refer to these frequently.
- **Learn terminology and concepts.** If you encounter words like *embolus*, *thrombus*, or *phlebitis*, and you don’t know what they mean, look them up as you encounter them, so that they become part of your long-term memory. Learning terms *in context* helps your brain store information in related groups, rather than as isolated facts.
- **Become familiar with normal findings** (e.g., normal lab values, assessment findings, disease progression, growth, and development) before being concerned with abnormal findings. Once you know what’s normal, you’ll readily recognize when you encounter information that’s *outside the norm* (abnormal).
- **Ask why.** Find out why normal and abnormal findings occur (e.g., “Why is there edema in heart failure, yet none when the heart is functioning normally?”).
- **Learn problem-specific facts.** You need to know how health issues usually present themselves (their signs and symptoms), what usually causes them, and how they’re managed. Box 3-1 gives questions you need to answer to be prepared for going to the clinical setting.
- **Use a worksheet to help you stay focused and identify what information you have and what information you’re missing.** Some organizations have a worksheet for you to follow. Figure 3-1 shows a worksheet I developed for myself when I worked part time in the ICU. Keep in mind that these worksheets should change depending on the clinical setting in which you’re working. For example, I had to adapt my ICU worksheet when working in home care.

BOX 3-1 Preparing for Clinical Learning

Questions you should answer before going to a clinical setting:

- What common problems are seen in this particular setting?
- What are the signs and symptoms of these problems?
- What risk factors do I know or suspect patients in this setting have?
- What do I assess to determine the status of these signs, symptoms, and risk factors?
- What are the usual causes of these problems?
- What do I assess to determine the status of the causes of the problems?
- How do these problems usually progress, and how are they managed?
- How can these problems be prevented?
- What are the signs and symptoms of potential complications of these problems, and how will I monitor for them?
- How can I be prepared to manage potential complications?
- What medications and treatments are likely to be used, and why?
- What medication-related or treatment-related problems might I encounter, how will I monitor to detect them, and how are they usually managed?
- What population-based factors (e.g., age group, lifestyle, culture, beliefs, and language needs) might have bearing on health practices related to these health problems?
- What are the key things people need to know to manage these problems independently, and what will I do to ensure that this knowledge is gained?

- **As you go through the day, make the nursing process—*assess, diagnose, plan, implement, and evaluate* a “guiding mantra” in your head.** Assess before you act. Make judgments based on evidence rather than guesswork. Evaluate patient responses and change approaches as needed.
- **Use debriefing.** You make the most of your learning when you engage in debriefing and dialogue with your instructor or in groups in postcare conferences. Share your clinical challenges and ask your instructor, preceptor, or peers for insight into what happened and things you should do the next time you’re in a similar situation.

TEACHING OTHERS: PROMOTING INDEPENDENCE

A common saying that applies to teaching others is “Teachers don’t empower learners. They encourage them to use the power they were born with.” Your role as a teacher—helping patients, families, and co-workers gain the knowledge and skills they need to be safe and independent—can be one of the most rewarding, time-saving, and cost-effective things you do. Patients are discharged “quicker and sicker” than they were in the past, and many manage complex problems independently at home. They need competent, knowledgeable teachers.

GUIDING PRINCIPLE

You are accountable for ensuring that patients, families, and caregivers you supervise have the knowledge they need to proceed with care safely and effectively.^{8,9} If you miss teaching that a reasonably prudent nurse in the same situation would have done and it results in harm, you may be accused of negligence.

Whether you’re dealing with patients, students, or peers, being an effective teacher requires working closely together with learners to identify (1) what must be learned, (2) how they want to learn it, and (3) what resources they can use to best aid learning.

Name_____	Medical Dx_____
Room_____	PCP_____
Age____ Religion____	Allergies_____
Culture_____	
Diet____ Activity____	
	Medications/IV's:
Neuro:	
Resp:	Potential Complications:
Oxygen:	
Cardiac:	Diagnoses/problems:
Circ:	
Skin:	Test Results
GU:	EKG
GI:	ABG
	Electrolytes
Special today:	Other

FIGURE 3-1 Sample clinical worksheet. This is one I used when working in the intensive care unit. Filling in the blanks helps you identify what information you have and what information is missing.

Patient Teaching Strategies

From your first encounter with patients to your last, your ability to engage them in their own learning significantly affects how well they do. It may be the most important thing you can do to avoid adverse outcomes and costly readmissions. Following are important strategies to help you engage and teach your patients.

GUIDING PRINCIPLE

Health literacy, a concept that's still evolving, requires a complex group of reading, listening, analytical, and decision-making skills and the ability to apply these skills to health situations¹⁰ People have the right to health information that helps them make informed decisions and to have learning needs met in ways that are understandable. You can find up-to-date information and tools on promoting health literacy at <http://www.health.gov>

- **Consider the learners' level of health literacy and ensure clear communication between you and the learner throughout the process.** According to Healthy People 2020, *health literacy* is the degree to which individuals are capable of (1) obtaining, processing, and understanding basic health information and (2) accessing and navigating the services needed to make appropriate health decisions.¹⁰
- **Together with the learner, determine the desired outcome(s):** What exactly must the person be able to do when you complete your teaching? *Example:* Sam will be able to regulate insulin dosage based on blood glucose readings by discharge.
- **Find out what the person already knows,** and then decide (1) what exactly the person must learn to achieve the desired outcomes and (2) how much time you have before the person must know it.
- **Determine readiness to learn** (e.g., "Where would you like to start?" "How do you feel about learning this?" "What are your biggest concerns?"). With patient teaching, be sure you include family and primary caregivers as indicated.
- **Give a compelling reason to learn.** People are motivated when they know how learning something will make their lives better.
- **Identify learning barriers** (e.g., consider motivation, personal feelings, and cognitive and developmental issues).
- **Ask about preferred learning styles** (e.g., doing, observing, listening, or reading) and use this information to plan teaching. *Example:* If you're teaching injection technique to doers, start by having them handle a syringe. If they'd rather read, have them read a pamphlet first. Better yet, give them the syringe and pamphlet and tell them they can start either way. Give them some time to learn on their own before you begin to teach.
- **Encourage people to ask questions and get involved.** *Example:* "Let me know if you have a better way of learning this. Not everyone learns the same way."
- **Reduce anxiety by offering support.** *Example:* "Everyone is nervous when first learning to change dressings, but once you've done it a couple of times, it's much easier."
- **Minimize distractions, and teach at appropriate times.** Pick a quiet room, and choose times when the learners are likely to be comfortable and rested.
- **Use pictures, diagrams, and illustrations** to promote comprehension and retention. Have them draw their own pictures and maps—ask them to explain them to you.
- **Create mental images by using analogies and metaphors.** *Example:* "Insulin is like a key that opens the cell's door to allow sugar to enter. If you don't have the key (insulin), sugar can't get in to feed the cell. The cell starves, and sugar accumulates in the blood, damaging kidneys and vessels."
- **Encourage people to think out loud, using their own words.** For example, a patient may say: "I need to have three things: the soaking-dressing stuff, the scrubbing stuff, and the after-dressing stuff."

- **Keep it simple.** The explain-it-to-me-as-if-I-were-a-10-year-old approach works especially well for complex situations. If you can't make it simple, you're not ready to teach it.
- **Tune in to your learners' responses and change the pace, techniques, or content if needed.** If they don't remember important content, take time to review it; if they don't seem to understand what you're saying, write it down or draw a picture.
- **Summarize main points, and don't leave learners empty-handed.** Give them the important points in print or online so that they can refresh their memory later (many health care organizations now post specific health-teaching videos on youtube.com).
- **Evaluate what's been learned by asking learners to "teach back" what they have learned.**

GUIDING PRINCIPLE

Studies show that 40% to 80% of the information patients receive is forgotten immediately, and almost half of the information retained is incorrect.¹¹ Using the "teach back," "show me," or "tell me how you'll handle this at home" approach helps confirm that you have explained to your learners what they need to know in a way that they understand. This is not a test of patients' knowledge. It's a test of how well you explained the concept.^{12,13}

IMPROVING GRADES AND PASSING TESTS THE FIRST TIME

Have you heard the saying, "As long as there are tests, there will be prayer in school"? Well, now that we have increased standards for competency, we probably have more prayer at work too. Whether you're a student or an experienced professional, testing is something that can be frustrating and produce anxiety. We all have been in the position of knowing something well, yet feeling lost on the test. Many complex, creative critical thinkers struggle with trying to "match" right answers on a test. As a friend once said to me, "I need to be in real situations to think well." This section helps you use critical thinking to identify the best way to prepare for—and take—tests.

Physiological Basis of Test Anxiety

Although many people suffer from debilitating test anxiety, few realize that there's a physiological basis for the stress they feel. When you're anxious, you feel stressed. Your brain responds to this stress by triggering a flood of hormones like cortisol and epinephrine (called the "fight-or-flight" response). These chemicals help you in short-term situations like running from danger, but they don't support calm, analytical, or intuitive problem-solving—they inhibit them.¹⁴ With test anxiety, stress becomes a vicious circle: you feel a bit anxious, the stress hormones kick in, and they make you feel even more stressed.

A good remedy for test anxiety is to remember that it works against you. Tell yourself to stay calm, take a deep breath, relax your muscles, and just do the best you can. It helps stop the cortisol surge. If you're stressed while studying or on the morning of the test, consider increasing your vitamin C intake. Many stress-reduction resources point out that vitamin C mediates the cortisol stress response, thereby helping you to stay calm.

Test-Taking Strategies

Keeping up on course work and studying each week—rather than cramming at the end of courses—is the key for doing well on exams. But it isn't the *only* key. Knowing how to reason your way through tests is equally as important. This section gives general test-taking strategies to help you reason your way through any test and then specific strategies for taking the NCLEX[®].

Preparing for Tests

- **Know yourself.** Identify your usual test-taking behaviors (e.g., do you get overly anxious? Do you tend to run out of time? Are you better at one type of test than another?). Seek help for areas you'd like to change.
- **Know the test plan.** Find out what types of questions are going to be asked and what information is the most important to study. If the teacher doesn't share this information, review course objectives, text objectives, and summaries—often these will help you decide what's most important.
- **Find out how long you have to take the test,** what resources you're allowed to bring, and whether you get penalized for guessing.
- **Prepare with an attitude of, "I can do this—**I just have to figure out how."**"** You are capable. Sometimes you need to remind yourself of this to gain the positive attitude that's so important. Lack of confidence is self-defeating brain-drain. Take a deep breath and focus on doing the best you can.
- **Get organized and budget your time.** Decide what you need to study, what your resources are (e.g., notes, books, tutors, and peers), and when and how you'll prepare for the test.
- **Join a study group—**be sure the group stays on task and on time.
- **Know the parts of a question, how to read questions, and how to make educated guesses** (Boxes 3-2 and 3-3).
- Practice taking the test under the same conditions you will experience when you actually take it. For example, if it's a computerized test, practice on the computer.

Taking Tests

- **Arrive early for warm-up.** Give yourself time to calm down, get focused, and scan your review materials. Reviewing practice questions is also a good way to get your brain in test-taking gear.
- **Pay attention to verbal and written instructions.** Jot down notes to be sure you remember the instructions.

BOX 3-2 Parts of a Test Question

1. **The background statement(s):** The statements or phrases that tell you the *context* in which you're expected to answer the question (e.g., the words in italics in the following example).

Example test question: You're caring for *someone who has severe asthma, is wheezing loudly, is confused, and can't sleep*. You check the orders and note that a sedative can be given for sleeplessness. Knowing the possible effects of giving a sedative to an asthmatic, what would you do?

- Give the sedative to help the patient relax.
 - Withhold the sedative, because it aggravates asthma.
 - Withhold the sedative, and monitor the patient closely.
 - Give the sedative, but monitor the patient carefully.
2. **The stem:** A phrase that asks or states the intent of the question (e.g., the underlined words above).
3. **Key concepts:** The most important concepts addressed in the background statement(s). In the example above, the key concepts are "severe asthma," "wheezing loudly," and "effects of giving a sedative to an asthmatic."
4. **Key word(s):** The words that specify what's being asked and what's happening. In the example above, the key words are "severe," "loudly," and "confused." These words specify that the asthma problem is severe. "Would you do?" specifies that you're being asked for an appropriate action to take.
5. **The options (choices):** These include one correct answer (called the *keyed response*) and three to five distracters (incorrect answers). In the example above, (c) is the keyed response, and the rest are distracters.

BOX 3-3 Guidelines for Making Educated Guesses*

Educated guess defined: Using test-taking strategies to choose a right answer when you're unsure from content alone (when none of the options seem to jump out at you)

1. Be sure you understand the test directions.
2. Find out whether you're penalized for guessing.
3. Read the question *twice*, asking yourself the following:
 - **What** does the stem ask? (Box 3-2 defines stem.)
 - **Who** is the client? (e.g., age, sex, role)
 - **What** is the problem? (e.g., diagnosis, signs, symptoms, behavior)
 - **What rationale** is offered in the question? (e.g., to prevent respiratory complications.... Because the cast is damp....)
 - **What time frame** is being addressed? (e.g., immediately before surgery, on the day of admission, or when?)
4. Study all the answers.
 - Eliminate answers you know are outright wrong.
 - Look for answers that are wrong based on the directions.
 - Look for clues in the questions or answers that might help you narrow it down further to the most likely best answer (see strategies 5 and 6 below).
5. Use the following rules together with your knowledge to make educated guesses:
 - **Initial = Assessment.** The word *initial* used in a question usually requires an assessment answer. (What would you assess?)
 - **Essential = Safety.** The word *essential* used in a question usually requires a safety answer. (What's required for safety?) Remember: "Keep them breathing, keep them safe."
 - **Opposites Attract Right Answers.** If you have two answers that are opposite to one another, the *right* answer is usually *one* of the two opposites.
Example: The correct answer below is likely to be (a) or (b) because they're opposites.
 - a. Turn the client on to the right side.
 - b. Turn the client on to the left side.
 - c. Encourage fluids.
 - d. Ambulate the client.
 - **Odd Man Wins.** The option that's most different in length, style, or content is usually the right answer. The *right* answer is often the longest one or the shortest one. *Example:* The correct answer below is likely to be (b) because it's the "odd man."
 - a. Decreased temperature
 - b. Rapid pulse
 - c. Decreased respirations
 - d. Decreased blood pressure
 - **Same Answer = Neither One.** If two responses say the same thing in different words, they can't both be right, so neither one is right. *Example:* Tachycardia and rapid heartbeat as two answer options.
 - **Repeated Words Means Right One.** If the answer contains the same word (or a synonym) that appears in the question, it's more likely to be a correct response. *Example:* The word *hypotension* in question, the word *hypotension* or *shock* in answer.
 - **Absolutely Not.** Answers that use "absolutes" aren't usually the right response. *Example:* always, never, all, none.
 - **Generally So.** Answers that use qualifiers that make the response more "generally so" tend to signify right answers. *Examples:* Usually, frequently, often.
6. When answering questions about setting priorities, remember Maslow's Hierarchy of Needs (See summary of Maslow in Chapter 6, Box 6-2).

*Strategies developed with the help of Judith Miller (<http://judymillernclexreview.com>) and Deanne Blach (<http://www.DeanneBlach.com>).

- **If allowed, skim the whole test and plan your approach.** For example, begin by answering the types of questions you like before tackling types you don't like (you may like matching questions better than essay). Completing what you like and know first reduces anxiety and gets your brain in the test-taking mode before you tackle more difficult questions.
- **Watch your time, and note how the questions are weighted.** If a question is worth 50% of your grade, you might want to save 50% of your time to work on that question.
- **Focus on what you know.**
 - **If allowed, skip difficult questions** and come back to them later. Mark the easy questions and do them first.
 - **For short-answer and essay tests:** Jot down main points you need and ask yourself, "What else can I say?" or "What did I miss?"
- **If you don't understand a question, ask for clarification.** If you're not allowed to ask questions during the test, write something like, "I wasn't sure what you meant, so I'm answering the question assuming you meant...." If allowed, write this on your answer sheet.
- **When in doubt, don't change answers.** Your first response is more likely to be correct.
- **When being tested using case histories, read the questions first.** Then, look for the answers as you read the case history.
- **If you're stuck on a question,** try sketching a picture, map, or diagram to help you conceptualize the answer.

After Taking Tests

- **If you do poorly, don't think it's the end of the world.** Even the best minds have failed tests (Einstein flunked algebra; Edison was considered unteachable). Instead, do something. Explain your difficulty to your instructor; ask for suggestions on how to prepare better or whether you can do extra credit work.
- **If there's a test review, be sure to go—you'll learn.** Too many students think that this is an opportunity to skip class, because "nothing much will be happening."

NCLEX® FACTS AND STRATEGIES

NCLEX® is based on surveys of skills that new graduates must have to practice safely and effectively (surveys are done every 3 years). It's taken on a computer and takes up to 6 hours. Questions require analysis and application. If you answer easy questions correctly, you move on to higher level questions. You can't go back and change answers. Don't skip questions—try your best on each one.

As soon as you answer enough questions to predict whether you'll pass or fail, the computer shuts down. You answer a minimum of 75 questions; 15 of these are being tested for reliability and are not a part of your score. The maximum number of questions is 265. Before you take the test, you must go through a short tutorial that explains how to answer alternate item questions. To get the most out of the tutorial, take a tutorial before going to the testing center (you can find the tutorial at www.pearsonvue.com/nclex).

GUIDING PRINCIPLE

The NCLEX® is a power test, not a speed test. Work slowly and accurately, rather than rapidly and carelessly. Careless wrong answers can "dig a hole that's hard to climb out of" (Miller J, personal communication, January 2015, <http://judymillernclexreview.com>).

Because it's important to begin studying by understanding overall test plans, study the following shaded section.

Fast Facts on NCLEX® Test Plan

Source: National Council of State Boards of Nursing. (2013). 2013 RN-NCLEX test plan. Retrieved from <https://www.ncsbn.org/1287.htm>

- **NCLEX® tests five major categories:**
 1. Safe and Effective Care Environment—Management of Care (17% to 23% of the test)
 2. Safe and Effective Care Environment—Safety and Infection Control (9% to 15% of the test)
 3. Health Promotion and Maintenance (6% to 12% of the test)
 4. Psychosocial Integrity (6% to 12% of the test)
 5. Physiological Integrity (around 50% of the test)
 - Basic care and comfort; assistance with ADLs (6% to 12% of the test)
 - Pharmacology and IV therapy (12% to 18% of the test)
 - Risk reduction (9% to 15% of the test)
 - Physiological adaptation (11% to 17% of the test)
- **Focuses on four processes throughout:**
 1. Nursing process
 2. Teaching and learning
 3. Caring
 4. Communication and documentation
- **Stresses assessment and monitoring (safe, effective care) throughout:**
 1. Before procedure, during procedure, and after procedure assessment
 2. Before drug administration, during drug administration, and after drug administration assessment
 3. Delegation (what should you delegate, to whom, and when?)
 4. Prioritizing and managing care (what should you do first?)
- **You'll find questions on all major specialties**, as well as Advance Directives, injury prevention, family systems, cultural diversity, legal rights and responsibilities, error prevention, bioterrorism, disaster response, human sexuality, and mental health. Questions may address clients in acute/critical care, long-term/rehabilitation care, outpatient, and community/home-based settings.
- **Most questions are multiple-choice items that require you to select one best answer.** There are an increasing number of "alternate item questions." These questions require you to choose one or more responses. They may appear in the following formats: fill in the blank; multiple response (select all that apply), ordered response (put in correct order); and click and drag the mouse to select a "hot spot." All items may include charts, tables, or graphs, sound, and video. The words **"Select all that apply"** always will be boldfaced in the stem of the question.
- **Generic names of medications are always used.** Trade names may or may not be used. Nursing diagnoses are still used; however, you don't need to memorize standard terms because the questions read something like, "What would be the nursing actions for a client with a nursing diagnosis of....?"

Tests your ability to:

- Apply infection control (e.g., hand hygiene, aseptic/sterile technique)
- Review pertinent data before medication administration
- Prepare and give medications (calculating doses and applying the five rights of medication administration)
- Provide care within the legal scope of practice
- Maintain patient confidentiality
- Ensure proper patient identification
- Practice in a manner consistent with a code of ethics for a registered nurse
- Protect a patient from injury (falls, malfunctioning equipment, electrical hazards)
- Prioritize individual patient priorities and overall workload to manage time effectively
- Use approved abbreviations and standard terminology when documenting care
- Perform and manage care of patients receiving peritoneal and hemodialysis
- Provide intrapartum care and education
- Facilitate group sessions.
- Identify and report occupational/environmental exposures
- Provide care and support for a patient with non-substance-related dependencies

Taking the NCLEX®

- Start preparing early; get review books early, and use them as you progress through your program. This helps you be familiar with the types of questions you have to answer. A lot of learning happens when you practice test questions.
- To increase learning and retention, when you get a question wrong, look up the information immediately so that you understand why you chose the incorrect response.
- Remember that you must complete a tutorial before the exam <https://www.pearsonvue.com/nclex>.
- Be sure you apply the general test-taking strategies addressed earlier in this chapter.
- Find at least one good source for content review and at least two sources for questions. Using two sources for questions exposes you to more than one style of question. (See NCLEX® Resources, Box 3-4.)
- Complete at least 2000 computerized practice questions, because this will significantly increase your chances of passing the first time. Practice, practice, practice is the name of the test-taking game (see practice questions in Appendix F).

BOX 3-4 Studying, Test-Taking, and NCLEX® Resources**General resources**

- Test-taking tips for all kinds of tests (essay, multiple choice, short answer, open book). <http://www.testtakingtips.com/>
- Study tips, including how to take notes and cram (if you must). <http://www.recordnations.com/articles/record-keeping-students/>
- 7 Dumbest things students do when cramming for tests. <http://www.cracked.com/blog/the-7-dumbest-things-students-do-when-cramming-exams/>

NCLEX® preparation

- Information about the testing center and practice tutorials. <http://www.Pearsonvue.com/nclex>
- Help for foreign nurses: http://www.testprepreview.com/cgfn_s_practice.htm

BOX 3-4 Studying, Test-Taking, and NCLEX® Resources—cont'd

- National Council of State Board of Nursing resources: <https://www.ncsbn.org>
- Individual state boards of nursing resources: <http://www.ncsbn.org> (click on “Boards of Nursing”).
- Canadian Registered Nurse Examination Preparation: <http://www.cno.org/en/become-a-nurse/entry-to-practice-examinations/>
- Kaplan Nursing: <http://www.kaptest.com/nursing/nclex-prep/>
- Tutoring and NCLEX® consulting: <http://judymillernclexreview.com/>; <http://www.DeanneBlach.com>

Free practice questions

<http://www.4tests.com/nclex>

<http://www.mightynurse.com/nclex-practice-questions/>

<http://brilliantnurse.com/pages/75-free-nclex-questions/>

<http://www.kaptest.com/nursing/nclex-prep/free-nclex-prep>

<http://www.varsitytutors.com/example-nclexrn-problems>

Elsevier resources

Silvestri, L. A. (2014). *Saunders Comprehensive Review for the NCLEX-RN® Examination* (6th ed.). St. Louis, MO: Elsevier.

Silvestri, L. A. (2015). *Saunders Q & A Review for the NCLEX-RN® Examination* (6th ed.). St. Louis, MO: Elsevier.

Zerwekh, J. (2016). *Illustrated Study Guide for the NCLEX-RN® Exam* (9th ed.). St. Louis, MO: Elsevier.

For more information, go to www.elsevieradvantage.com.

? CRITICAL THINKING EXERCISES

Example responses are in Appendix A.

1. What are your responsibilities related to teaching patients, the caregivers you supervise, and yourself?
2. Why is knowing how to teach others and yourself efficiently essential to meeting nursing outcomes?
3. Drawing from your personal experience, give at least one example of where the “Use It or Lose It” rule applies; then give strategies you can use to either boost your memory or use the information more frequently.
4. Why are those who cannot learn, unlearn, and relearn considered to be the illiterate of this century?
5. When studying for a test, why is it important to be sure you know the content without looking at your notes?
6. **Fill in the blanks in a to h by choosing from the following words:** same, practice, various, safely, effectively, apply, ready, already, know.
 - a. Two main steps to teaching others are finding out what they _____ and determining whether they are _____ to learn.
 - b. You demonstrate competency when you apply knowledge and skills to accomplish specific skills _____ and _____ under _____ circumstances.
 - c. Doing well on a test requires you to not only have the required knowledge but also to _____ taking the test under the _____ conditions you’ll experience when you actually take it.

THINK, PAIR, SHARE

With a partner, in a group, or in a journal entry:

1. Discuss the strategies given the following article:

Ticket to Home tool helps patients and families prepare for discharge. Retrieved from http://www.strategiesfornursemanagers.com/ce_detail/254410.cfm

2. Share your best and worst learning experiences. Identify what made things go well and what made things go poorly. What did you learn from these experiences?
3. Discuss the implications of Fran London's Blog, The Teachable Moment Patient Education Blog: No Time To Teach, at <http://NoTimeToTeach.com>
4. Create a Health Literacy Seminar based on the information and tools posted at <http://www.health.gov>
5. Apply the ABCD model to evaluating resources in relation to one of your favorite websites. Or, apply the criteria and tools for evaluating websites listed at Cornell University's website (<http://www.library.cornell.edu/olinuris/ref/research/webeval.html>).
6. Identify key points of the Teach-Back method as addressed by North Carolina Program on Health Literacy at <http://www.nchealthliteracy.org/toolkit/tool5.pdf>
7. Test your study skills by taking the Scientific American quiz at <http://www.scientificamerican.com/article/test-your-study-skills-quiz>
8. Examine how your brain learns best by reading some of the resources you find when you enter "Discuss Psychologists Identify the Best Ways to Study" into the search field of <http://www.ScientificAmerican.com>.
9. Decide where you stand in relation to achieving the learning outcomes at the beginning of this chapter (p. 55).
10. Based on your personal experiences, discuss your thoughts on the following *Critical Moments* and *Other Perspectives*.

CRITICAL MOMENTS

Motivating Learners

Connecting with others' motivations sparks their critical thinking. When trying to teach or motivate others, use the human instinct to self-focus to your advantage. Ask yourself questions like "What's in it for them?" and "How can I make this relevant and worth their time?"

Be Sure to Teach "Why"

Knowing why something must be done empowers people to solve problems independently. Always explain the principles and rationales for treatments. If they know the reasons behind the treatments, they'll be able to make decisions about what to do when things go wrong.

Teaching Others Helps You Learn

When you want to learn something, offer to teach it to someone else. You learn and recall best what you teach someone *else*.

OTHER PERSPECTIVES

Most Dangerous Mistakes

*The most dangerous mistakes in patient education are assumptions. You assume they can read. You assume they understand. You assume they have no more questions. You assume they can do it. You assume they will do it.*¹⁵

—Fran London, MS, RN, author of *No Time to Teach: The Essence of Patient and Family Education for Health Care Providers*

Teach-Back Strategies Avoid Errors

This amusing situation could have been avoided using teach-back strategies: As I escorted “Bob” into one of our examining rooms, he said, “I was told to put on a new medication patch every six hours, but I’m running out of room.” When he took off his shirt, he was covered in patches. Needless to say, the instructions for this drug now say “remove previous patch and apply the next one in a different spot.”

—Posting on a Nursing Listserv

The Best Way to Learn Complex Skills

Focusing on one skill at time—a musical scale, free throws, the quadratic formula—quickly leads to noticeable, tangible improvement. But over time, such focused practice actually limits our development of each skill. Mixing or “interweaving” multiple skills in a practice session, by contrast sharpens our grasp of all of them. This principle applies to a broad range of skills.

—Carey Benedict, *Author of How We Learn: The Surprising Truth About When, Where, and Why It Happens*¹⁶

Go Outside Your Learning Box

Knowing where you fall on learning styles inventories shouldn’t be a stumbling block to learning. For example, don’t avoid sim lab experiences because you aren’t a kinesthetic learner who learns best by doing. Strengthen your learning skills by encouraging yourself to operate in dimensions that aren’t your preference.

—Lyn DeSilets, RN-BC, EdD

Learning Proverb

I hear, I forget. I see, I remember. I do, I understand.

—Astronaut John Glenn

New Twist on an Old Proverb

Give a man a fish and he eats for a day. Teach a man to fish, and he leaves you alone every weekend.

KEY POINTS/SUMMARY

- Building learning cultures that embrace the motto that “everyone teaches, everyone learns” is central to promoting critical thinking and safety.
- Engaging in critical thinking in today’s rapidly changing world requires continuous learning and testing of that learning.
- To succeed today, make teaching and learning a key part of daily activities of your workplace and school.
- Knowing how to teach yourself saves time and helps you achieve your goals efficiently.
- Accessing, analyzing, and applying information is an essential skill of 21st-century nurses; ABCD (Authority, Bias, Citations, Dates) is a memory jog that’s often used to evaluate the credibility of web pages and other works.
- Learning, unlearning, and relearning are now a common challenge for patients, families, and the rest of us.
- Relearning—often called remediation—is now commonplace. We must all be alert to skills that may not be as sharp as they once were and seek opportunities to improve.
- To teach effectively and avoid information overload, be sure that you identify the salient (most important) things that must be learned to accomplish a skill or achieve an outcome.
- If someone feels stuck trying to learn something, going back to earlier learning reduces frustration, builds confidence, and ensures that salient points taught early in the process have indeed been learned.

- The information overload we have today requires us to develop strategies that help us process, manage, and remember information.
- Critical thinking takes more than memorizing facts—you must know how to *apply* information in context of various situations. For example, recognizing *abnormal patient findings* requires applying your knowledge of *normal findings*.
- Clinical learning experiences are challenging because the environment is often unfamiliar and you're trying to juggle learning with actual patient care.
- Competence has four interrelated components—knowledge, skills, behavior, and judgment. The degree to which you're able to display these components at the point of care under various circumstances determines how clinically competent you are.
- Until you have a large storehouse of experiential knowledge in your brain, keep references handy for quick reference on the clinical unit.
- You make the most of clinical learning when you engage in debriefing either with your instructor, with one another, or in groups in postcare conferences.
- Remember, “teachers don't empower learners; they encourage them to use the power they were born with.”
- Whether you're dealing with patients, students, or peers, being an effective teacher requires working closely together with learners to identify (1) what must be learned, (2) how they want to learn it, and (3) what resources they can use to best aid learning.
- The NCLEX[®] is based on surveys of skills that new graduates must have to practice safely and effectively (surveys are done every 3 years).
- Get NCLEX[®] review books early, and use them as you progress through your program; a lot of learning happens when you practice test questions.
- Scan this chapter to review the illustrations and Guiding Principles throughout.

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