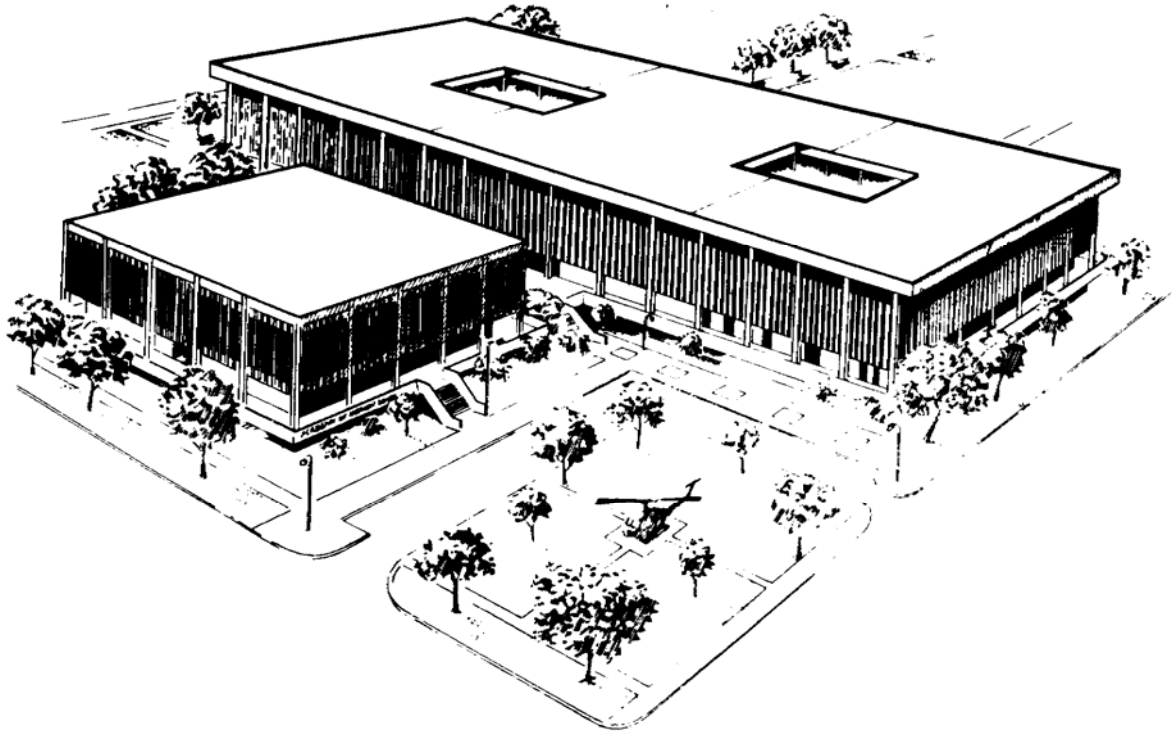

**U.S. ARMY MEDICAL DEPARTMENT CENTER AND SCHOOL
FORT SAM HOUSTON, TEXAS 78234-6100**



ROLE OF THE MEDICAL NCO

SUBCOURSE MD0560

EDITION 100

DEVELOPMENT

This subcourse is approved for resident and correspondence course instruction. It reflects the current thought of the Academy of Health Sciences and conforms to printed Department of the Army doctrine as closely as currently possible. Development and progress render such doctrine continuously subject to change.

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CLARIFICATION OF TRAINING LITERATURE TERMINOLOGY

When used in this publication, words such as "he," "him," "his," and "men" are intended to include both the masculine and feminine genders, unless specifically stated otherwise or when obvious in context.

TABLE OF CONTENTS

Lesson	Paragraphs
INTRODUCTION	
1	DUTIES AND RESPONSIBILITIES OF THE MEDICAL NCO
	Section I. Overview of the Medical NCO Role1-2--1-5
	Section II. Leadership1-6--1-17
	Exercises
2	PRINCIPLES OF EFFECTIVE MILITARY INSTRUCTION: THE INSTRUCTOR, BASIC PRINCIPLES OF EDUCATION, EFFECTIVE STUDY TECHNIQUES
	Section ..I. The Instructor.....2-1--2-4
	Section ..II. Principles of Education2-5--2-10
	Section III. Techniques for Effective Study2-11--2-21
	Exercises
3	PRINCIPLES OF EFFECTIVE MILITARY INSTRUCTION: TECHNIQUES AND TRAINING AIDS
	Section ..I. Improving Instructor Speech3-1--3-9
	Section ..II. Questioning Techniques3-10--3-14
	Section III. Training Aids3-15--3-29
	Section IV. Demonstrations.....3-30--3-33
	Exercises
4	CONDUCTING AND EVALUATING TRAINING
	Section ...I. Determine Training Needs4-1--4-6
	Section.. II. Preparations to Conduct Training4-7--4-14
	Section III. Conduct and Evaluate Training.....4-15--4-18
	Exercises

**CORRESPONDENCE COURSE OF
THE ACADEMY OF HEALTH SCIENCES, UNITED STATES ARMY**

SUBCOURSE MD0560

ROLE OF THE MEDICAL NCO

INTRODUCTION

The Medical NCO course fills a long identified gap in Army training. Until this course was written, the Medical NCO with a Military Occupational Specialty (MOS) as a Combat Medical Specialist had no formal training after the initial basic course. As his rank advanced, the enlisted person was expected to learn new requirements on the job. When a study was made, four things became apparent.

The skills learned by the Combat Medical Specialists, as they advanced in rank, were not uniform in quality or quantity.

Under emergency conditions, some Combat Medical Specialists might be called upon to use skills they never had an opportunity to learn.

Those Combat Medical Specialists who were not assigned to use their MOS skills in their peacetime job situations forgot some combat critical skills.

Under wartime conditions, there would be a shortage of medical personnel with advanced casualty care skills.

This course was designed to help meet these training gaps. As a Medical NCO, you will be charged with several responsibilities in addition to your assigned duty position. You will be training those Combat Medical Specialists under your direction in skills they have not had an opportunity to learn during their initial training. You will be helping them review in areas where they feel unsure about skills they learned earlier. You may be called upon to act as a resource person on medical information for both your superiors and the Combat Medical Specialists.

The Medical NCO will be interacting with professional medical personnel in addition to the Combat Medical Specialists who may be under his direction. For this reason, many of the terms used are medical specific. The supervisory specialist may be able to give the physician precise information about casualties, and this is only possible using technical medical language.

The use of the medical technical vocabulary in this course necessarily requires the use of some technical English terms which may be unfamiliar to you. It would be a wise idea to use one of the excellent medical dictionaries available in most bookstores and libraries. Some examples are the latest editions of Dorland's Illustrated Medical

Dictionary (published by the W.B. Saunders Company) and Taber's Cyclopedia Medical Dictionary (published by the F.A. Davis Company). For general English usage, consult a standard dictionary such as Webster's New Collegiate Dictionary (published by the G. and C. Merriam Company). Do not feel restrained by these examples. Any good dictionary will be useful.

Subcourse Components:

The subcourse instructional material consists of the following:

- Lesson 1, Duties and Responsibilities of the Medical NCO.
- Lesson 2, Principles of Effective Military Instruction: The Instructor, Basic Principles of Education, Effective Study Techniques.
- Lesson 3, Principles of Effective Military Instruction: Techniques and Training Aids.
- Lesson 4, Conducting and Evaluating Training

Study Suggestions:

Here are some suggestions that may be helpful to you in completing this subcourse:

- Read and study each lesson carefully.
- Complete the subcourse lesson by lesson. After completing each lesson, work the exercises at the end of the lesson, marking your answers in this booklet.

- After completing each set of lesson exercises, compare your answers with those on the solution sheet that follows the exercises. If you have answered an exercise incorrectly, check the reference cited after the answer on the solution sheet to determine why your response was not the correct one.

Credit Awarded:

To receive credit hours, you must be officially enrolled and complete an examination furnished by the Nonresident Instruction Branch at Fort Sam Houston, Texas. Upon successful completion of the examination for this subcourse, you will be awarded 12 credit hours.

You can enroll by going to the web site <http://atrrs.army.mil> and enrolling under "Self Development" (School Code 555).

A listing of correspondence courses and subcourses available through the Nonresident Instruction Section is found in Chapter 4 of DA Pamphlet 350-59, Army Correspondence Course Program Catalog. The DA PAM is available at the following website: <http://www.usapa.army.mil/pdffiles/p350-59.pdf>.

LESSON ASSIGNMENT

LESSON 1

Duties and Responsibilities of the Medical Non-Commissioned Officer.

LESSON ASSIGNMENT

Paragraphs 1-1 through 1-17.

LESSON OBJECTIVES

After completing this lesson, you should be able to:

- 1-1. Identify the skills/abilities of the trained Medical NCO.
- 1-2. Identify the three leadership categories of attributes and how these are demonstrated by good and poor leaders.
- 1-3. Identify the divisions of tasks and responsibilities between officers and noncommissioned officers.
- 1-4. Identify the differences and similarities between teaching and counseling.

SUGGESTION

After completing the assignment, complete the exercises at the end of this lesson. These exercises will help you to achieve the lesson objectives.

LESSON 1

DUTIES AND RESPONSIBILITIES OF THE MEDICAL NON-COMMISIONED OFFICER

Section I. OVERVIEW OF THE MEDICAL NON-COMMISIONED OFFICER ROLE

1-1. GENERAL

The need for the highly trained 91B has become very apparent during the wars of the 20th century. Physicians and physician assistants cannot be everywhere at once. The Army nurses perform vital functions, but their numbers also are limited. The civilian paramedic programs suggested a solution to the Army's pressing need for more medical personnel on the battlefield. The well-trained 91B10/20 supported by a highly trained 91B30 is proving to be a workable team and a welcome addition to the Army medical personnel. The fear that a wounded soldier will have no medical attention can seriously impair his performance on the battlefield. This is a morale factor that has always presented problems in the accomplishment of a unit's mission.

1-2. REASONS FOR THE DEVELOPMENT OF THE MEDICAL NON-COMMISIONED OFFICER COURSE

The medical and military training in this course will enhance the capabilities of both the combat medical specialist and the medical NCO. The on-the-job training and time-in-rank requirements for skill level advancement have been insufficient for the increased needs of the Army medical department.

a. **Medical Training.** Even though many 91B20 personnel have been able to enhance their medical knowledge through contact with more highly trained medical personnel, there has never been a requirement for further formal training. This course provides for uniform medical/military training to increase the level of skill for these higher level 91B personnel. This advanced medical training will enable the medical NCO to take an active, knowledgeable role in determining treatment during mass casualty situations. He will feel more confident in making critical care decisions.

b. **Standards of the Grade Authorization.** In keeping with the current standards of the grade authorization (SGA), the career management field (CMF) 91 medical field allows:

(1) The 91C practical nurse to be used in the wards and clinics where his training can best be utilized.

(2) The 91B medical NCO to occupy positions in field units, clinics, and emergency rooms formerly staffed by the 91C practical nurse.

(3) The 91B medical NCO to participate with confidence in medical care as well as in supervisory/administrative duties.

1-3. SKILLS TO BE DEVELOPED OR ENHANCED BY THE MEDICAL NONCOMMISSIONED OFFICER COURSE

a. This course is designed to provide training in these areas:

(1) Administering advanced emergency and routine outpatient medical treatment to battle and non-battle casualties.

(2) Supervising field and clinical medical facilities.

(3) Assisting with technical and administrative management of medical treatment facilities.

(4) Providing instruction for initial skills and as a review to update previously learned skills.

b. The medical NCO must have a thorough knowledge of all the skills and duties of the 91B as a basis for the supervisory and administrative functions which form a substantial part of his job. Knowledge of the skills and duties of subordinate level positions is assumed for this course. You may wish to review the appropriate material from an earlier course or from Army/civilian texts before completing the advanced material in this course.

1-4. SKILLS AND ABILITIES OF THE TRAINED MEDICAL NONCOMMISSIONED OFFICER

The trained medical NCO will provide the unit with skills and abilities to deal with:

a. **Advanced Trauma Situations.** Trauma care may include all types of bodily injury, any actions needed to save life or limb, and diseases that may impair normal bodily function. On the battlefield, final responsibility for medical care decisions rests with the most highly trained medical person available (this should be the physician). Under this assumption, the medical NCO will provide or assist in providing all required trauma care.

b. **Unit Training.** The medical NCO will be competent to organize and direct medical training of all personnel in his assigned unit. The training provided will suit the needs of each type of unit, to include both enlisted and officer personnel.

c. **Leadership Skills.** The medical NCO is proficient in management of medical treatment facilities (MTF), in counseling subordinates, in the operations of ambulance sections, and in the operations of other medical sections. Among his other skills, he can deal with mass casualty situations and interpret orders.

d. **Combat Critical Military Skills.** The combat critical skills will enable the medical NCO to act in coordinating medical unit operations with the movements of the fighting unit. He must also be ready to act as part of the fighting unit, if this role should become necessary.

1-5. MEDICAL ASSIGNMENTS AS A MEDICAL NON—COMMISIONED OFFICER

a. **Tables Of Organization And Equipment.** Most of the medical NCOs will be assigned to units organized under “Tables of Organization and Equipment” (TOE). In these assignments, the medical NCO may evaluate, diagnose, and treat minor conditions as seen on sick call. Medical NCOs will be authorized at aid stations, dispensary/clearing platoons, and emergency treatment stations.

b. **Tables Of Distribution And Allowances.** In some parts of the “Tables of Distribution and Allowances” (TDA) units, the medical NCO will be authorized. The primary locations for the medical NCOs in these units will be in the various outpatient clinics and the emergency rooms. Many of these positions were formerly held by 91C20/30 (practical nurse) personnel. The medical NCO would probably be assigned as the noncommissioned officer-in-charge (NCOIC) at these locations.

Section II. LEADERSHIP

1-6. INTRODUCTION

Leadership is a developed skill. Like any skill, it must be learned and practiced in order to become fully developed and professional. A good leader can give directions and instructions with the knowledge that those under his direction will follow no matter what problems are encountered. Such trust and faith in leadership must be developed and earned over time. A good leader can establish such a relationship with those under his guidance. Both peacetime and wartime situations for medical personnel require this kind of relationship. Take the time to practice the principles of good leadership contained in this section. This information is excerpted from FM 22-100, Military Leadership. If further guidance is required, read the entire field manual and the supplementary civilian texts recommended there.

1-7. ATTRIBUTES OF LEADERSHIP

The primary factors of attributes of leadership can be divided into three general categories:

- a. The kind of person he should be.
- b. Those kinds of information and skills a leader should know.
- c. The kinds of actions a leader should do.

1-8. FOCUS OF LEADERSHIP ATTRIBUTES

The ideas of be, know, and do take in most aspects of social life. These aspects are interrelated because each tends to direct and depend upon the other two. These attributes determine how well a leader can do his job. The knowledge you gain from this course is a vital part of your job. You could not function as a well-trained medical NCO without it. But this knowledge is only a part of good leadership. In order to apply most of this knowledge, you will need the willing cooperation of those soldiers under your command and any others who are in a position to help you. The attributes of leadership are present in all leaders--good and bad. It is the character or focus of these attributes that will determine whether the leader can expect his soldiers to perform well under all conditions and to follow his directions without confusion. The next three paragraphs will explain these ideas.

1-9. BE

a. This aspect refers to the values which are internal with each person and generally are not discussed by that person. This concerns the way a person regards such intangibles as:

- (1) Professional character traits.
- (2) The Professional Army Ethic.
- (3) The family.
- (4) The human race.

b. There are two opposing poles of belief about these ideas. Each has a very different focus.

(1) The poor leader. A person lacking good leadership qualities may regard professionalism useful only so long as it serves his own purpose. The Professional Army Ethic that requires loyalty to our nation and his unit may be regarded as something to say but only for others to do. This person's attitude toward the family may be demonstrated by requiring blind obedience of his spouse and children with little regard for their feelings, needs, and wants. His attitudes toward the human race could be so callous that he could order extermination of civilians without a second thought.

(2) The good leader. The person who has good leadership qualities will regard professionalism as a worthwhile attribute both for himself and for others. He will show his attitude toward loyalty by everything he says and does. It will be more than a role he plays from 9 to 5 each workday. The good leader shows his attitude toward family by treating his own family members as individuals with needs and wants which may be different from his own, but just as important. He remembers that his men have families of their own that need consideration. His attitude toward the human race would force him to make every effort to protect innocent civilians from involvement in battle and provide medical care for the injured to the best of his ability.

1-10. KNOW

a. **Factors.** Knowing covers more than the vital medical aspect of your job. This factor includes knowing:

- (1) Yourself.
- (2) Human nature.
- (3) Methods to develop your leadership.
- (4) Your job.

b. **Individual Strengths and Weaknesses.** Each of us has both strengths and weaknesses. The wise leader will capitalize on both.

(1) Strengths. It is possible to strengthen those areas where a person has weaknesses once those weaknesses are known. Sometimes it is also possible to capitalize on the strengths of others that complement your own lack. For example, an officer who is weak in paperwork may capitalize on the help of NCOs who are strong in detail work.

(2) Human nature. Knowledge of human nature will tell the good leader that cohesion of his unit will develop only when people have the opportunity to work together frequently. Each of the people under your direction is an individual with his/her own strengths and weaknesses. They need opportunities to talk about their problems and their successes. The wise leader will use every opportunity to talk with his men and learn about them first hand. Discipline is more easily developed by the leader who knows the individuals in his command than by fear and rank superiority. A disciplined unit that does its duty promptly and effectively in response to orders (or even in the absence of orders) has the best chance of survival in battle. The unit that understands and respects the leadership abilities of its superior will respond faster and with greater effect.

(3) Medical Non-Commissioned Officer abilities. The job abilities of the formally trained medical NCO are far greater than anything previously expected by most unit commanders. In some ways today's medical NCO must demonstrate this enhanced knowledge and skill to both his subordinates and his superiors. He must demonstrate both his vastly improved medical knowledge and his ability to shoulder his combat critical duties as an Army NCO.

1-11. DO

All those admirable, ingrained values and your comprehensive knowledge will count for little unless they are demonstrated by what you do. The "do" attributes which count most toward showing good leadership are the ways in which you provide direction, implement directions, and motivate others.

1-12. PROVIDING DIRECTION

a. Analyze the Problem. In order to provide direction, the problem must first be analyzed.

(1) Set goals. The analysis process requires that you know exactly the nature of the problem, have all of the needed information, and have separated the problem from people's feelings and emotions. Another process of providing direction is to set goals. These goals may be for your unit, for yourself, or for others. If others are involved, they should be consulted.

(2) Establish priorities. Each direction you give should be planned by thinking through the likely or possible results of your direction. Confusion can result from hastily conceived direction provided by a leader. If there are many goals and/or several directions which compete with one another, it is up to the leader to establish the priorities for his men. Generally, a medical goal will take priority, but this is not true in all situations. Unless this decision is taken out of your hands by a superior, you must decide.

b. Leader Decisions. Setting priorities is only one type of decision the leader must make. Some decisions will mean life or death to patients under your care and even to those in your unit. Just make sure the decision you make is based on the best information available and that it is sensible in dealing with the conditions that exist. Problem solving will be a daily process for the medical NCO. Some problems will be easy, and some will require all the medical and military experience you have. A good leader will stand by his solutions but be ready to admit when he has made a mistake.

1-13. IMPLEMENTING DIRECTIONS

There are several methods to implement a decision or directive. The method or combination of methods will depend on the nature of the unit, the nature of the directive, and the style of leadership.

a. **Communicating.**

(1) Forms of communication. Communications generally take one of two forms: written or spoken. Both forms are subject to interference (or "noise") between sender and receiver.

(a) Interference. Anyone who has been in a field situation is familiar with radio or field telephone interference that makes voice communications difficult or impossible. There is another type of interference that will have the same effect for both written or verbal messages. This type of interference will have the same effect in a classroom as in the field. A person will often get the message he expects to get. The sender may mean to deliver a different message from the one actually heard or seen by the receiver.

(b) Cause of interference. This is caused by the mental expectations and state of alertness of the receiver. A student who is not alert may expect the instructor to assign homework and hear this message even though the instructor has actually said that the work will be done the next day during class time. A written message may tell the receiver about an enemy advance from the north, but because the receiver had been expecting an advance from the south, he might read what he had expected.

(2) Countering interference. There are ways to counter this interference. One is feedback. Have the receiver repeat the message to be sure it is understood as sent. Another method is emphasis. Underline crucial words on a written message and use a different voice on verbal ones. A third method is to use gestures during face-to-face messages. A sketch or diagram is sometimes helpful. It is the responsibility of the leader to make sure his message is understood and understood correctly. Good message receiving skills can be trained. It is as important for the leader to listen for good feedback as it is to send clear messages.

b. **Coordinating**. More confusion is generated by lacks in coordination than by any other problem. Each person should be aware of the movements of others whose actions will affect him. There must be a plan which covers all possibilities, and everyone involved needs to know his own part and the parts played by all others. No one should depend on a specific leader for constant direction. If that leader is unable to function (for whatever reason), the individual soldier must still know what to do.

c. **Supervising**.

(1) During learning situation. The supervisor is most important during a learning situation. A learning situation might include skill practice, on-the-job training, or a learning situation in the field. Supervision of the learner is vital, especially in a potentially dangerous skill-learning procedure. Many of the medical tasks fit this description.

(2) Delegate supervision. Sometimes it is reasonable to delegate supervision to a peer who has learned the procedure very well. However, this does not relieve the medical NCO from his supervision responsibility.

(3) Oversupervision. Once the job is learned and the soldiers are capable at their skill, do not oversupervise. This stifles initiative and lowers morale. Trust enough to spot check when you are sure constant supervision is no longer required.

d. **Evaluating**. This function generally is done as a result of supervision.

(1) Purpose of evaluation. To evaluate is to judge the results of an action or product on the basis of known criteria. If the procedure is to be done under sterile conditions, is sterility being maintained? Is the patient's history complete? Are all entries on the patient care record in black (or blue-black) ink and initialed? If the criteria are not being met, it is time for a reteach and then further evaluation.

(2) System of regular evaluation. Simple errors can bring major disasters, especially in the medical care field. A system of regular evaluation is vital. Inspections should be both formal and informal and corrections made without delay. A unit that is missing supplies or equipment and a unit which has sloppy procedures are not capable of accomplishing their assigned mission.

1-14. MOTIVATING

A motive is a reason for doing something. A person's motivation is affected by two things: the strength of his need and how well he believes his intended action will do in satisfying that need. People can have either internal or external motivation. Internal motivation could be his beliefs, values, self-interest, fear, and the urge to be helpful. External motivation could be danger, a chance for promotion, or pressure from others. These are often combined and may either strengthen or weaken motivation.

a. **Aligning Individual and Unit Needs**. All of us have a strong desire to satisfy our own needs. Your job as a leader is to show your personnel that their needs are aligned with the needs of the unit. Both perceived punishments and rewards can be used towards this goal.

(1) Punishments. Perceived punishments may include such things as withholding privileges, extra duty, withholding recommendation for additional schooling, and being passed over for promotion. Examples might be:

(a) Reteach and retest after hours or on Saturday for those failing examinations.

(b) No weekend passes for those whose equipment or uniforms do not pass inspection.

(c) Extra physical training (PT) for a soldier who does not make the weight requirement.

(2) Rewards. Perceived awards include such incentives as verbal praise, recommending a soldier for awards, time off from duty, and taking special pains to stand up for your good soldiers when they need help. Other examples of rewards might be:

(a) A glowing narrative on the enlisted efficiency report (EER).

(b) Using phrases such as "I've been noticing your hard work, and I really appreciate it."

(c) Creating local awards or certificates and awarding them at unit meetings. Individual awards will probably be useful for only the top 5 to 10 percent of the unit, but they can inspire the others who will recognize that excellence is rewarded. Some rewards can be used for the whole unit when they are appropriate. A word of caution: Praise should be earned. It becomes meaningless if overused.

(3) **Examples.** When you motivate by teaching, also set an example. See that your own head is covered whenever this is required. Get enough rest so that you can think clearly under stress. Keep yourself in good physical condition.

b. **Involvement.** Get your personnel involved in planning. If there is a problem to solve, ask for their input. They may come up with a plan that is better than yours. When people play a part in developing a plan, they have a much greater interest in seeing that plan carried out well. This action also opens lines of communication between you and your soldiers. If you are not satisfied with the plan that is developed, you can always point out problem areas and show more feasible ways to handle the problem.

c. **Personal Problems.** Try to help your soldiers work out personal problems. A soldier who is concerned about personal problems is not as efficient in his job. Some private life areas that may be easy for you to manage may be very difficult for the soldier who was never taught "life" skills. It may be wise to keep some reference books about legal, personal, and financial matters on your desk. Keep the phone numbers of a chaplain, lawyer, or other appropriate professional help available and refer your soldiers when they need this type of help. Sometimes a soldier just needs to "talk out" a problem. Arrange time for this type of counseling session.

d. **Keeping Informed.** Keep your soldiers informed. Soldiers should have access to your team plans. They should also have a clear understanding of their duties with or without formal orders. The 91B10 personnel should be clear about the scope of their duties as medical specialists as well as their duties as soldiers. If you wait until your unit is called into action, it will be too late to develop a working relationship among your personnel. If certain events are scheduled and involve your people, be sure they are informed in enough time so they can make provisions in their personal lives.

1-15. DIVISION OF RESPONSIBILITIES

The Army regulations make a clear distinction between the duties of officers and NCOs. The following points from FM 22-600-20, Duties and Responsibilities of the Noncommissioned Officer, explain guidelines for what officers do and what NCOs do, and how to divide tasks and responsibilities between officers and NCOs.

a. **First Guideline.** While the officer establishes policy, and plans and programs training and operations, the NCO conducts the daily business of the unit as required by orders, policies, and schedules. Although final decisions are often the responsibility of an officer, most officers will seek the advice and assistance of their NCOs to ensure that the decisions are reasonable and relevant.

b. **Second Guideline.** While the officer works on unit training needed to accomplish the mission, the NCO works on individual and team training needed to accomplish that same mission. Officers use reports, inspections, ARTEPS, and other training tools to manage unit training. At the same time, NCOs use soldier's manuals, SDT publications and results, and other information to teach, test, and improve soldier and team skills. See figure 1-1.

OFFICER	NONCOMMISSIONED OFFICER
The officer commands, establishes policy, plans, and programs the work of the Army.	The NCO conducts the daily business of the Army within the established orders, directives, and policies.
The officer concentrates on collective training that will enable the unit to accomplish its mission.	The NCO concentrates on individual and team training that develops the capability to accomplish the mission.
The officer is primarily involved with unit operations, training, and related activities.	The NCO is primarily involved with training individual soldiers and teams.
The officer concentrates on unit effectiveness and unit readiness.	The NCO concentrates on each subordinate NCO and soldier and on the small teams of the unit to ensure that each is well-trained, highly motivated, ready, and functioning.
The officer pays particular attention to the standards of performance, training, and professional development of NCOs.	The NCO concentrates on standards of performance, training, and professional development of NCOs and enlisted personnel.
The officer creates conditions and makes the time and other resources available so the NCO can do his job.	The NCO gets the job done.

Figure 1-1. Duties and responsibilities of the officer and the NCO.

1-16. TEACHING AND COUNSELING

These functions form a substantial portion of your duties as a medical NCO. A soldier who is competent at his job will display confidence in the field. This confidence will affect the morale of all soldiers, not only those with medical skills. In order for you to do a good job teaching, your soldiers must feel a need to learn. You can foster this need by showing the person that what you are teaching will make him more competent to do his job. This involves pointing out possible situations where more knowledge is vital for survival.

a. **Involvement in the Learning Process.** A soldier who is involved will retain more of what is taught.

(1) Student involvement. If you consider your own training, you will realize how little you retained from those instructors who lectured for the entire hour. Involve your students by discussion after a short (15 to 20 minute) lecture; by demonstration and then student practice; by a mediated (slides, short films, charts, etc.) short presentation and student work book; or by making an assignment and having students research, then later present the topic.

(2) List/explanation of unfamiliar items. If students must learn unfamiliar names of items, hand them the list and explanations ahead of time and allow them time to assimilate the material before your class meets. This will save much of your lecture time and allow the student to learn at his own rate. All you will need to do is explain confusing terms and clear up misunderstandings.

(3) Role play/simulations. Since subjects such as “patient-medic communication” and “psychiatric patient handling” may need to be taught, remember to use role-play and simulations in the teaching process. These methods are appropriate when a situation is needed but not likely to be encountered by many of your students under peacetime conditions.

b. **Teaching Values.** The following paragraphs present examples of how to teach values. Other important, but hard to measure attributes of leadership are character traits, communication, counseling, and the ability to apply the principles of motivation. The first thing to remember when you are teaching is that you must be a living example of the attribute you want to teach. People learn naturally by simply following the example of a respected teacher or leader. Role modeling is the strongest teacher and has long-term effects.

(1) Starting the class. To gain the interest of your soldiers, start with an interesting, challenging example that illustrates professional values or the lack of them. Use an appropriate example. Then define the term “value” and explain how values have a powerful influence on a person’s life.

(2) Involve the troops in an interesting discussion.

(a) Troop talk. After giving examples of values and defining them, you have talked for 15 to 20 minutes. It is time to involve the troops. Get them talking. Let them debate with each other about the pros and cons of various values. You can list them, or have another soldier list them on a blackboard or on butcher paper.

(b) Discussion learning. This discussion will bring out at least one or more important teaching points that you want to make. Write these down. Let the discussion continue for 15 to 20 minutes. If it is a meaningful discussion, you can “sense” the learning taking place. Let the discussion continue if it is meaningful and participate in it as you see fit. Your job as a teacher in discussions is to ask the right questions to create and maintain an atmosphere where people are involved and interested in what is being taught.

(3) Make your teaching points.

(a) Concluding discussion. When the discussion is not making progress, conclude it with a summary. Review the important points that were made, praising those people that made good points. Always encourage and reward participation if it adds to the learning climate. You, as the leader, should then state your important teaching points.

(b) The “right” answer/opinion/Army doctrine. In those areas where you feel there is a “right” answer, give it to them. Tell them what you value and expect them to value and why. When you state your own opinion, be sure the students know that it is your opinion and not Army doctrine. In the areas that are personal, or where you don’t feel there is one right answer, tell them that too. Give them the boundaries of what you see as acceptable values and behavior in those areas. Answer any questions raised by your teaching points and statements.

(c) Instructor summary. In your summary, define values, state the meaning of the values in the Professional Army Ethic, restate the main teaching points, and tell them what you expect from them including unit standards. By this time, 50 or 60 minutes have passed, and it is time for a 10-minute break.

(4) Teach how to resolve ethical dilemmas. Begin the next hour by defining an ethical dilemma. Present an example of an ethical dilemma, such as this one: “Your best buddy is severely injured during a battle and is in the expectant category. There are two other soldiers and a POW who need your help. How would you set up your order of treatment?” Then have a 20 to 30-minute discussion of how the 91A or 91B20 should handle the dilemma. List the pros and cons of the alternatives. Then follow the same teaching process as in the first hour: Make teaching points, answer questions, summarize, and state what you expect of them in similar situations.

(5) Summary. This type of two-hour class can be immensely valuable to you as a leader. It would create an awareness in your soldiers of the crucial professional values. This awareness is the first step in really learning these values. It is crucial that they see their leaders always living by professional values and that soldiers are reinforced for behaving in terms of these values. Once this occurs, the soldier is well on his way to instilling in himself the values you are trying to teach.

c. **Counseling.** Counseling is a combination of teaching, problem solving, analysis, and influencing behavior. The sessions for the purpose of performance counseling with a subordinate are considered in a separate subcourse. Sessions for the purpose of changing deviant behavior require compassion, sincerity, and good communication skills. Train yourself to be a good listener. Hear what is being said and what is not being said. When the counselee can make his own decisions, let him do so. When you must make the decisions, be firm about enforcing them. Figure 1-2 “Incident in the Barracks,” gives an example of how to counsel.

1-17. SUMMARY

Effective leadership is based on mutual trust, respect, confidence, and understanding between you and those soldiers under your direction. There are no rules or formulas to tell you exactly what to do in each situation. This is true because an action that is wrong in one situation may be right, just, and fair in another. Leadership is more an art than a science. Always make sure your standards are reasonable and fair. Fear creates a false climate which will not hold up under the stronger fear generated in battle. Problems in a unit are rarely caused by soldiers. They are almost always caused by a lack of good leaders or by leadership mistakes.

INCIDENT IN THE BARRACKS

Staff Sergeant Butler was a platoon sergeant in an ordnance company. Sergeant Boyer was a squad leader. Staff Sergeant Butler had been concerned because SGT Boyer was always complaining about the lack of enough coercive power to motivate his soldiers to do the job. SGT Boyer wished he had been in the Army in the old days when sergeants could physically beat soldiers or make them go on punishment marches until they dropped. Staff Sergeant Butler tried to talk to SGT Boyer about how to motivate his soldiers and how to properly use the disciplinary tools that are legal and available: Withdrawal of privileges, oral and written reprimands, and company discipline. SGT Boyer was never satisfied. He would say, he just did not have the necessary punishment power to get good performance from his soldiers.

Private Mendez had been in SGT Boyer's squad about two months. Conscientious and hard working, PVT Mendez had said he might like to make a career out of the Army.

One night, PVT Mendez left his key in his room by mistake. When he returned from pass at midnight, he realized his mistake. The CQ did not have another key. The only one who could be reached with another key was the company commander. The commander was called, and he came in and let PVT Mendez in.

When Sergeant Boyer heard this, he was furious. He felt that this incident made him look bad with the commander. He decided to teach PVT Mendez a lesson. The next day, he called PVT Mendez in. He told PVT Mendez he was going to give him a practical lesson on forgetfulness. He even had prepared a lesson plan with an objective, a teaching point, and practical application. The objective was "never forget your key again." The teaching point was that without a key you can't get in, and that causes trouble for others, like your commander and squad leader. He had prepared a special practical application to drive home the teaching point. He had found a large wooden key about 1 foot wide and 3 feet long. He attached this key to PVT Mendez's waist with a chain and locked the chain. He said PVT Mendez would wear the key in the company area all day.

Figure 1-2. Incident in the barracks-counseling exercise (continued).

INCIDENT IN THE BARRACKS (Continued)

About an hour later, Staff Sergeant Butler happened to see Mendez in the company area. Amazed, he asked him why he was wearing the key. PVT Mendez related the “lesson” he had received from Sergeant Boyer. Staff Sergeant Butler knew about Mendez locking himself out, but had thought nothing of it. He saw it as the kind of human error everyone makes periodically. He knew the commander was not concerned. With one brief look into PVT Mendez’s eyes, he saw the damage that Sergeant Boyer’s poor leadership had already done to this soldier’s confidence in his leaders. Because of the treatment he received from one of his superiors, PVT Mendez regarded even Staff Sergeant Butler with a certain suspicion.

Staff Sergeant Butler was now enraged, but he controlled himself and set a calm example. He told PVT Mendez that he had been treated in an inexcusable manner, and he would take immediate corrective action. Taking PVT Mendez with him, he found SGT Boyer and gave him a look that showed his disgust for what Boyer had done. He quietly ordered SGT Boyer to immediately remove the key from PVT Mendez. SGT Boyer objected, saying he was within his rights and was giving PVT Mendez “extra training” within the guidelines of the definition of extra training.

Staff Sergeant Butler added a little volume and intensity to his voice and told Boyer that if he did not remove the key he would be disobeying a lawful order, and that he would press court martial charges. This last statement got SGT Boyer’s attention. Boyer immediately removed the key. (Staff Sergeant Butler was intentionally using legal, coercive power on Boyer to initiate changes in his behavior.)

Staff Sergeant Butler dismissed Mendez to return to his duties, but told him to report to his office at 1600 hours. He then took Sergeant Boyer to his office, told him to sit down, and said: “We have talked about how to motivate soldiers and how to reward and punish them. You have never agreed with me. You want more power to punish, and you think we ought to be able to physically punish soldiers. Well, your beliefs and methods of motivating soldiers are not only illegal, they are wrong. Already, they have caused serious problems in your squad. Most of your soldiers do only what they must to avoid your punishment. They resent you for the way you threaten and talk to them. You nearly ruined Mendez today. He is one of the best soldiers we have, and the kind we need to stay on as a professional. Don’t you understand that in combat, people fear death more than they fear what you can do to them? Don’t you understand that you don’t get the best out of people through fear? What makes you think you are any better as a human being than they are?”

Figure 1-2. Incident in the barracks-counseling exercise (continued).

INCIDENT IN THE BARRACKS (Continued)

“Now let me make something clear to you. You could get a battalion--or brigade--level punishment for what you did to Mendez. You could be relieved. I will not tolerate a leader that does not treat his soldiers with basic human respect. Right now, you are more of a problem than an asset, and your squad would be better off without you. I am giving you one more chance. If you do not change the way you treat, motivate, and talk to your soldiers, I will relieve you! Understand?”

“Yes, Sergeant.”

“Do you want to be relieved?”

“No, Sergeant.”

“Now, let me explain why I am not relieving you at this time. I see good qualities in you. You are efficient. You are a technical expert in your job. You are the best mechanic and maintenance supervisor we have except in the way you treat people. You are conscientious. You work long hours. You work well with the machines, and you know how to teach others your maintenance skills. The way you communicate and treat people, however, nearly cancels out all your good skills. Your problem is your understanding of human nature and your beliefs about motivating people.

I don't want to relieve you; but I will, and I'll recommend that you lose a stripe if you do not change the way you treat your people. I am going to teach you the way I want you to communicate, counsel, and motivate your people. Understand?

“Yes, Sergeant.”

“Now, I want to get one more thing straight. What you did to Mendez made me angry, because I can't stand to see good soldiers abused in any way. On the other hand, I know you did not mean to do the wrong thing or hurt Mendez's pride. You honestly believed that was the way to motivate him and to teach him. Look, I want you to succeed. I want to have a good relationship with you based on respect and confidence. I don't want to have to lead you by threats. Right now, however, you put me in a position where I have to let you know clearly the actions I will take if your leadership behavior does not improve. You have a duty to lead in accordance with my policies on motivation and punishment. You don't have to believe in them, but you will obey them. Now go and think about what has happened and what I said. I will see you at 1700 for our first lesson on human nature and how to motivate soldiers.”

What Staff Sergeant Butler gave Sergeant Boyer was a verbal reprimand, but it was delivered to teach and counsel. Therefore, it was counseling. Anything that is part of the process to get someone to change his beliefs and behavior is teaching and counseling.

Figure 1-2. Incident in the barracks-counseling exercise (continued).

INCIDENT IN THE BARRACKS (Continued)

Staff Sergeant Butler's counseling was "directive." He told SGT Boyer what he did wrong and what he wanted him to do to improve. In directive counseling, the counselor identifies the problem and tells the counselee what to do about it. "Nondirective" counseling is helping the counselee determine the problem and plan a course of action. In nondirective counseling, the counselee determines his own problem and solution with the help of the counselor.

You, as the leader, have to determine if you should be "directive," "nondirective," or some appropriate combination. It depends on who has the information about what the problem is and how to solve it. In SGT Boyer's case, Staff Sergeant Butler had the information. Staff Sergeant Butler told Sergeant Boyer that his beliefs were wrong, but he did not tell him to change them. You can't order someone to change their beliefs and then enforce that order. Don't give orders you can't enforce. SSG Butler did attack SGT Boyer's beliefs and explained why he thought they are wrong. He then gave SGT Boyer a significant emotional shock when he told him he would relieve him if he did not change his way of treating soldiers. Sometimes such a shock is necessary to start a process of change.

SSG Butler let SGT Boyer know that he saw his good points. He told SGT Boyer that he wanted him to succeed and to develop as a person and professional and that he would do his part by giving Boyer daily lessons on leadership. Butler also let Boyer know that if he did not behave in strict accordance with Butler's policies, he would not hesitate to relieve him and recommend reduction.

After finishing this counseling session with Sergeant Boyer, Staff Sergeant Butler met with Private Mendez. He told Mendez that he was a superior soldier with the values, character, and skills that show he has excellent potential as a soldier and future leader. He apologized for Sergeant Boyer's behavior and said that he had reprimanded and counseled Boyer. He said that Sergeant Boyer would apologize to Mendez. This session began the healing process of the psychological wound to Mendez's pride.

After talking to Mendez, Staff Sergeant Butler planned and organized his next counseling with Sergeant Boyer. He hoped he had started the belief and behavior change process with the first session. Now he would have to keep it moving. When Sergeant Boyer came in the next time, Staff Sergeant Butler created a different atmosphere. He told Boyer to sit down and relax. He began by asking Boyer if he was serious about wanting to become a better leader and if he was motivated to be receptive to the leadership lessons; he intended to give him in a series of counseling sessions. Boyer said he was receptive. If Boyer had been stubborn and resentful, Butler had made up his mind to relieve him.

Staff Sergeant Butler then got SSG Boyer to talk about asking a series of questions: Why were you upset at PVT Mendez? What did you hope to achieve by

Figure 1-2. Incident in the barracks-counseling exercise (continued).

INCIDENT IN THE BARRACKS (Continued)

putting a key on him? How do you think that made PVT Mendez feel? He asked Staff Sergeant Butle, then got SSG Boyer to talk about asking a series of questions: Why were you upset at PVT Mendez? What did you hope to achieve by putting a key on him? How do you think that made PVT Mendez feel? He asked these questions in a nonthreatening way. By doing this he got SSG Boyer to talk about his feelings, his experiences, and how he had developed his leadership beliefs and methods. This gave him genuine insight into SSG Boyer's beliefs and behavior. It gave him the information he needed to help SSG Boyer learn about human nature and develop better leadership concepts and methods. They talked at great length about human nature, motivation, and leadership. Staff Sergeant Butler taught Boyer about leadership, giving examples to support his points.

They had sessions like this about twice for a month. Staff Sergeant Butler helped Sergeant Boyer with all the leadership problems in his squad; he taught him how to teach, to counsel, to discipline, and to communicate with his troops. Within two months, Sergeant Boyer was one of the best squad leaders in the company. He apologized to PVT Mendez for his lack of sensitivity. Staff Sergeant Butler's counseling skills made a big difference in Sergeant Boyer's life, the lives and motivation of Sergeant Boyer's troops, and the effectiveness of Sergeant Boyer's squad. Staff Sergeant Butler had changed Sergeant Boyer's leadership beliefs, methods, and behavior. He had done this through:

- * An appropriate reprimand.
- * Controlling Boyer's behavior by forcing him to behave in accordance with Butler's ethical policies, regardless of whether or not he agreed with the beliefs behind the policies.
- * Informing Boyer of the consequences if his leadership did not improve.
- * Effectively and honestly communicating with Sergeant Boyer.
- * Determining Boyer's experiences and feelings that had caused the development of his beliefs.
- * Explaining why he thought Boyer's beliefs were wrong.
- * Teaching Boyer a different set of methods for communicating with his troops, for motivating them, and for disciplining them.
 - * Coaching Boyer as he learned to use the new methods.
 - * Letting Boyer know that he was on his side, and giving him confidence that he could improve as a leader.

Figure 1-2. Incident in the barracks-counseling exercise (concluded).

Continue with Exercises

EXERCISES, LESSON 1

INSTRUCTIONS. Answer the following exercises by completing the incomplete statements or writing the answer in the space provided. After you have completed all the exercises, turn to the solutions at the end of the lesson and check your answers.

1. List four leadership skills that must be possessed by the medical NCO.
 - a. _____.
 - b. _____.
 - c. _____.
 - d. _____.

2. List three general categories of the primary attributes of leadership.
 - a. _____.
 - b. _____.
 - c. _____.

3. A poor leader may regard professionalism as useful only so long as it

4. A good leader shows his attitude toward _____ to provide medical care for the injured to the best of his ability.

5. Does a unit become cohesive (have a sense of unity or togetherness) by working together frequently or by working together infrequently?
_____.

6. As a medical NCO, providing direction to subordinates includes these three major factors:

- a. _____.
- b. _____.
- c. _____.

7. In communications, an individual may receive a different message than is sent due to his mental expectations and his _____.

8. Soldiers have learned a job and are capable at their skills. Spot check but do not oversupervise. Oversupervision at this point _____ and _____.

9. Factors which are internal motivators include an individual's _____, _____, _____, _____, and _____.

10. External motivators include _____, _____ and _____.

11. To motivate subordinates effectively for the benefit of the unit, a good leader must show that _____.

12. What happens when praise is overused and given regardless of whether it is deserved or not?

13. Getting the soldiers involved in problem solving opens lines of _____ between you and your soldiers.
14. Keeping your soldiers informed about events that are scheduled allows them to _____.
15. List three responsibilities of an officer.
- a. _____..
 - b. _____..
 - c. _____..
16. List three responsibilities of a noncommissioned officer.
- a. _____..
 - b. _____..
 - c. _____..
17. You are teaching values to soldiers and have just stated your opinion. You should be sure to tell them that this is your opinion and not _____.
18. Leadership, an art rather than a science, requires that the leader's standards be _____ and _____.

Check Your Answers on Next Page

SOLUTIONS TO EXERCISES, LESSON 1

1. You are correct if you listed any four of the following:
 - * Proficient in management of medical treatment facilities.
 - * Proficient in counseling subordinates.
 - * Proficient in operations of ambulance sections.
 - * Proficient in operations of other medical sections.
 - * Proficient in dealing with mass casualty situations.
 - * Proficient in interpreting orders. (para 1-4c)
2. The kind of person a leader should be.
The kinds of information and skills a leader should know.
The kinds of actions a leader should do. (paras 1-7a through c)
3. Serves his own purposes. (para 1-9b(1))
4. The human race. (para 1-9b(2))
5. Working together frequently. (para 1-10b(2))
6. Analyzing the problem.
Setting goals for the unit and for yourself.
Establishing priorities. (para 1-12a(1) and (2))
7. State of alertness. (para 1-13a(1)(b))
8. Stifles initiative.
Lowers morale. (para 1-13c(3))
9. Beliefs.
Values.
Self-interest.
Fear.
The urge to be helpful. (para 1-14)
10. Danger.
A chance for promotion.
Pressure from others. (para 1-14)
11. The needs of subordinates are aligned with the needs of the unit. (para 1-14a)
12. Praise becomes meaningless. (para 1-14a(2)©)

13. Communication. (para 1-14b)
14. Make provisions in their personal lives. (para 1-14d)
15. You are correct if you listed any three of the following officers' responsibilities:
 - * Establish policy, plans, and programs for work of the Army.
 - * Concentrate on collective training to accomplish the mission.
 - * Involved with unit operations, training, and related activities.
 - * Attend to standards of performance, training, and professional development of NCOs.
 - * Create conditions/make time and other resources available so the NCO can do his job. (figure 1-1)
16. You are correct if listed any three of the following noncommissioned officers' responsibilities:
 - * Conduct daily business of the Army within the established orders, directives, and policies.
 - * Concentrates on individual and team training to accomplish the mission.
 - * Involved with training individual soldiers and teams.
 - * Concentrates on each subordinate NCO and soldiers and small teams to be sure each is well-trained, high motivated, ready, and functioning.
 - * Concentrates on standards of performance, training, and professional development of NCOs and enlisted personnel.
 - * Gets the job done. (figure 1-1)
17. Army doctrine. (para 1-16b(3)(b))
18. Reasonable.
Fair. (para 1-17)

End of Lesson 1

LESSON ASSIGNMENT

LESSON 2

Principles of Effective Military Instruction: The Instructor, Basic Principles of Education, Effective Study Techniques.

LESSON ASSIGNMENT

Paragraphs 2-1 through 2-21.

LESSON OBJECTIVES

After completing this lesson, you should be able to:

- 2-1. Identify the characteristics of a good instructor and the ways he can improve his teaching.
- 2-2. Identify the principles that enhance or detract from learning and how these principles can be applied.
- 2-3. Identify the physical/mental processes in learning and the process/principles of instruction.
- 2-4. Identify the usefulness of generalization and incidental factors in learning.
- 2-5. Identify the ways learning styles and motivation influence study.
- 2-6. Identify the personal adjustments needed for study.
- 2-7. Identify the importance of listening, taking notes, reading, and effective study.
- 2-8. Identify the conclusions made from research and methods for taking examinations.

SUGGESTION

After studying the assignment, complete the exercises at the end of this lesson. These exercises will help you to achieve the lesson objectives.

LESSON 2

PRINCIPLES OF EFFECTIVE MILITARY INSTRUCTION: THE INSTRUCTOR, BASIC PRINCIPLES OF EDUCATION, EFFECTIVE STUDY TECHNIQUES

Section I. THE INSTRUCTOR

2-1. INTRODUCTION

a. **Organization of This Lesson.** Effective training depends heavily on a trainer's ability to communicate with his students. As noted in the preceding lesson, the communication process is much more than giving instruction. Whether the learners are a small group, a large group, or perhaps a single individual, the principles governing this process require your careful study.

b. **The Effective Instructor.** Throughout this lesson, keep in mind that anyone can give effective instruction. There is no such person as a "born instructor" nor is there a "teaching personality." The effective instructor is one who learns the rules and puts forth the effort. If you want your students to learn, make the effort and work at being a good instructor. You will become both proficient and effective.

2-2. GENERAL

The success of medical personnel in the Army depends on the effectiveness of the instruction they receive. The plan of instruction can be very well written, but still not be learned. The presentation of the training in that plan depends on having well-trained instructors who can do more than just read the lesson. The effective instructor knows his subjects and knows how to present them. The instructor is the foundation of training.

2-3. CHARACTERISTICS OF A GOOD INSTRUCTOR

a. **Knowledge of His Subject.** The instructor must know his subject if he is to teach it to others.

(1) Experience + current medical information. Instructors should have both field or hospital experience and a thorough knowledge of applicable medical literature. An instructor is mistaken if he assumes that field or hospital experience alone will give him sufficient knowledge to teach without further preparation and continuous study of current medical literature.

(2) Depth of knowledge. Field or hospital experience should enable the instructor to evaluate the material in medical journals and present it realistically to soldiers. He should know more about his subject than he will have time to teach, and he should be prepared to answer almost any question on the subject.

b. Knowledge of Teaching Techniques. A knowledge of how to instruct is a prerequisite to good instruction. It is the reason for conducting Army instructor training courses. The instructor must be able to apply the principles, methods, and techniques of instruction in these lessons.

c. Good Teaching Personality. Personality can be defined as behavior of an individual to which other people respond, either favorably or unfavorably.

(1) Development. A good personality, one that gets a favorable response, is not some mysterious inborn quality. It can be developed by concentrating on and improving weaker personality features.

(2) Characteristics. Each instructor should strive to develop characteristics that contribute to successful teaching, such as enthusiasm and sincerity. Each instructor should avoid characteristics that interfere with effective instruction such as an air of superiority and disinterest in his subject matter.

d. Leadership Ability.

(1) Good leader. Instructors who are good leaders can develop proper habits, attitudes, and character traits in their soldiers as well as teach the basic information required in a course. They are in control, and their classes run smoothly.

(2) Course manager. Course management is a responsibility of leadership. This management includes detailed planning, obtaining and distributing supplies and equipment, keeping records, reducing waste, adjusting the program to the needs of the soldiers, making reports, and numerous other administrative details that are necessary for effective teaching. Courses must be managed if they are to be taught effectively.

e. Professional Attitude.

(1) Understanding. The instructor who has the proper professional attitude continually adds to his subject knowledge and skills and makes every effort to improve his teaching. He must have a sympathetic understanding of his soldiers' problems and be fair in dealing with each individual.

(2) Attitude. Everything an instructor says and does during classes, as well as his manner, reflects his attitude toward his soldiers, the subject, and the training program. His attitudes have a tremendous influence on soldiers' attitudes and morale. Soldiers tend to adopt the instructor's attitude and point of view toward the subject and the training.

2-4. IMPROVING THE INSTRUCTOR

Every instructor can improve his teaching by constant effort. The fact that an instructor has taught for some time does not mean that he has become a good instructor. Even if an instructor is rated superior this year, he may not be superior next year.

a. **Good Instruction.** Know what makes good instruction. In his efforts to improve, the instructor must start with an appreciation of the basic elements of good instruction. He must set standards for himself.

b. **Observation.** Observe other instructors. The instructor must maintain his individuality while improving his technique. He should observe other instructors to learn from them, but should not imitate them to a great extent. Two highly competent instructors may have radically different personalities and use entirely different techniques, yet both do a superior job of teaching. Instructors should determine what they can do well and then develop techniques based on their known abilities, rather than on abilities that they admire but lack.

c. **Analysis.** Analyze your own characteristics. Self-evaluation and self-analysis are essential to improvement. The instructor should try to evaluate his own teaching and analyze his own characteristics for strengths and weaknesses. He should build on his strengths and correct his weaknesses.

d. **Specific Rather Than General.** Concentrate on specific elements. Progress is made by concentrating on specific techniques and working out a systematic plan for their improvement. A general attempt by an instructor to do well rarely brings the significant improvement desired. Attention must be given to improving specific aspects of instruction.

e. **Ask for Criticism.** Ask for help from associates. An instructor cannot always evaluate his own work objectively. He should encourage others to criticize his instruction and welcome their suggestions. Other instructors, assistant instructors, and supervisors can identify his strengths and weaknesses more readily than the instructor himself.

f. **Be Consistent.** Make constant efforts to improve. The instructor's attitude toward his work is best judged by the effort he makes to improve. After each lesson, the good instructor will ask himself how he could have done the job better. He will not be satisfied with anything but the best. Constant search for the best methods to improve his soldiers' learning is the most important part of the instructor's plan for improvement.

Section II. PRINCIPLES OF EDUCATION

2-5. NATURE OF LEARNING

The desired outcome of all military instruction is soldier learning. If soldiers are not better prepared to do something at the end of a lesson than they were before, they have not learned. The instructor must accept responsibility for what his soldiers have or have not learned. If the soldiers have not learned as a result of his instruction, he should look first to himself and his presentation for the cause.

a. **Learning and Doing.** Learning is the process of acquiring new knowledge, skills, techniques, and attitudes that will enable a person to do something he could not do before. The emphasis is on doing. Learning is an active process, not passive absorption. Soldiers must be presented with purposeful and worthwhile work to do. They must be kept both mentally and physically active. With proper presentation of learning opportunities, the curve of learning will look something like the illustration in figure 2-1.

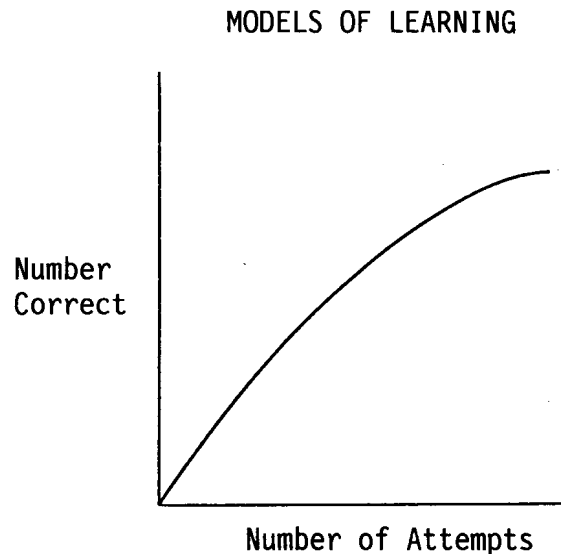


Figure 2-1. A typical learning curve.

b. **Sensory Learning.** The channels for learning are the senses. Learning can then be defined as the change that takes place in an individual as a result of his mental and physical responses to stimuli.

(1) Senses stimulate learning. The five senses are the channels through which the individual is stimulated. A person makes contact with things around him through sight, hearing, touch, taste, and smell. As a result of these contacts, he makes responses that enable him to acquire new knowledges, skills, and attitudes.

(2) Use senses in teaching. It is the instructor's responsibility to provide learning situations that make maximum use of the senses and produce the desired responses. Lessons should appeal to a variety of senses. This is one reason why practical exercises, training aids, and demonstrations are valuable.

c. **Kinds of Learning.** The accepted categories of learning are: skills, knowledges, and attitudes. Knowledges can be called awareness of facts, principles, meanings, concepts, and relationships. Skills refer to physical and mental abilities. Mental skills or abilities include problem solving, critical thinking, analysis, synthesis, and judgment. Attitudes include appreciations, ideals, preferences, and values.

d. **Tests of Learning.** When the degree of learning from presented instruction is tested, this is usually done by using one or more of these three methods-recall, recognition, or relearn. If pencil and paper tests are needed, recall or recognition types are used. If practical tests are used, these are recall. The examination at the end of this subcourse is a recognition type. Generally, relearn is used when the instruction far precedes the test or a high degree of mastery is required.

(1) Recall. Recall requires that a skill or knowledge be brought to mind without the benefit of cues or hints. The score achieved on a test of recall is based on a level of performance or the level of mastery reached during practice. The degree of mastery must have reached a very high level in order to be well reproduced on a practical test. Studies have found that what is available to be reproduced on a written recall test will vary from moment to moment. Written recall questions are generally of the essay or short answer type.

(2) Recognition.

(a) Test item level of difficulty. Recognition-type questions are generally easier than recall type because a skill or knowledge must be recognized with cues or hints rather than recalled from the mind without cues. The ability to recognize previously learned material can be adversely affected by the skill of the test writer in constructing examination items. The greater the similarity of the distractors (incorrect responses) to the learned material, the more difficult the test item.

(b) Recognition test items. Multiple choice and true-false questions are recognition test items. Use of these types increases the likelihood that the correct response will be selected. This is true for two reasons. The first reason is that instruction not completely mastered can often be used to select a correct response from incorrect alternatives. The other reason is less beneficial. If a student has not mastered the material, he can frequently still pass an examination. On true-false items, there is a fifty percent chance of guessing correctly. On multiple-choice items, there is a twenty-five percent chance of guessing correctly with four possible answers (or greater, if fewer than four responses are listed).

(3) Relearn. In Army training, relearning is frequently done just before the SDT testing. This is especially needed by those whose regular assignments have not included the skills being tested. In all instances, relearning is both easier for the learner and quicker than the initial learning. This is true regardless of the time interval since the initial instruction was given. Even if the learner does not recall any part of the original instruction, there will be some savings in both time required to relearn the skill and in the amount of effort required of the learner.

e. Forgetting.

(1) Rate of forgetting. Forgetting is a product of the passage of time. Up to forty percent of the learned material is forgotten during the first few hours after completing the last practice. After the first day, the forgetting curve is more gradual, and by the end of the third day, the curve becomes very gradual. A typical forgetting curve is shown in figure 2-2. Forgetting never becomes complete. The rate at which the material is learned makes no difference to the rate of forgetting. A fast learner and a slow learner both have the same rate of forgetting.

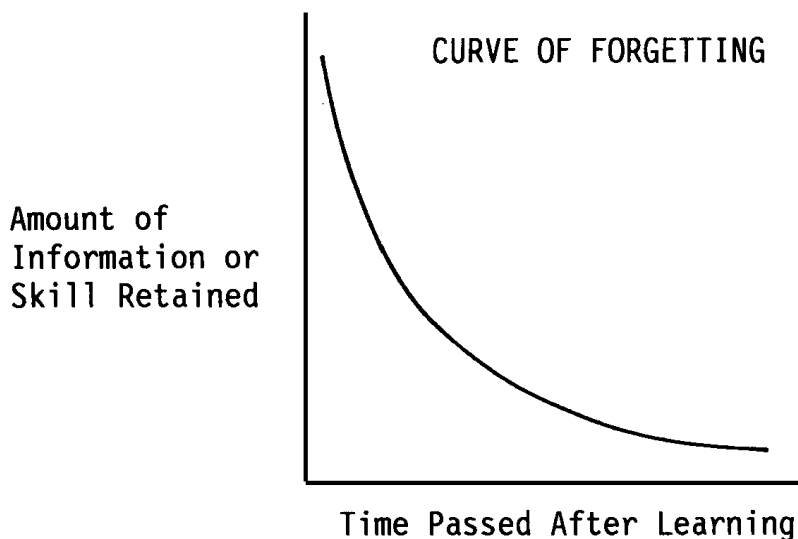


Figure 2-2. Typical forgetting curve.

(2) Amount of forgetting. The degree of mastery does affect the forgetting rate. The greater the degree of mastery, the greater the retention. This principle explains why people in their senior years who were proficient at bicycle riding in their childhood find it relatively easy to take up the sport anew. Over-learning past the mastery level results in only small additions to the amount of material retained past the initial forgetting curve. A better way to hold on to a high rate of skill is to space practice every two or three days. This kind of procedure is used by some professional athletes and others who make their livelihood by virtue of their skill mastery.

(3) Interference. The greater the interference with learning, the more complete will be the process of forgetting. Interference will be caused by one of three mental processes-- retroactive, proactive, or memory trace.

(a) Retroactive process. The retroactive process occurs when skills or knowledges learned afterwards interfere with the original learned material. This could be evident when the original material is a highly technical unit on skin diseases. Following instruction, another highly technical unit on respiratory diseases is taught. Following the respiratory disease unit, the unit on skin diseases is tested. Because of the delay in testing the first unit and the highly technical nature of both units, the second would likely interfere with the first.

(b) Proactive process. The proactive process occurs when skills or knowledges learned earlier interfere with the learning of new material. This might happen when a person who has had instruction in learning to speak French attempts learning Spanish vocabulary. This interference is caused by the fact that many French words are very similar to Spanish words which have the same meaning. Earlier instruction in another language, such as Greek, may not cause any problems because the vocabulary is very different.

(c) Memory trace process. The mind may distort memory. Memory trace distortion occurs because mental or physical practice of a skill or knowledge is not always corrected when practice occurs some length of time after the original instruction. A skill or knowledge may be recalled with errors. Then every time the learning is recalled with these errors, the mind is quicker to accept the faulty practice as correct. More errors may even be added and compound the problem. At any point, the problem can be corrected by an expert monitoring practice or by relearning the entire procedure correctly. For the medical practitioner, it is vital that memory trace be eliminated.

(4) Reinforcement.

(a) Reinforcement in Army training. Reinforcement is the rewarding of desirable behavior and/or punishment for undesirable behavior. Applied to Army training, punishment for lessons not learned or skills not mastered usually comes in the form of failing a unit or a course, recycling through the same course again, loss of promotion rights, or other similar consequences. Rewards might be passing a course, praise by instructors, better assignments, or anything valued by the student. By far, instructor approval is the most frequently used reinforcement. Rewards are more effective than punishments. While students are learning a new skill, reinforcement should be given continuously for each improvement in learning the skill. After the skill is mastered, reinforcement should still be given occasionally.

(b) Reasons for schedule of reinforcement. There are good reasons for this schedule of reinforcement. If each succeeding improvement is rewarded, the skill will be mastered faster. When mastery is achieved, if reinforcement is discontinued completely, the skill will be subject to extinction. Extinction happens when a response stops because the reinforcement is stopped. By reinforcing occasionally, the skill remains longer. This could be termed "intermittent" or "random" reinforcement. It is the same principle that is used by slot machines that are set to pay off at irregular intervals. Their object is to keep people playing longer, and this usually succeeds.

(5) Practice.

(a) Practice and skill improvement. If a skill is difficult or has many parts, it will usually require more practice than a simple uncomplicated skill. Improvement is not always evident during each succeeding practice, but in general, the level of skill will increase. Figure 2-3 shows a typical schedule of results from fifteen practice sessions. You will note that on two occasions, the results actually decreased, but the general direction was toward improvement. If this chart of actual results were depicted in curve form, it would look something like the curve shown in figure 2-4. Note the similarity between this curve and the typical curve shown in figure 2-1.

(b) Practice and generalization. One of the major goals of training is to develop the students' ability to extend their application of skills learned in one situation to other situations where the skill is needed. This is the process of generalization (paragraph 2-9). You can encourage this process by planning your skill practice sessions carefully. Try to utilize as many different environments or situations as are available for your use. The more situations you use, the faster the skill will generalize. Those students who are among the less creative may find it difficult, if not impossible, to generalize a skill unless you provide this kind of assistance.

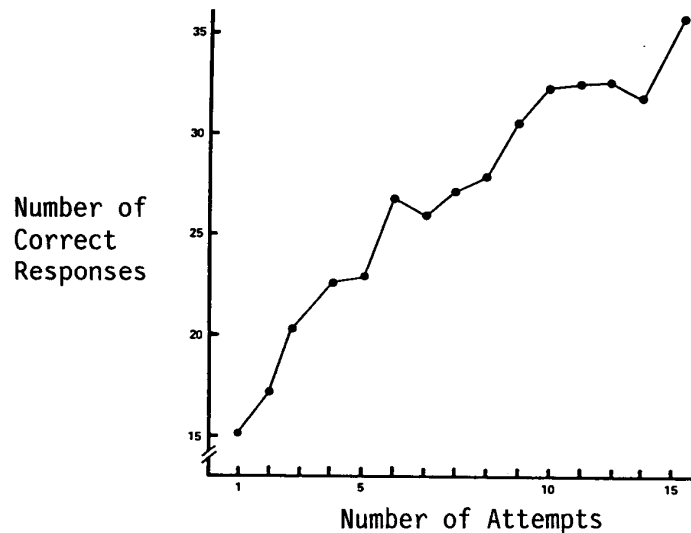


Figure 2-3. Typical result of trials.

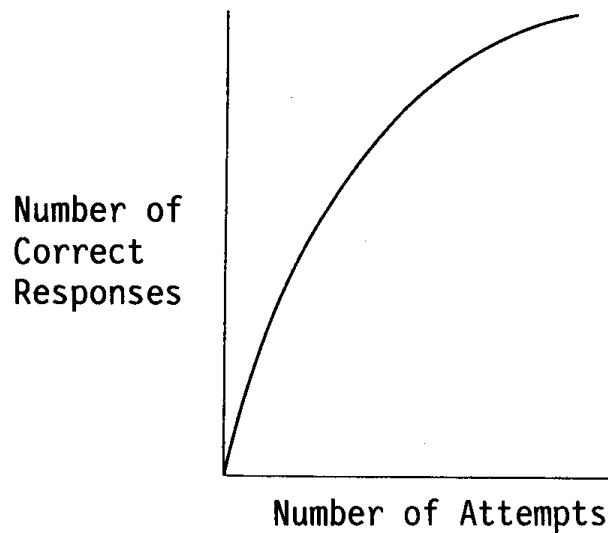


Figure 2-4. Converted to a curve

2-6. PROCESSES IN LEARNING

The learning process is done by the student in order to incorporate new material into his storehouse of knowledge. These processes can be categorized into mental and physical skills or procedures. These two types are not mutually exclusive. There is some mental activity required in each physical procedure, and there is some physical requirement for the primarily mental procedures.

a. Physical Processes.

(1) Trial and error. You have a problem, but you have no idea how to go about solving the problem. You think out possible solutions yourself or form a group and brainstorm (ask for ideas). Then you try each of the ideas or strategies until you find one that works. This is the way many basic inventions (for example, the electric light, the telephone) were invented. This method is used, to a limited degree, in "pure" research. It can be costly, both in researcher time and in material. Failure is a built-in feature of this process. No researcher expects to succeed with the first strategy tried. Some even spend their entire working lives on a single project without a major success. This can happen if the project is of major significance and the funding is available. Infants use trial and error to form their associations with the environment, and all of us use the trial and error method to form early social relationships. The Army's training programs are designed to eliminate this very costly process.

(2) Imitation. Even though imitation is more pronounced in childhood, all of us use imitation to some degree. We are all aware of the little boy who imitates his father shaving and the small child who wants to cook just like his parent. These are examples of early childhood imitation. As we get older, the process of imitation frequently focuses on an older sibling or some figure in the entertainment industry. By this time, the preteen or teenager will attempt to dress, sing, or act like the esteemed figure. Most people past their teen years will protest that their period of imitation has long since past. If this were true, we could not account for the armies of people in their suits, dress shirts, and ties who inhabit business establishments in our larger cities. Frequently a young Army recruit will attempt to model himself in imitation of a respected superior or peer. The Army instructor must always look and act like a person worthy of being imitated.

(3) Observation. We observe with our eyes, ears, nose, fingers, and tongue. After we observe, the impressions are stored in the brain and recalled when needed. We observe how others look, how they smell, and what they do. The decisions we make to like or dislike; respect or dismiss; approve or disapprove; are all based on the observations we have made. Observation never stops as long as we are alive and in reasonable health.

(4) Participation. Mental practice of a newly learned skill is not enough. Mastery requires active participation in practice or rehearsal sessions. No one has yet learned to be a good trainer without participating in skill practice sessions and demonstrations associated with training skills. Fear of failure is no excuse for lack of participation. Everyone fails sometimes. This is part of learning and frequently the most important part.

b. Mental Processes.

(1) Perception. Perception is the way which each of us views our world. The fact that we each "perceive" or "see" the world from our own unique perspective accounts for the wide variety of beliefs found in any group of people.

(a) Perception development. To the infant, the world consists of his bed and whoever is caring for him at the moment. Our world grows larger as we do. Now our world can extend deep into outer space and inner space. All our observations are accepted by the mind in relation to those "truths" which are already held there. That is the reason optical illusions are possible.

(b) Acceptable perception. When something appears contrary to our mind's "truths," we tend to see only what is acceptable. This is also the reason why people tended not to believe the stories about the atrocities in Germany during World War II. Genocide was an unthinkable concept to most people, and their minds would not accept it.

(2) Concept formation. The formation of concepts is the end product of our observations. These concepts (or ideas) form the network by "truths" which color our perceptions. When enough examples of anything have been observed, a concept is formed in our minds.

(a) Concrete concepts. We have the concept of "chair" which includes the various types and styles of seating equipment for one person. Our concept of "lamp" can mean an incandescent, fluorescent, kerosene, or any other kind of equipment that gives off light. Both of these examples are concrete concepts. They have to do with those things we can see, hear, feel, taste, or smell.

(b) Abstract concepts. The mind also forms concepts that are abstract. Abstractions cannot be experienced by the senses directly, so they must be inferred from people's actions. Love, honor, hope, and patriotism are all abstract concepts. These and many other abstract concepts must be inferred from our actions and those of others.

(3) Insight. Insight has been defined as the sudden appearance of a solution for a problem. It is often considered in contrast to trial and error. This is not strictly true because trial and error is mainly a physical process, and insight is a frequently misunderstood mental process. Insight has ties to previous learning. It is a method for problem solving. After trying unsuccessful methods to solve a problem, a person suddenly "sees" the correct solution. Frequently, the correct solution seemingly has no relationship to the incorrect methods attempted earlier. Actually, this sudden discovery of the correct solution is rooted in learning that may have been mastered much earlier. Requirements for the development of human insight are:

(a) An ability to generalize previous learning to widely different problems.

(b) Individual creativity.

(c) The availability of a mental storehouse of previously mastered knowledge that includes those elements required to "see" the correct solution. Insight applies only to problem solving. It does not apply to such situations as the learning of new vocabulary, learning precise procedures, or any memorization task.

2-7. PROCESS OF INSTRUCTION

The instructional process is the basic procedure for teaching either a single lesson objective or an entire phase of a subject. This is a three-stage process of presentation and evaluation by the instructor and application by the soldier. Using these stages as a guide, the instructor applies specific instructional methods and techniques to achieve the most effective teaching-learning situation.

a. **Presentation.** The soldier learns the subject by completing a study assignment, listening to an explanation, participating in a conference, or watching a demonstration. For most military and medical subjects, an effective presentation will include a combination of these.

b. **Application.** In this instructional stage, the soldier can apply the new ideas he has learned. This state is the most important because for learning to have taken place, the person taught must make a conscious, successful response to something—a situation, a problem, etc. When the soldier applies information the instructor taught, a determination as to whether or not learning took place can be made. In planning and conducting instruction, an instructor should remember that it is not so much what he does or says that teaches, but what the soldier learner does that indicates whether or not learning occurred.

c. **Evaluation.** The instructor checks soldiers' responses to keep them informed of their progress and from practicing incorrect responses. Evaluation includes formal testing at the end of a period or phase of instruction. The most important type of evaluation is informal and concurrent with the presentation and application stages of the instructional process. Such evaluation is accomplished by oral questions, close observation of soldiers during practical work, and checking soldier understanding of previous instruction.

2-8. PRINCIPLES OF INSTRUCTION

The following principles are appropriate to all kinds of instruction: basic or advanced, skill or knowledge, field or classroom. Not all of these principles will apply to each specific lesson of instruction. It is up to the instructor to select and use those that are applicable.

a. **Desire to Learn (Motivation).** The soldier must have a desire to learn before the offered instruction will have a lasting effect. If you want your instruction to have this effect, you will need to develop this desire in your students. Some of the methods you can use are:

(1) Need. Show your students that they need the skill or knowledge. You cannot assume that the students will recognize the importance of learning the medical lessons in a training program. Many important points will seem unrelated to the work of the soldier when he first hears them. Your instruction must include valid reasons for learning and an explanation of how the information they are learning will be used in their job.

(2) Intent to learn. Before instruction is presented, the soldier must be made to realize that he has a responsibility to learn. It is not enough that the soldier is physically present for training. He must be mentally prepared to learn. The instructor must frequently check class progress and insist that each person apply himself to the task at hand.

(3) Student interest. Interest is essential if you expect to gain and hold attention. The use of the force of instructor personality, enthusiasm, examples, and illustrations will help keep interest high. The more interesting the material can be made for the students, the more readily they will learn. Be sure you keep in mind that your responsibility is to teach, not to entertain.

(4) Achievement. Early success motivates students. A person's success tends to drive him to further effort and additional success. Achievement brings a certain amount of pleasure, satisfaction, and stimulation toward greater activity. During the early stages of a training program, instructors should have soldiers work at an activity that they can successfully complete.

(5) Recognition.

(a) Recognition--an incentive. Recognition and credit provide strong incentives for learning. Soldiers desire and have a right to expect credit for work well done. Instructors should mention the good points of soldiers' work and not dwell on their mistakes.

(b) Criticism: constructive/destructive. Start with favorable comments, then lead into suggestions for improvement. There are two types of criticism: constructive and destructive. Try to understand the difference between them. Constructive criticism is a building mechanism. In order to use the constructive type, you would point out the error and offer one or more ways to correct the deficiency. By using this type, the person corrected gains more than he loses. Destructive criticism points out the error and frequently points out the stupidity or personality lack of the person making the mistake. This type of criticism is very damaging to the person being corrected and cuts down the status of the corrector.

(6) Feelings. Avoid feelings and emotional responses that interfere with efficient learning. Feelings affect learning. Soldiers who are angry, resentful, embarrassed, frightened, or emotionally upset think about the source of their disturbance rather than the subject being taught.

(7) Competition. Friendly competition stimulates learning. Such competition between two or more groups achieves efficient learning if the intensity of the competition does not obscure learning goals. When possible, group competition is preferable to individual competition. Having a person compete against his own past record also provides effective competition.

(8) Incentives. Rewards are powerful incentives. On the other hand, punishment is perhaps the least desirable form of motivation. Punishment the soldiers consider to be unjust or too severe may breed resentment or antagonism and cause failure to learn the subject with which punishment is associated.

b. **Objectives.** Learning is most efficient when the soldier knows exactly what is expected of him. At the beginning of each period of instruction, instructors should set forth goals and standards. The soldier should be told how each lesson fits into the overall program of instruction and how the course of instruction prepares him for his job. The Army has specific ways for framing objectives. The method for developing objectives will be discussed in the next lesson (Lesson 4).

c. **Actively Responding.** What a soldier is asked to do helps determine what he learns. This may take many forms: listening, observing, reading, recalling, taking notes, reciting, writing, practicing, or solving problems. The instructional process of presentation, application, and evaluation centers on the instructor's application of this principle of instruction. Every period of instruction should be planned to require the soldier to respond frequently in a form that can be observed and evaluated by the instructor. "Practice makes perfect" only when the soldier practices correctly.

d. **Reinforce Correct Responses.** Efficient learning requires that the soldier know whether his responses are right or wrong. Application of this principle as the heart of the evaluation stage of instruction is well established in the psychology of learning.

(1) Response: correct or incorrect. For a soldier to know that his response is correct strengthens the response and tends to "fix it in the mind." A soldier should also be informed of incorrect responses and given an opportunity to correct them. Ideally, the soldier should know whether he is right or wrong immediately after each response. The longer the delay between response and knowledge of results, the weaker reinforcement becomes.

(2) On-the-spot correction. Instruction should be planned so that evaluation is concurrent with presentation and application. On-the-spot correction of errors is essential to effective instruction. Formal examinations at the end of an hour or phase of training will not adequately accomplish the principle of reinforcement because of the delay.

e. **Relate to Real Situations.** The instructor should ensure that learning activities in training closely relate to the situations on the job. Each lesson or main point should be subjected to the test of two questions.

(1) Question: How will the skill or knowledge gained from this lesson be used on the job? The manner of presentation must be realistic from the standpoint of its field application. During the introductory phase of instruction, the desire for realism should not be allowed to get in the way of learning. Even though the soldier may have to apply that pressure dressing to a spurting wound under heavy enemy fire does not mean that preliminary instruction in dressing application should be presented under similar conditions. There should be time enough to use this skill in a field situation after a soldier has mastered the basic principles and techniques.

(2) Question: Is the presentation realistic as far as the level of the class is concerned? Instruction beyond soldier comprehension is unrealistic. Relatively difficult subject matter can be presented to classes of different levels if adapted to their specific needs. Make instruction more realistic to the soldier by using such personal references as "Here's what this means to you," or "You will use this in this way."

f. **Learning Hooks.** Learning is based on experience, and new experiences are interpreted on the basis of past experience. A person seeing an airplane for the first time may call it a "strange bird" because that describes the object in the light of things familiar to him.

(1) Learning hooks and illustrations. An Army instructor can explain new things by using illustrations that "hook into" the past experience of soldiers and relate them to the new material. A description of arterial flow could be compared to the current of a strong river, while venous flow is compared to a lazy current in a small creek. This would be much better than the technical explanation that may not give some of your students a satisfactory explanation.

(2) Selection/presentation of illustrations. Soldiers' past experiences vary. They may not all attach exactly the same meaning to an explanation. Instructors must select and present illustrations so that all soldiers will get the desired meanings. In early stages of Army medical training, instructors must draw illustrations from common civilian experiences. As training advances, more illustrations can be drawn from earlier phases of the training program.

(3) Review of previous lesson. Instructors can apply this principle in the introduction to a lesson by reviewing previous instruction. This helps soldiers recall what they have previously learned and makes up their background for the lessons to be presented later.

2-9. GENERALIZATION FROM LEARNING

A major aim of Army medical training is to develop the ability to apply knowledges and skills whenever these are appropriate. This ability is called "generalization."

a. **Student Generalization.** When a student is able to take any skill learned in the classroom and demonstrate his ability to apply it, under the right circumstances, in field or clinical situations, that skill has "generalized." Chances are that you will never be completely sure if the skill or knowledge has generalized because you cannot follow the student around the rest of his life.

b. **Encouraging Generalization.** This ability is considered a high level product of learning. As such, it cannot be taught directly. There is no way for an instructor to teach every possible situation where a skill or knowledge could be used, nor is it a good idea to try. As an instructor, you can encourage the generalization process by presenting or having students present the more likely situations and by emphasizing those indications (signs/symptoms) that should point toward the need for the skill you have taught.

2-10. INCIDENTAL LEARNING

a. **Development of Correct Values and Attitudes.** The military instructor must concern himself with more than the teaching of skills and information that directly contribute to his lesson objectives. He must also be alert to the development of correct values and attitudes that determine how effectively the soldier will apply the knowledge and abilities he has acquired in the training program. This principle emphasizes the fact that the instructor's real, ultimate task is to train soldier medics, not merely perform as a subject matter expert. Many Army training publications recognize the validity of this principle when they call for such training results as aggressiveness, the will to fight, initiative, resourcefulness, and the spirit of the offensive. Medical training generates a desire to help others, encourages development of selflessness, and instills compassion. These desirable ends are not taught directly. They are developed indirectly as a result of three basic factors:

(1) Instruction that recognizes these attributes is a by-product of good teaching.

(2) Good leadership that emphasizes and contributes to the ultimate objectives of medical training.

(3) Carefully designed training programs that provide numerous realistic situations in which these qualities have the opportunity to develop.

b. **The Instructor, an Example.** To apply this principle to his teaching, the instructor must be alert to every facet of the soldier's development. He must recognize that his students learn many things from his instruction, in addition to the material presented. He must set a good example and employ a positive attitude toward his instruction. Soldiers are quick to pattern their reactions to the attitude of the instructor. The instructor must refrain from making incidental remarks and voicing personal opinions that do not contribute to the desired soldier attitude. The instructor should give advance thought to the desirable attitudes, values, interests, ideals, and habits of conduct that may result from instruction, and try to contribute to their development.

Section III. TECHNIQUES FOR EFFECTIVE STUDY

2-11. INTRODUCTION

There is frequently a substantial period of time between the basic course and the advanced course. During this interval, most medical specialists find little time for formal or organized study. Those who have managed some classroom time may not need the following section. For most others, the techniques of effective study can use some sharpening.

a. **Information.** In this section, you will find some information and ideas that will prove useful for students when you have platform responsibilities. Bear in mind that some study patterns are useful for self-study while others refer to the more formal classroom type.

b. **Reference Books.** For either type of study, there are two reference books you will find useful. A good abridged dictionary will be a great help. If there is more than one meaning given in the dictionary, be sure to find out which meaning is used in the lesson. If you cannot figure this out from the lesson text or your notes, ask peers, instructors, or writers. A comprehensive medical dictionary is also very useful for most students. Learn to use the pronunciation guides in the dictionaries. Physicians generally pronounce terms correctly, and you can too with a little study.

2-12. LEARNING STYLES

People differ in their learning styles as much as they differ in their appearance. Some of us learn faster than others. Some learn faster when the material is presented orally and some when they see a picture or a diagram. Many people prefer to know the theory and then how the theory is used in practice. Others want to see practice examples and then be told the theory which led to the solutions. These are some of the reasons why each of us tends to think out problem solutions in our own special way.

a. **Instructor Teaching Style/Student Learning Style.** Instructors are no different. Each instructor has his own teaching style. This teaching style is based on the instructor's own experiences and personality. When the styles of the student and the instructor match closely, the class seems very easy for the student. There is little or no confusion, and generally the pace is just about right. When the styles do not match, the class seems difficult to the student, and the student may not understand everything the instructor is trying to teach. Even if the styles do not match, the student can adjust.

b. **Adjustment of Styles.** Adjustment is easier when the student can arrange to discuss the lesson with others in the group who seem to understand better than he does. This is a time when a peer study group is very valuable. If this is not possible, the student can prepare a list of the points of confusion and make an appointment with the instructor to go over these. Most instructors are quite willing to help if they are allowed to schedule an appointment at their convenience.

c. **Army Instruction.** Most Army instruction is structured. This will sometimes rankle a student who learns better using a more autonomous method. Any formal classroom where the instructor lectures or prescribes the amount to be learned and the time for learning is considered structured. Correspondence courses and training extension course (TEC) lessons are considered autonomous because the student determines the speed of learning (within limits), and he can look up supplementary materials. This kind of conflict can be resolved if the student determines ahead of time that the course (or lesson) is so important to his personal or professional development that he will do whatever is required to master the material.

2-13. REASONS TO LEARN

Motivation is fully as important to the student as it is to the instructor. Real learning takes place only when the learner feels a compelling need to know the material. For a very few people, the desire to be of service is enough. Generally, there must be more than that.

a. **Medical Personnel Need.** Medical personnel feel some need to be of service when they select their MOS. The desire to advance and/or to excel in their field can impel many soldiers toward additional training. Along with this is a need to make others proud. When mom and dad or the spouse and children feel pride, this contributes toward the happiness of the service member.

b. **Advancement.** Advancement also brings material rewards, such as money and promotion to a higher rank. Whatever the motivation, it must be felt enough to bring about a strong, positive attitude toward learning the presented material.

2-14. PERSONAL ADJUSTMENTS

Some people are so flexible that they can tackle the job of intensive study with very little personal adjustment. Most of us must adjust or change some parts of our personal life to accommodate this new activity. Areas that might require some adjustment are:

a. **Physical.** Effective study requires enough rest for clear thinking. The student needs exercise. Prolonged study in one position will eventually cause the body to rebel, by causing cramps and various aches and pains. Maintain a good diet. This means a balanced diet, without excessive dependence on snack foods. Keep yourself and your study area clean. A cluttered, dirty work area does not invite study (neither do smelly clothing and dirty hands).

b. **Time.** Be realistic in your attitude toward time. Setting unrealistic schedules for yourself will accomplish little and encourage disappointment. Yesterday is gone. It makes no sense to bemoan lost opportunities. Today is now, and the future is yet to come. These are the times that need your attention. Life continues; it does not go backward.

c. **Know Yourself.** Know how long you will need to complete your planned task and then allow enough time. It matters little how long others would need; you are planning for yourself. Know your personal needs, no matter what they are. Try to understand things about yourself (what triggers your temper, that you have a tendency to forget where you put things, and so forth). Understand what makes you act as you do. Above all, be honest with yourself. No matter what other deceptions you make, never deceive yourself.

d. **Worry (Anxiety).** Some anxiety keeps you applied to the task, too much interferes with your ability to retain what you are trying to learn. The type of anxiety that can seriously retard learning is worrying about events that may never happen. Many people worry about events such as being flooded out of their homes (even though the home is on high ground), being attacked by aliens from outer space, and . If you talk out such fears with others and then plan out your work, you can combat these fears in yourself. There are only two types of worries: those you can do something about and those you cannot. If you can, do it; and if you can't, forget it.

e. **I'm Not Good Enough.** All of us are humans with an uneven distribution of talents and abilities. There should be no feelings of inferiority just because you lack one ability or another. All of us do. You are inferior only if you believe yourself to be inferior. You may even succeed in convincing some others to agree with you. The best way to eliminate such a delusion is to accomplish one or more task goals you set for yourself. Try it, it works.

f. **Humor.** Nothing dispels gloom better than the ability to laugh at your own mistakes. You accomplish a great deal by learning to laugh at yourself and with other people.

g. **Someone to Talk to.** You may need a friend, family member, or someone who will listen. Find someone who will not make judgments, just listen. You can often find your own solutions to your problems while you are talking.

h. **Get Out and Do Something.** Everyone needs activity. Daydreaming solves no problems. Neither does fantasy. These just make it easy to deny that a problem exists while creating another (loss of your time). A good solution is to do something to help others.

i. **Be With People.** We all need human contact. It is not healthy to shut yourself away from family and friends. Use one to one contact and group contact to break up study periods. You need both work and recreational activities. Space them to your own special needs.

2-15. LISTENING SKILLS

We hear the voices of many people during our working day. We also hear many other sounds. We hear, but we do not always listen.

a. **Selective Listening.** We are consciously or unconsciously very selective about listening. This will carry over to what we hear in a classroom, from a videotape or from an audiotape. Sometimes an important point is missed because, even though you heard it, you were not listening.

b. **Combating Selective Listening.** In any Army classroom, the student frequently has a lesson outline with stated objectives. By reading these objectives before the class begins, the student has the advantage of forewarning about the important points where careful listening is required. This outline can also build student interest and hold the students' attention during class. The student must hear and understand the words which are spoken before any learning is possible.

c. **Listening Processes.** These are processes that are necessary for careful listening.

(1) Get the message the speaker is sending. A speaker with a heavy accent or a very soft voice may need to repeat until the students get used to his voice.

(2) Students should attend to gestures, facial expressions, and other nonverbal messages. These generally enhance the spoken words.

(3) Students who are confused or need something repeated should ask questions immediately. The instructor should be willing to answer this kind of question without waiting until the end of the point.

(4) All presented material should be compared and related to past lessons and experiences. If there are incongruities, they should be checked out.

2-16. TAKING NOTES

It is a rare person who can remember everything he hears and everything he reads without making any notes. After the class is over or you have finished reading the assignment, your knowledge of the material is not likely to be any better than the notes you have written. When review time comes, a messy crowded set of notes is likely to be difficult to use. Find somewhere else to doodle. You will probably need to revise your notes after class, especially if they are crowded or you wrote unnecessary items. Record only the facts and details that pertain to the lesson objectives.

a. **Tape Recording.** Do not rely on a tape recorder to take your notes. You are making double the amount of work for yourself. Besides, some instructors will refuse you permission to use them. By using a tape recorder, you will get far too much detail. Then you will need to take notes from the tape later. Use a tape recorder only if someone is recording the lecture because you cannot attend or you have an injured arm and cannot write.

b. **Instructor Outline.** If you are planning to take a resident course, you will usually have an outline of each lesson handed to you before class.

(1) What is in it. The outline has a bare minimum, and some entries will mean very little to you after the notes "get cold." You will need notes to cover selected portions, not the whole lecture. Naturally, if no outline is provided, you will need to note the main ideas as well. If the instructor emphasizes a point, it is a good idea to underline or highlight it.

(2) How a student can use it. As soon as possible, read over your notes. Then you can add to them or correct mistakes. Think about what you have written and jot down anything you want to clarify with the instructor before the examination. Any points emphasized by the instructor are likely to be examination questions. When the instructor writes it on the chalkboard, you know it is important.

c. **Note-Taking Strategies.** The two note-taking strategies which follow may help:

(1) Shorthand. Develop your own note-taking strategy. You can reduce your volume of notes by using medical abbreviations where appropriate. "With" becomes "c,,"; "therefore" becomes "∴"; and "as needed" becomes "prn." Use other shortened words that are easily recognized, such as "intro" for "introduction" and "med" for "medical" or "medicine." When you look over your notes later, you may want to reduce the volume further by categorizing into sections using key words, backup information, and your thoughts about the sections.

(2) Videotapes or Films. If the room is very dark, you may not be able to do any more than jot down a few words. If you need notes, try to write them immediately after the viewing. If a procedure is shown, there is usually a discussion preceding or following the showing. You should be able to get all the notes you need from this discussion.

2-17. READING

Your reading rate will depend on the type of material at hand. A good general practice is to skim the material first. This will give you an idea of the topics covered and an idea about the depth of concentration required. When you are reading for information and ideas, you will be moving rather quickly. When you are reading to learn thoroughly (especially if the material is quite technical), you will need to slow down considerably. As you read:

a. From your initial skimming, make a decision about how deep you want to read the material the second time.

b. Question yourself as you read for the second time. When a principle is presented, ask, "What is an example I might find?" Always ask, "How does this relate to the lesson or course objectives?"

c. Watch for such negative points as the author's bias, claims he did not support with evidence, propaganda, or emotional language.

2-18. STUDY POINTERS

Study can be done at any time and under any conditions; but if you study haphazardly, you will probably not retain the material. Consider these suggestions for efficient use of your study time.

a. **Time.** When you schedule your study time, don't plan to study one section or module immediately followed by another related one. Do something else, totally unrelated to the subject area, just before you begin to study. This will help to eliminate proactive interference. Then relax after you have completed study. If you are not finished, take a short break and then resume studying.

b. **Place.** Use a quiet place for study. Even though a teenager may watch television, listen to a stereo, and still study, most of us with family or job responsibilities cannot. At least two of these activities will suffer, and usually study is the one that will suffer.

c. **Comfort/Interruptions.** Use a comfortable chair. Don't slump because you will create a backache. Allow no interruptions. If this is not possible where you are living, go to a library or anyplace where comfort and quiet are possible.

d. **Lighting.** You need good lighting to avoid eyestrain and the resulting headache. Unfavorable conditions are all right for someone just learning how to study, but not for someone in specialized study.

e. **Terms, Points, Concepts.** All important terms, major points, and concepts should be underlined or highlighted. Think of as many important things about each of them as you can before referring to your notes. If you are having trouble remembering, use flash cards for study. Write the idea, concept, or vocabulary term on one side and the definition, etc. on the other. For example, write the disease on the front and its signs and symptoms on the reverse.

f. **Subject Matter.** When the subject matter is very difficult, try to study when your energy level is high. Retention seems to be better close to the end of the day or near bedtime. Don't study in the first hour after awakening. It takes the body at least that hour to work up to top efficiency. The more complex the subject, the longer it will take you to learn it. Allow enough time, but take a break after about forty to ninety minutes of study. About ten to fifteen minutes per break is sufficient.

g. **Pre-examination Study.** Before an examination, cramming should be unnecessary. A review of one to three hours the night before the examination will do it, if you have reviewed enough earlier.

2-19. ADDITIONAL RESEARCH CONCLUSIONS ABOUT STUDY

There have been a great many research studies on means and methods for effective study. Following are conclusions reached by many of these studies. They can be used in addition to those listed in paragraph 2-18.

a. **Reinforcing Learning.** Eat before you begin studying and skip the cigarettes and drugs. This helps concentration.

(1) Initial reinforcement. Master the vocabulary first, especially the medical terms which are new to you. Your knowledge becomes a living part of your mind when you have read it, talked it over with others, written about it, and used it. The closer the first study time is to the lesson, the better will be your recall and learning. If you say it when you are seeing the material, you are reinforcing what you are learning.

(2) Review as reinforcement. When you review, be sure to check your notes so that you reinforce only correct material. The following reinforcement review schedule is recommended for effective learning (although difficult or boring material needs up to twice as many reviews):

- (a) Five minutes after learning.
- (b) Later the same day.
- (c) The next day.

- (d) The next month.
- (e) Just before the examination.

b. **Memorizing.** Memorize in private. Allow nothing to distract you. Study during the late evening helps set the information in your mind. If this time is impossible, find a time of day when you are alert and ready to learn. The words or terms to remember may be new or unfamiliar to you. When there are many and/or some of them are hard to remember, try a memory trick. The method you use will depend on the kind of material you are learning and which strategy is most comfortable for you. Look at these memorex tricks:

(1) Technique: first letter each word. By using the first letter of each term on the list you must memorize, you can form either a word or a nonsense sentence. For example, if the list is nephron, glomerulus, loop of Henle, and tubule, the first letters are "n, g, l, o, h, t". They can form "n gloht." The same letters can form "no good jumps of hard turd." Either of these devices can help you remember the structural parts of the kidney.

(2) Technique: "location assistance." "Location association" is frequently used for remembering topics, names, or lists of things. Some instructors will ask each soldier to sit in the same seat for classes or briefings. This makes it easier for them to remember each soldier's name.

(a) Using the technique. You can use the same device. Select some place with which you are very familiar, such as your home or a classroom. If your lists include the names of major veins, major arteries, major bones, etc., you can imagine each group in a different place. For example, the veins may be sitting on your sofa, the arteries on the coffee table, and the bones stretched out in front of the fireplace.

(b) Generalizing the technique. This device can also help you remember those topics for a speech you want to give. This will cut down your reliance on cue cards or the written script.

(3) Technique: cards. Vocabulary can be learned by writing the word on the front of a three by five card and the word's definition (or other pertinent information) on the back. The act of writing out the cards will help. Then you can review these cards during odd moments. Reciting these aloud will also help to set them in your memory. This is a good way to learn words that are spelled almost the same, but have different meanings.

(4) Technique: small segments. Sometimes it is necessary to learn verbatim. When no memory tricks will work and rote learning is required, break the list or other material into small segments. This is similar to the way you learned your social security number and your home telephone number. These numbers are already broken up into segments (indicated by a dash or parenthesis that separate the segments). You can break up prose, rhyme, or members into similar segments that are logical to you.

2-20. EXAMINATION

The most productive way to prepare for an examination is to review the night before and then go to sleep. Each person needs at least four to six hours sleep the night before an examination. Review the material to be tested for the last time while you are still alert, but all other studying is completed. If you have been reviewing regularly, one to three hours before the examination should be enough. Don't rely on cramming. This will defeat its own purpose. By cramming, you will not get enough sleep to react well to the examination items. You may actually forget more than you have learned during the cramming session. You also increase your anxiety level. Some stress during an examination is normal and helps to keep you alert. Too much is destructive. If you have arranged to review with a group, be sure the members of the group are not overly resentful of the system or constantly voice their own fears. These people will only increase your own anxiety level and cost your time and energy. Below are some test-taking pointers that may help you.

a. **Get to the Examination Room Five Minutes Early and Relax.** Read a newspaper or chat with other students about anything except the examination.

b. **When You Get the Examination, Read All the Directions Carefully.** If the instructor or proctor goes over the directions orally, listen. He may say things that are not in the written directions.

c. **Begin by Checking the Whole Test.** Answer the easy items first. Then go back and wrestle with the tough ones. If there is no penalty for guessing, make an educated guess. If a portion of the wrong answers will be deducted from the number correct and you have no idea of the answer, do not guess. An educated guess means that you can eliminate at least some of the distracters you know are wrong. In a multiple-choice question with four alternatives and you can eliminate two, you have a fifty percent chance of guessing correctly.

d. **Analyze Test Items Quickly.** In a multiple-choice question, the first alternative answer is statistically the least likely to be correct and the longest one is most likely to be correct. On true- false items, look for words such as "always," "never," or "none." These are absolutes, so statements containing these words are probably false. Words such as "some," "often," "rarely," and "may" are qualifiers and are probably true. Remember, if any part of the statement is false, the whole statement is false.

e. **Give Your Answers a Final Check.** When you are finished, leave yourself enough time to reread your answers. You may find some foolish errors you made (like marking in the wrong column on a computer graded answer page). If you guessed at the answer the first time and are still not sure, resist that urge to change it. Your first answer is more likely to be correct.

2-21. CLOSING

Effective learning for the soldier depends on a combination of factors: chiefly the ability of the instructor to teach the subject and the ability of the student to learn what has been presented. Knowing how to study is a great determiner in whether or not a soldier will remember the information he has heard. The success of the soldiers you instruct will depend to a great extent on how well each one can learn, remember what he learned, and use what he learned. The information you have just read in this lesson will help you guide your students to success in all three areas.

Continue with Exercises

EXERCISES, LESSON 2

INSTRUCTIONS. Answer the following exercises by completing the incomplete statement or writing the answer in the space provided. After you have completed all the exercises, turn to the solutions at the end of the lesson and check your answers.

1. List five characteristics of a good instructor.

a. _____.

b. _____.

c. _____.

d. _____.

e. _____.

2. What is the most important part of an instructor's plan to improve his teaching?

_____.

3. The desired outcome of all military instruction is _____.

4. Learning may be defined as _____

_____.

_____.

5. The channels through which an individual learns are the _____.

6. Are practical tests recall, recognition, or relearn tests? _____.

7. Over a period of time, people forget what they have learned. During the first few hours after an individual has last practiced what he has learned, he will forget

about _____ percent of that learning.

8. Complete items a, b, and c by filling in the blank with the name of the correct forgetting process

Three processes of forgetting cause interference with learning. These processes are _____, _____, and _____

- a. The instructor teaches a highly technical unit on respiratory diseases, then a highly technical unit on skin diseases. Then the instructor tests on respiratory diseases. The forgetting process operative here is the _____ process.
- b. The _____ forgetting process happens when skills or knowledge learned earlier interfere with the learning of new material. A student learns French and then Spanish. He is confused in Spanish.
- c. Practice occurs a long time after the original instruction. The task is performed incorrectly, but the mistakes are not corrected. Each time the individual performs the skill after that practice, he makes the same mistakes. The name for this forgetting process is _____.

9. List three possible reinforcement rewards that you might give a student.

- a. _____.
- b. _____.
- c. _____.

10. A skill that is difficult or has many parts requires more _____ simpler skill.

11. List four physical processes of learning.

- a. _____.
- b. _____.
- c. _____.
- d. _____.

12. The mental process of learning termed _____ is the way in which each of us views our world.
13. The mental process of learning called _____ is a person's formation of ideas based on his observations.
14. The mental process of learning termed _____ can be defined as the sudden appearance of realization of a solution of a problem.
15. The basic procedure for teaching either a single lesson objective or an entire phase of a subject is called the _____.
16. The three steps in the instructional process are:
- a. _____.
 - b. _____.
 - c. _____.
17. Among the general principles of instruction process are:
- a. A soldier must have a desire to learn before the offered instruction will have _____.
 - b. Before presenting the lesson, relating the material to the soldiers' work will show them that they _____.
 - c. Early success in a class has the effect of _____ soldiers.
 - d. When criticizing a student's work, first give _____ comments, then tell the student _____.
18. "Learning hooks" refers to the technique of _____

19. Generalization, a major aim of Army medical training, may be defined as

20. Army medical training should generate these values:

_____.

_____.

_____.

These values are not taught directly but are developed _____.

21. List two reference books which can be very helpful study tools for the Army medical student.

a. _____.

b. _____.

22. A particular class may seem difficult for the student whose learning style is not the same as the _____ teaching style.

23. The instructor is presenting information to the class, and a student is confused.

What should the student do? _____.

24. A student taking notes during class should remember not to write as much as possible of what is being said but to write only the _____ and _____ which pertain to the lesson objectives.

25. List three test-taking pointers that apply to taking examinations.

a. _____.

b. _____.

c. _____.

Check Your Answers on Next Page

SOLUTIONS TO EXERCISES, LESSON 2

1. Knowledge of his subject.
Knowledge of teaching techniques.
Good teaching personality.
Leadership ability.
Professional attitude. (para 2-3a through e)
2. Constant search for the best methods to improve his soldiers' learning.
(para 2-4f)
3. Soldier learning. (para 2-5)
4. The process of acquiring new knowledge, skills, techniques, and attitudes that will enable a person to do something he could not do before. (para 2-5a)
5. The senses. (para 2-5b)
6. Recall. (para 2-5d)
7. 40 (para 2-5e)
8. Retroactive process, proactive process, and memory trace.
(para 2-5e(3))
 - a. Retroactive process. (para 2-5e(3)(a))
 - b. Proactive. (para 2-5e(3)(b))
 - c. Memory trace. (para 2-5e(3)(c))
9. You are correct if you listed any three of the following:
 - * Passing a course.
 - * Praise by instructors.
 - * Better assignments.
 - * Anything valued by a student. (para 2-5e(4)(a))
10. Practice. (para 2-5e(5)(a))
11. Trial and error.
Imitation.
Observation
Participation. (para 2-6a(1) through (4))
12. Perception. (para 2-6b(1))

13. Concept formation. (para 2-6b(2))
14. Insight. (para 2-6b(3))
15. Instructional process. (para 2-7)
16. The presentation.
The application.
The evaluation. (para 2-7a through c)
17.
 - a. A lasting effect. (para 2-8a)
 - b. Have a need to learn the information. (para 2-8a(1))
 - c. Motivating. (para 2-8a(4))
 - d. Favorable.
How he can improve. (para 2-8a(5)(b))
18. Relating new information to be learned to the past experience of soldiers.
(para 2-8f)
19. The ability to apply knowledges and skills whenever these are appropriate.
(para 2-9)
20. A desire to help others.
The development of selflessness.
Instill compassion.
Indirectly. (para 2-10a)
21. An abridged dictionary.
A comprehensive medical dictionary. (para 2-11b)
22. Instructor's. (para 2-12a)
23. The student should ask the instructor about the information at this point. The student should not wait until the end of the class.
(para 2-15c)
24. Facts.
Details. (para 2-16a)
25. You are correct if you listed any three of the following:
Get to the examination room five minutes early and relax.
Read all the directions to the examination carefully.
Begin to do the examination by checking the whole examination.
Quickly analyze test items.
Give your answers a final check. (para 2-20a through e)

End of Lesson 2

LESSON ASSIGNMENT

LESSON 3

Principles of Effective Military Instruction: Techniques and Training Aids.

LESSON ASSIGNMENT

Paragraphs 3-1 through 3-33.

LESSON OBJECTIVES

After completing this lesson, you should be able to:

- 3-1. Identify the various techniques for improving instructor speech and the importance of these techniques.
- 3-2. Identify the methods for asking effective questions.
- 3-3. Identify the various training aids, their use, and their importance.
- 3-4. Identify the methods for conducting an effective demonstration.

SUGGESTION

After studying the assignment, complete the exercises at the end of this lesson. These exercises will help you achieve the lesson objectives.

LESSON 3

PRINCIPLES OF EFFECTIVE MILITARY INSTRUCTION: TECHNIQUES AND TEACHING TECHNIQUES

Section I: IMPROVING INSTRUCTOR SPEECH

3-1. INTRODUCTION

a. An Army instructor must speak clearly, and what he says must make sense. You will find your leadership and instructional duties much easier if you have good speech habits. Most of our training depends on oral presentation. If you do not use good speech techniques, you lose the interest of your students; students become bored and confused; and they soon become discouraged in their attempts to learn.

b. An instructor may know his subject thoroughly, have an effective teaching personality, and be well prepared for the lesson, but the effectiveness of his oral presentation will depend on the degree of skill he has in using these specific techniques of good speech. Lacking a serious speech impediment, any instructor who makes a serious effort to improve his lesson delivery can develop into a "top-notch" instructor.

3-2. CLASS PROCEDURE TECHNIQUES

Realize that you are not making speeches or talking at your students, but are talking with them. The purpose of speech is to communicate ideas. An instructor must establish and keep personal contact with the class. Here are some suggestions that will help you:

a. **Attention.** Get the attention of the class first. Do not start the class until you have the attention of the students. Sometimes walking to the center of the platform will cause your soldiers to quiet down and listen. More often, it will be necessary to ask for their attention. A simple "Your attention, please!" will usually produce the desired result.

b. **Eye Contact.** Look at and talk to your soldiers. Observe people in earnest conversation and you will notice that the speaker does not look out the window or at the floor or ceiling. He looks his listeners in the eye. He may not know he is doing so. His purpose naturally finds its expression in this personal contact. Address your students, not the training aids or the distant landscape. Never talk while facing the chalkboard; your speech will be muffled. Give every student the feeling that you are looking at and talking to him. Keep eye contact.

c. **Voice Tone.** Speak in a conversational tone. Do not let your voice reflect an impersonal, indifferent attitude. Do not orate or declaim. Make frequent use of the pronoun "you." Identify yourself with the students by "you and I" or "we." Leave the impression that you and they have something in common.

d. **Check for Inattentive Students.** Be alert to what is going on in your class. Pay close attention to the students' responses. Listen and evaluate their comments and answers to your questions. Be quick to spot an inattentive soldier. Look at him. Take a step toward him or ask him a question. Continually ask yourself, "Do my students understand?" Check often to make sure they are following you.

3-3. NERVOUSNESS

a. General Information.

(1) Nervousness a common reaction. Almost every instructor experiences nervousness to some degree before his initial appearance in front of a class. Nervousness indicates that the instructor is aware of the class and concerned about its reaction to him. Many instructors who lack nervousness are likely to be unimaginative and may not do more than a mediocre job of instruction.

(2) Positive aspects. Under control, nervousness usually results in a more enthusiastic and expressive delivery. Good instructors usually devise their own particular techniques of making their nervousness work for them instead of against them. Some of these techniques are: preparation, attitude, begin well, use the familiar, humor, and slow down. The next paragraphs explain these techniques.

b. **Preparation.** Be thoroughly prepared. The first step the instructor can take to overcome excessive nervousness is thorough mastery of the subject and the plan for teaching it. Then he must realize that the students are there to learn and that they are more interested in the subject than in the instructor. Think of the subject and of the learning that should result from the instruction, and nervousness will take care of itself.

c. Attitude.

(1) Mental attitude. Assume the proper mental attitude. The most reliable weapon the instructor has for overcoming nervousness is a proper attitude toward himself, his students, and the entire instructional setup. To assume a proper frame of mind, he must make an intelligent, rational analysis of the situation. He must realize that the unpleasant mental and physical reaction he experiences before a class is from fear of what the soldiers will think of him and his instruction.

(2) Instructor knowledge. Students expect their instructor to have full knowledge of the subject and to be able to teach it effectively. Although the students focus their attention on instructors, they do not immediately place them on trial. If the instructor has mastered his subject and prepared thoroughly, he has eliminated the real reason for fearing the reaction of the students. He has every right to a feeling of self-confidence which will help make his presentation a success.

d. **Begin Well.** Have your initial remarks well in mind. The first few moments are the most difficult. Get past these and things will go well. It is advisable to have the lesson introduction so well in mind that no notes are needed.

e. **Use the Familiar.** Review previous instruction. By starting with a reference to a phase of training previously completed, the instructor immediately causes the students to focus their attention on something with which they are familiar. The instructor thus meets the soldiers on common ground.

f. **Humor.** Tell a story (if you can do this well). Nothing releases tension as quickly as a bit of humor injected early in the introduction. Remember that the story should make a point that can be related to the subject. When setting out to get a laugh, try to get one, but don't be discouraged if your students don't burst their sides. The next class may respond more vigorously. No great harm is done if a story falls flat.

g. **Slow Down.** When a person is nervous, body activities tend to speed up. Instructors should remember this when they are faced with nervousness. They should move deliberately and not talk too fast. After a few moments of deliberate control, the stage fright will pass, and the instructor's normal poise and bearing will take over.

3-4. MAINTAIN BEARING

a. **Soldier Response.** Soldiers react to what they see as well as to what they hear and understand. Each instructor must make certain that he meets military standards of appearance, bearing, and bodily control. Posture, bodily movements, and gestures can be highly expressive. They are a vital part of communication. Gestures can make the difference between an excellent, enthusiastic presentation that stimulates soldiers to effective learning and a dull, uninteresting lesson to which soldiers make a weak response. Any physical attitude assumed, bodily movement, or gesture that attracts attention to itself is distracting and is a hindrance rather than an aid. Movements should appear free, natural, and spontaneous. Remember to look natural.

b. **Position.** Maintain good posture. Take a position from which the entire class can see you and you can see all of the class. Stand erect, with weight balanced on your feet. Look physically and mentally alert. Relax and let your hands and arms hang freely at your sides. Your hands will not appear as large and awkward to students as they might seem to you. If you cannot let them rest on your side until ready to use them, clasp them in back of you or let one hand rest on the speaker's stand. Don't wring and twist your hands. The basic rule to remember is moderation. Don't remain glued to one spot and don't move all of the time. When you do move, move briskly and with purpose. As your skill and experience increase, you will find movement becoming less obvious and more meaningful.

c. **Gestures.** A gesture is the movement of any part of the body to convey a thought or emotion or to reinforce oral expression. Your arms, hands, and body are your principal tools of gesture. When instructing, let your gestures be natural. Never rehearse specific gestures for use at definite points in your presentation. Gestures should arise spontaneously from enthusiasm, conviction, and emotion. Do not try to emphasize every statement with a gesture, though. To do so will defeat the purpose of gestures.

3-5. DISTRACTING MANNERISMS

Instructors should avoid doing anything that causes the class to concentrate on the instructor's mannerisms instead of the subject. Instructors may not be aware of their peculiar mannerism unless they ask associates for constructive criticisms of their delivery. Here are some common habits to avoid.

a. **The Dying Warrior.** The instructor leans heavily on the lectern, wears an air of exhaustion, and never moves.

b. **The Fig Leaf Stance.** This is standing with hands clasped in front below the waist and feet immovable.

c. **The Walkie-Talkie.** This pacer never stands still.

d. **The Chained Elephant.** This person stands with his weight first on one foot and then on the other.

e. **The Change Counter.** This one counts the change in his pockets every two minutes.

f. **The Swordsman.** This one tries to duel with the pointer and forgets to put it down when he is not using it.

3-6. ENTHUSIASM

There is no substitute for a physically vital and enthusiastic delivery. Enthusiasm is contagious. It is evident in one form or another whenever a person is doing something he sincerely likes. If an instructor is sold on his subject and conveys this feeling to the class, he will keep his soldiers interested and eager to learn. An enthusiastic instructor will help his students develop a favorable attitude and an appreciation for the training program. The basis for an instructor's enthusiasm is a thorough knowledge of his material and its usefulness to his students.

3-7. VOICE QUALITY

a. **General Information.** Voice quality is the characteristic that distinguishes one voice from another. Some voices have a pleasant quality while others are unpleasant. Most people have a voice quality that can be made pleasant to listeners. Sometimes this requires overcoming any tendencies toward nasality, hollowness, hardness, throatiness, or monotone. A voice monotone has a deadening effect on students. Inflection will help overcome monotone and hold the students' attention. Expressive speech can be achieved by change in pitch, volume, rate, or by a combination of all three. Your voice is your most effective teaching tool. Use it to your best advantage.

b. **Pitch.** Pitch is the highness or lowness of a sound. Voice pitch should be at the natural level used in conversation. You should determine the pitch level at which you can speak with greatest ease and clarity and then vary your pitch to produce emphasis where needed. Variation of the pitch breaks monotony and adds interest to your speech.

c. **Volume.** You must speak loudly enough for all students to hear without difficulty. On the other hand, too loud a voice is deadly. The hearing attention of the students soon dulls in self-defense. Loudness requires volume. A thin voice can be loud, but loudness is not enough. If you have the proper volume, students feel comfortable listening.

(1) Vary volume. You should vary the volume with the size of the class and the conditions under which the instruction is given. You can change volume to accent the proper syllables of words. Accent in pronunciation is described as greater force or stress on a particular syllable. This means change in volume. Too great a voice volume makes it difficult to change volume for accent and variation, and more difficult for the student to catch these changes in volume.

(2) Proper volume. Proper volume is especially important when teaching outdoors or in a building with poor acoustics. By watching students' reaction, an instructor can tell if they are having difficulty in hearing. If there is any chance that the volume of your voice is not satisfactory, have an assistant or a student in the rear signal you so that you can adjust your voice to the class.

d. **Speed.** Rate of speech should be governed by the thought or emotion communicated to the students. Complex material should be presented slowly.

(1) Class learning ability. The instructor should also consider the learning ability of the class in determining his speed of delivery. Change in the rate of speaking will create pleasing variations and produce emphasis. Expression and variety can be obtained by a change in pace. Speak faster once in a while, but slow down or pause occasionally for variety and emphasis.

(2) Presentation rehearsal. If you are a beginning instructor, tape record a presentation to check for rate of speech. Between 120 and 150 words per minute is a normal speaking rate. If you speak over 160 words per minute, students may have difficulty keeping up with you. If you speak under 90 words per minute, you normally will cause student to lose interest. Over-rapid delivery tends to confuse students and over-deliberate delivery tends to irritate them.

3-8. CLARITY

Be sure you are understood. Successful instruction depends on how well the students understand their instructors. Consider the following points when planning your lectures:

a. **Words.** Develop a healthy regard for words. Choose words carefully and develop sentences clearly and logically. The right word in the right place is a requirement for both effective speech and writing. Verbal communication depends on using words that have the exact meaning to make the thought clear.

(1) Student education level. Consider the educational level of the group you are teaching. Use terms that are common to the vocabularies of your students. Do not try to impress students by using unfamiliar words. An instructor's purpose is to clarify, not to confuse. If complex terms are essential, use them, but define each new term the first time it is used.

(2) Instructor word choice. Use strong, meaningful, descriptive verbs that leave vivid impressions. Add interest and color to your presentation by using a variety of descriptive terms. Use a variety of connective words. "And" is not the only connective word in our language.

b. **Sentences.** Words selected must be properly grouped to express ideas clearly and accurately. Use short sentences. Signal the end of your sentences by voice inflection. Eliminate unnecessary words and phrases. Do not pad sentences and clutter delivery with trite expressions.

c. **Pauses.** Pauses punctuate speech. The proper use of pauses accomplishes several things. Students get time to absorb your ideas. You get an opportunity to concentrate on your next point. You give emphasis and meaning to your ideas. You also get a chance to breathe. Pauses should be clear and decisive. The use of "er-r-r," "ah" or "uh-h" in the pause is a mental crutch that you should not use. Don't confuse a deliberate pause with uncertain hesitation. Pauses are a definite part of the art of speaking. Uncertain hesitation shows that your lecture is not well prepared.

d. **Enunciation and Pronunciation.** Speak clearly and distinctly. Try for clarity of expression.

(1) Instructor speech patterns. It makes no difference what part of the country you are from. Enunciate clearly and soldiers from all parts of the country will be able to understand you. It's not necessary to change your whole pattern of speech. Pronounce or accent each syllable distinctly and clearly. Look up the pronunciation of difficult or unfamiliar words in the dictionary. Don't guess (e.g., pharynx is pronounced "far inks," not "far nicks.").

(2) Class size--large. It may be necessary to enunciate more forcefully and deliberately when instructing a large group than when carrying on a conversation. Be especially careful to enunciate each syllable to terms that may not be common to your students' vocabularies. Avoid slurring, swallowing, or mumbling words.

e. **Think While Speaking.** Your words should be chosen and grouped to express clear and definite ideas.

(1) Think and choose words. Think out your ideas first and then use carefully chosen words to express them. Weak expression indicates faulty, weak thinking. Learn to think while standing before your class.

(2) Think during pause. During the pause that follows a statement, formulate your next sentence. As you speak, think about what you are saying. If you have trouble finding words to express yourself when standing before the class, try writing the key words or points of the lesson in short, complete sentences.

f. **Avoid Excuses.** Do not apologize or demonstrate an apologetic attitude. Do not make any comment that can be interpreted as an excuse for lack of preparation, knowledge, or ability to teach. Excuses accent weaknesses. If you do not know the answer to the question that was asked, your best answer is, "I don't know, but I will find out and answer your question the next time we meet." Then find out the answer and explain the point the next time this class meets. Don't apologize for:

- (1) Your lessons.
- (2) The teaching aids.
- (3) The teaching environment.
- (4) Your inability to answer a question.

3-9. WORKING TOWARD BETTER SPEECH HABITS

You can improve your speech only if you find out what you are doing wrong. Plan for improvement. This requires that you really want to improve and practice the better way. Keep in mind these three points as you work toward improvement:

a. **Develop Your Listening.** Listen to others speak. Why is it that people on the radio or television are so easy to listen to and not jarring on your ears? Listen to others around you and try to figure out what they are doing. Then try to incorporate some of their traits into your speech.

b. **Set Personal Goals.** Set yourself speech goals toward which you want to work. Use your voice recording and the critical comments of those you respect to isolate your weaknesses and determine ways to correct them. Find your strengths and make them stronger.

c. **Work Toward Your Goals.** Try to make sure that you are consistent in your conversation style. Many of us have different conversation types for home, for the workplace, and for teaching. It is too difficult to try to improve on three styles of speech at the same time. Settle on one style and use it in all three places. Take every opportunity to speak before an audience. Make additional recordings of your voice to check on your progress.

Section II. QUESTIONING TECHNIQUES

3-10. PREPARATION OF QUESTIONS

According to the United States (US) Army Medical Department (AMEDD) Center and School standards, a minimum of two questions is required in each prepared lesson. There is no maximum.

a. **Purpose of Questions.** Questions ensure student participation and stimulate student interest. Questions should emphasize the main points of the lesson and utilize the variety of experiences of the students in the class.

b. **Specifics About Questions.** If students lack experience in the area under discussion, questions can solicit student opinions and thereby encourage participation. The following paragraphs deal with the areas which should be mastered by the effective instructor: What to say, who to ask, encouraging responses, and asking for questions.

3-11. WHAT TO SAY

Phrase your questions correctly. Poorly-expressed questions can confuse students and discourage them from participating in class discussions.

a. **Kinds of Questions.** Generally questions are used to have students recall the material you have taught, to stimulate thought, and to check student understanding. Use of questions to recall a point you have covered will keep the students alert to your lecture. It is harder to daydream through a lecture when you know that you may be called on to recall a part of the lesson at any minute.

(1) Questions to stimulate. Questions to stimulate thought might be something like, "If you were in this situation, how would you have handled the problem?" You might even ask about a situation where the lesson solution would not work. Be careful to use situations which would apply to the medic's duties and not something which would be far a field.

(2) Questions to check understanding. If the purpose of your question is to check understanding, it is often sufficient to change the phrasing of the question so that even though the answer is contained in the lesson, the material must be changed in some way to answer the question. If you have been describing the signs and symptoms of several diseases and three of them included dizziness, upset stomach, and fever, your first question could be, "Which disease might be indicated by dizziness, upset stomach, and fever". "What else would you need to know before making a tentative diagnosis?" could be your second (follow-up) question.

b. **Clear Questions.** Use short, clear questions.

(1) Question length. If you would normally use a lengthy question, use two short ones instead. This way you can call on two students instead of one. Also, you will not be asked to repeat the question nearly as often.

(2) Question language. Avoid using language your students cannot understand. If lengthy terms are in your questions, they should have already been used in the lesson.

(3) Purpose. A question is not to teach new material, but to stimulate thought or check understanding. It is unfair to ask questions about material students could not be expected to know. If you do this regularly, students will soon become discouraged. Only those few students who have more than the required prerequisite background will be able to answer. The others will feel left out and grow silent. Questions should encourage participation, not stop it.

c. **Compound Questions.** Use one point per question.

(1) One question. Be sure your questions are not really two questions tied together. "How are rivers and hills shown on a map?" is really two questions, one about rivers and the other about hills. Ask them separately.

(2) Short response question. Don't ask questions which require a very lengthy response from a student. Break it up and give more students a chance to answer. Instead of, "Name all the arthropods you can remember," ask, "Name an example of an arthropod." Then ask the same question of several students.

d. **Specific, Not Vague**. If your question is vague, the student can bluff with a vague answer. Students should not be allowed to get by with a vague answer. Vague answers tell you nothing about student learning. Instead of "What should you do about a severely injured casualty?" ask, "What is the sequence for evaluating a casualty?"

e. **Full Answers**. If you ask questions that can be answered "yes" or "no," you are inviting guessing. This serves no good purpose, unless you also require the student to explain his answer. Use of "does," "did," "should," or "could" frequently invites "yes or no" answers. Try to use words like "how," "who," "when," "where," or "why" to elicit a full answer. Be sure that the question does not reveal the correct answer. You may need to rephrase the question.

3-12. WHO TO ASK

a. **Give Notice**. Let the class know that you are about to ask a question. Don't spring questions that few students will recognize. Ask the question in a natural, interested, and conversational tone and make sure the whole class hears it. This prevents the need to repeat the question because most of the students did not hear it.

b. **Ask the Class**. Ask the question of the whole class and pause while the students think about an answer. Then select a student to answer. If you name a student before you ask the question, the rest of the class will not think about an answer.

c. **No Set Pattern**. Try not to establish a set order for calling on students. The brightest or most attentive students tend to be called on the most. Try not to fall into this trap. The shy or quiet student needs to be called upon as often as the others. Your aim is for full class participation, so distribute your questions well.

3-13. ENCOURAGING RESPONSES

Each student should be encouraged to answer, even if he is not sure about the answer. "I don't know," should not be accepted without trying to draw out a better response.

a. **Same Question -- Several Students**. Often it is wise to have several students answer the same question before making a final evaluation of an answer. This tactic will help you identify points that are confusing to the class. If a student gives a vague answer, ask him to clarify or elaborate on his answer.

b. **Student Response -- When Asked.** Frequently students address their answers to the instructor in a low tone which can be heard by the instructor but not by the rest of the class. You may need to ask students to stand and address their answers to the class.

c. **Student Response -- Unasked.** When students become very interested in the topic, they tend to answer the questions without being called upon. Do not allow this kind of response. It cuts down on the participation of others.

3-14. ASKING FOR QUESTIONS

Students should be informed at the beginning of the lecture that their questions are encouraged. Stop often during your presentation to allow for their questions. This is especially crucial if the material is difficult or quite involved. The number of questions asked is a good measure of the students' interest in the presentation.

a. **Encourage Student Questions.** Some students may be hesitant to ask questions because they fear that the question is "dumb." Assure the student that if he is confused about a point, then there are others in the class who are also confused.

b. **Response to Student Questions.** Sometimes it is a good idea to repeat a student's question to the class and ask if someone can respond. If you cannot answer the student's question, do not try to bluff. Tell the student that you do not know, but will look up the answer and have it the next day the class meets. Then be sure to carry through on your promise.

Section III. TRAINING AIDS

3-15. INTRODUCTION

Training aids can make good instruction into effective instruction. In the hands of good instructors, they are powerful tools. Like skilled craftsmen, instructors must know how to make the best use of the tools of their profession. They must become expert in the selection, procurement, construction, and use of training aids. Good instructors use training aids because they recognize their value.

3-16. WHAT ARE TRAINING AIDS?

Training aids are visual and/or auditory learning helps.

a. **Types of Training Aids.** There are many types of training aids. Visuals may be still, such as charts, pictures, graphs, or slides. They may also use motion, such as films, filmstrips, videotapes, or skits. Audio aids may be tapes of sounds or lectures. Many training aids use some combination of visual and auditory sensory modes. Each has advantages and limitations, depending on the lesson and the subject.

b. **Learning by Training Aid.** Too many ideas presented at one time or too many details on any one training aid will tend to confuse and hamper student learning. Decide what type of aid will best assist soldier learning. While equipment and facilities do aid in learning, these are not considered training aids. See paragraphs 3-21 through 3-29 for descriptions of specific training aids.

3-17. WHY USE TRAINING AIDS?

By the use of training aids, you can accomplish several objectives that would be very difficult using lecture alone.

a. **Sensory Mode Stimulation.** The sensory modes are sight, hearing, taste, smell, and touch. Studies have shown that more efficient learning takes place when two modes are used together than when only one is used. If students can see an actual object while you are talking about it, they will show better understanding. Words alone often paint different pictures to different people, based on their range of experience. While you know exactly what you are talking about, many students will get an entirely different picture. Because of its broader appeal, visual instruction is much more effective than words alone.

b. **Interest to the Student.** Training aids add interest and perk up instruction. They tend to focus the student's attention on the lesson being presented. When used correctly, they add variety to the presentation. In many training situations, the use of the actual object, a model, or a short training film adds realism to the subject. This can give the student motivation which helps to maintain his readiness for learning.

c. **Clarify the Subject.** The most important reason for using training aids is to make it easier for students to learn. Good training aids simplify, add emphasis, and help clarify difficult points of subject matter. Confusion is eliminated, and student understanding is enhanced. This helps both the slow and the fast learner. Some aids can help in memorization, but their greatest value will be seen when the student must learn procedure or principles.

d. **Faster Learning.** It would be difficult, if not impossible to learn many of the patient care medical tasks without training aids. At best, use of the right training aid will save time for both the student and the instructor.

3-18. A GOOD TRAINING AID

In order to be suitable for use in an Army training program, a training aid must meet the following criteria.

a. **Easily Visible.** An instructor should consider the size of the class, the viewing area, and the suitability of the subject matter. You should make sure that your aid can be seen easily; and if lettering is used, it should be readable from the rear of the class. Lettering should be a minimum of one inch in height for every thirty-two feet of distance from the front of the room to the rear of the viewing area.

b. **Uncomplicated.** The training aid should be simple enough to be understood by the average student in your class. If the material you want to include is very involved, give the students a handout they can follow while you are pointing out important areas on the chart or graph. Be sure all your facts and figures are correct and do not conflict with current doctrine.

c. **Easily Used.** Be sure you can operate and use the training aid with a minimum of effort. Never try to operate two different kinds of training aids at the same time. Using an overhead projector and a slide projector together in the same lesson can cause you to lose your train of thought.

d. **Professional.** Even if you made the training aid yourself, it should look neat and eye appealing. Too many words or too much color can clutter the aid. Color helps to add interest, but line drawings also teach.

e. **Appropriate.** The training aid should illustrate or explain a main point of the lesson. They should never be used as time fillers or as entertainment. Lecture time can always be used to better advantage. Frequently a low cost, locally produced aid will be as good as or better than an expensive custom-made aid. Try not to use too many aids in one lesson. When students see the training aids all the time, they stop paying attention.

3-19. GENERAL INSTRUCTIONS FOR USING TRAINING AIDS

Be sure you know how and when you are going to use the aids. Rehearse the lesson a couple of times or until your presentation is smooth. If you are not planning to use all the graphics in a chart portfolio, tab all the ones you will use and indicate the order in which you will use them. You can easily lose the attention of the class by spending class time looking for the graphic you want to show.

a. **Explain the Training Aid.** Explain the purpose or function of each aid you use. Even though you think the aid is self-explanatory, not all of your students may understand it. This is especially true if the aid is complicated or technical. If you have not given enough explanation, your students will miss part of your lecture trying to figure out the aid.

b. **Cover When Not in Use.** Cover charts or drawings on the chalkboard with paper until you use them and after you have used them. Keep the projector turned off when you are not using it. Cover a model or piece of equipment with a cloth and then recover after use. Even the finest training aids will be distracting to the class.

c. **Check Visibility.** A great training aid can be useless unless the whole class can see it. If a model or piece of equipment is too small to be seen in the back of the class, allow time for the students to examine it after the class. Do not pass it around during class time. The students who are passing or examining the device will miss part of your lecture.

d. **Always Face the Class.** It is easy for the instructor to become so involved with the training aid that the students get only a mumbled version of the lecture. If you remember to maintain eye contact with the class, this tendency will be eliminated. The tendency is especially common when the instructor is explaining and drawing a complicated graphic on a chalkboard or putting up a lesson outline. If you need a complicated or involved graphic, put it on the board before the class meets.

e. **Using a Pointer.** A pointer is very valuable when you want to bring the students' attention to a specific part of the training aid. Try not to hold the pointer across your body. This can cause you to look awkward and will encourage you to face the aid instead of the class. Hold the pointer in the hand that is nearest to the training aid. Hold the pointer steady when you are using it. Put it away when you are done. When you are showing an overhead transparency, a pen or pencil makes a good pointer. Whichever type you are using, hold it steady on the part you want the students to see.

f. **Assistants.** If you are fortunate enough to have assistant instructors to show your training aids, to assist with demonstrations, or to help with practical testing, use them to your best advantage. Assistants should be well rehearsed. They should have a copy of your lesson plan so that they know when each slide is to be shown. If the assistance is for a demonstration, make sure they know exactly what they are to do. If the assistance is for testing, be sure they know exactly how the task was taught and should be tested.

g. **Present Training Aids Smoothly.** This is no time for unpleasant surprises. Make sure you know the use of every knob and button on the equipment or model you are using. Double check to be sure that every slide you need is correctly placed in the tray. Even though you placed them in the tray last week, a lot can happen in seven days. If the equipment is large, get it in place before the class starts. Disasters can happen, but try to avert as many as you can.

3-20. LIMITED SELECTION OF TRAINING AIDS

Frequently a unit is restricted in the variety of training aids available. The training aid types used at one unit may be different from those used for similar units at other locations. When the selection is limited, the best you can do is to select from those available for the subject area you are teaching. Most kinds of training aids are discussed in the following paragraphs. Even though demonstration is a training aid, it will be treated separately (Section IV).

3-21. ACTUAL EQUIPMENT AND MODELS

The most realistic training device is the actual equipment. The instructor must consider the size of the class when planning to use many pieces of equipment. If there is a procedure to be shown using the equipment, all of the students must be able to see. For this reason, a larger model or a training film may show the procedure better. For instance, infusion equipment and the procedure for using it will probably show up better, for a large class, in a film or on slides. The use of something as large as a blackboard can be seen easily by a class of forty students. Models are usually three-dimensional representations of the real thing, but with some details removed. Examples are a skeleton, an animated model of blood circulation, or a model of a vital organ placement. These are useful when the real thing is not available or impractical to use.

3-22. GRAPHICS

Still visuals are most frequently called graphics. These include charts, diagrams, sketches, cartoons, maps, or 35 mm slides. These also include pictures shown on the opaque projector, but these will be treated separately.

a. **Some Types.** Frequently a line drawing will be preferable to a picture. Pictures often include too much extraneous detail. Cartoons that encourage laughter have been shown to be less effective than the same material presented in another manner. Color adds interest to graphics. Sometimes color is necessary for understanding. An example would be a drawing of the venous and arterial systems. The venous system is usual shown in blue while the arterial system is shown in red.

b. **Slides.** Slides, another type of graphic, are quite effective and inexpensive to use. Commercially produced slides are frequently available or pictures can be taken by the instructor from books, magazines, etc. (obtain copyright release). It is often wise to show slides of a procedure that will subsequently be practiced by the students.

3-23. VENETIAN BLIND DEVICE

The Venetian blind device is an effective training aid when used for an outline or for the steps of a procedure.

a. **Specifics.** The lettering on the Venetian blind strips should be neat, attractive, and orderly. Use capital letters that are large enough for all to see and read. This aid may not be suitable for a very large class. The items should be exposed one at a time. Each item should be discussed thoroughly before the next item is exposed.

b. **Summarize Material by Venetian Blind.** Venetian blind strips should be summarized in the order they were taught. Start from the top and then summarize from the top. This provides mental drill for the student. Do not try to question from the unexposed portion of the Venetian blind, since this would be asking the student to guess what would be exposed next. If wipe-off lettering is used, you can reuse the same strips for another lesson. See figure 3-1 for an example of a Venetian blind device.

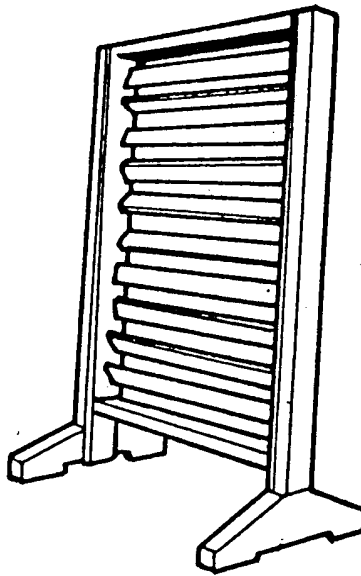


Figure 3-1. A type of Venetian blind.

3-24. THE CHALKBOARD

The chalkboard is a flexible and useful training aid. It is often used incorrectly because its potential for use and the techniques are misunderstood.

a. **Multi-Use.** A chalkboard can be used in many ways. You can place topics, questions, sketches, diagrams, teaching points, or other written material on the chalkboard. By using the overhead projector or the opaque projector, transparencies, pictures, or graphs can be projected on the chalkboard and then traced in chalk for greater visibility.

(1) Template. A template (pattern or gauge) can be a guide in making drawings accurately or in reproducing a standard object when drawing on the chalkboard.

(2) Trace drawing. If you use a pencil to trace a drawing in advance, you can trace it later in chalk to show a clearer and more professional picture to the students. This is very convenient for those items you want to show by sections during class.

(3) Magnetic board. Some chalkboards are designed to be used as magnetic boards. This allows the combining of various materials.

(4) Fluorescent chalk. Fluorescent chalk used with black light creates special effects that will enhance student interest. For example, nuclear fireballs can be dramatically shown on the chalkboard. This also works well with materials that are painted with fluorescent paint.

(5) Student participation. You can use the chalkboard to promote class participation. Students are encouraged to participate more in class when they see their answers, suggestions, or comments shown before the class on a chalkboard.

b. **Equipment**. Get everything needed for chalkboard work before the class begins. This includes chalk, ruler, eraser, etc.

c. **Glare**. Check for glare. Be sure that every student will be able to see the board. If the lighting causes so much glare that the students will be unable to see work on the chalkboard, you can use wrapping paper as a board and draw with dark colored chalk. Green chalkboards usually do not cause glare and also counter eye fatigue. You can make a green chalkboard by painting a hard, smooth board with a flat green oil paint. More than one coat may be required. Yellow chalk stands out well on these boards. You can use more chalk colors on a green than on a black chalkboard.

d. **Work Plan**. Plan your work in advance. Before class begins, sketch the layouts shown in the lesson plan or other work with a pencil on the chalkboard. The class will not be able to see the markings and you can follow the penciled sketch when writing or drawing with chalk.

e. **Material**. Keep the material on the chalkboard simple and brief. Short statements are most effective. One word with oral explanation by the instructor will often be sufficient.

f. **Printing/Drawing**. Print and draw legibly, large enough so that printing and drawing are visible to the students. Don't allow your printing to get smaller. Keep the chalkboard clean. A dirty chalkboard gives the impression that the instructor is not prepared or that he is sloppy.

g. **Colored Chalk**. Use colored chalk for emphasis and variety. Some colors do not show up clearly. Try your colors in advance. It's worth the extra effort.

h. **Work Composition**. Don't crowd your work and don't write all the way across a wide chalkboard. If you have a lot to put on the board, divide the board into two sections using the chalk. Then write across each section separately. Try to use less words, the fewer the better.

i. **Non-Related Work.** Erase any material that is not related to the work at hand. Having other work on the board distracts attention from the point you are making. Use an eraser or a cloth but don't use your fingers.

3-25. BLANKET AND MAGNETIC BOARDS

These display boards are very useful in teaching organization or any subject where visualization requires a progressive build up or where there is movement of symbols or cutout silhouettes. You can make a blanket board by stretching an Army blanket over a frame and backing cardboard cutouts with coarse sandpaper. When these cutouts are slapped against the blanket, they stick to it. You can get the same effect using cutouts backed with pressurized adhesive tape and placed on a chalkboard or any other clean, smooth, flat surface. You can also use cutouts backed with small magnets and a metal chalkboard.

3-26. FILMS

Film is effective in illustrating and demonstrating concepts and procedures that are difficult to explain in the classroom. Films are effective in arousing emotions and changing attitudes. They teach faster and more fully than the lecture, even to those soldiers who have little education. The following method is used to get the best result from films.

a. **Preview Film.** Preview and study the film in advance. No training film is perfect. Pick out the key points you want to emphasize, items that may be omitted or touched upon too lightly, portions that are obsolete or need explanation. If there are many errors, don't use the film. Plan your introduction and follow-up in advance. Instructor's film references are available through film libraries for most training films and will help you plan your presentation. These film references may give you information such as the running time of the film, a synopsis, suggested introductory remarks, and a follow-up quiz. Try not to use a film that runs for longer than twenty minutes or you run the risk of putting your students to sleep.

b. **Final Check.** Make a final check of the film and equipment just before class. Make sure that you have spare bulbs for the projector. Show a portion of the film to make sure that you have the proper film and that the equipment is working.

c. **Introduction.** Introduce the film. Tell the class what the film is about, why you are showing it, why it is important, the key points they should observe, and the relation of the film to the course.

d. **The Showing.** Show the film. If needed, stop the film to explain a difficult point or to emphasize a key point. Students should be told not to take notes during a film. The room is too dark, and they will miss parts of the film.

e. **Follow Up.** Follow up the film. Allow the students to ask questions about what they have just seen. Lead an oral discussion of the main points and discuss errors or possible points of confusion in the film. If the film involves a procedure the students will do, the instructor should demonstrate this procedure. Students should have a practical exercise period where they can practice the procedure themselves. Next, there should be a critique of the students performance. Often a second showing of the film will help the students to understand how they can improve their performance.

3-27. FILM STRIPS

A filmstrip consists of a length of standard motion picture film containing still pictures of a specific subject. There is usually a script describing each frame for the instructor to read. If not, the instructor should explain each frame. Sometimes there is an audiotape to use. Use your pointer as you find necessary. The picture sequence can be stopped at any time for discussion on points of confusion. It is best to have an assistant operate the projector to allow the instructor freedom of movement.

3-28. OVERHEAD PROJECTOR

The overhead projector (see figure 3-2) projects large transparencies onto a screen or flat wall surface and is widely used by the Army instructor. Overhead projectors are available through audiovisual communication centers.

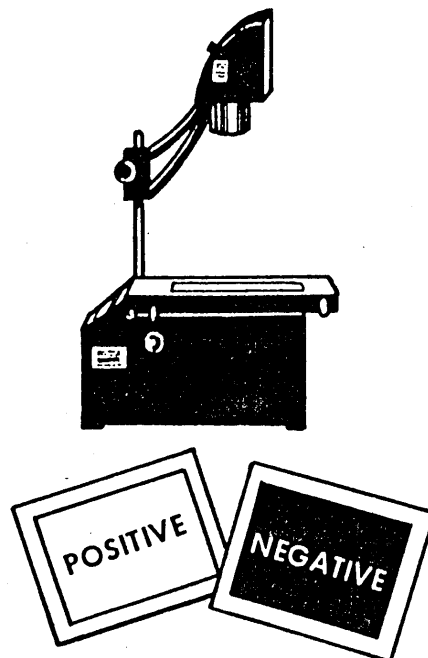


Figure 3-2. Overhead projector.

a. **Advantages.** This type of projector can be used in lighted and ventilated rooms and permits students to take notes. The instructor can face the students while operating the projector and thus maintain contact.

b. **Materials to Use.** A wide variety of techniques may be used to prepare materials for use on the overhead projector. The instructor can point out features on the screen by pointing to the items on the projector itself. Negative transparencies can be easily constructed locally. These can be colored by the instructor with acetate and India ink pens. These are inexpensive. Wide varieties of prepared transparencies are available through service schools, training aid centers, audiovisual communication centers, and commercial sources.

3-29. OPAQUE PROJECTOR

The opaque projector (see figure 3-3) projects material from books, magazines, newspapers, and other printed matter on a wall or screen. Almost any color or type of print will project on the screen.

a. **Advantages.** This projector is especially helpful when the instructor wants to make a facsimile of a piece of actual equipment or map, of cardboard, heavy paper, or on the chalkboard. The image can be projected from a picture or some other printed material and the outline traced from the image. In order to enlarge the image, the projector can be pushed toward the rear.

b. **Disadvantages.** One disadvantage of the opaque projector is that the room has to be completely darkened. Students will be unable to take notes. The instructor cannot observe class reactions. Another disadvantage is the quality of the projected image. The farther rearward the projector is used, the less clear the projected image.

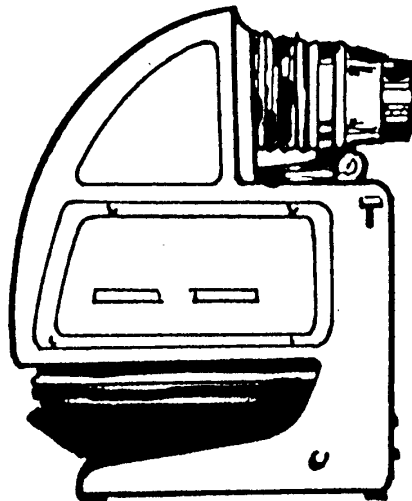


Figure 3-3. Opaque projector.

Section IV. DEMONSTRATIONS

3-30. IMPORTANCE OF THE DEMONSTRATION

The objective of military instruction is to train the soldier. The soldier is trained to do. Because of this emphasis on doing, the Army instructor must provide the soldier with a pattern for doing along with an explanation of what, when, and how. The demonstration is an effective way to provide this pattern while setting the standards for performance. The effectiveness of the demonstration as a training aid is based on several motivational factors. The strength of these factors influences the soldier's sense of sight and hearing.

a. **Degree of Respect for the Leader.** The greater the soldier's respect for the leader or instructor, the more likely he is to pay close attention to a demonstration.

b. **Desire to Meet or Exceed Performance Standards.** If the soldier wants to complete/pass the course, he will learn from the demonstration better than if he has no real desire.

c. **Need for Approval.** The soldier who needs the approval of his peers, his family, and/or his superiors will find a demonstration one of the best ways to get the knowledge he requires to gain this approval.

d. **Need for New Experience.** If the soldier has not seen the demonstrated procedure before, he is more likely to watch with a great deal of interest.

e. **Need to Be Active.** Demonstration is preparatory to the active participation of the soldier in a hands-on procedure. Therefore it appeals strongly to the soldier who is oriented toward active rather than passive participation.

3-31. PURPOSE OF THE DEMONSTRATION

The demonstration is a training aid rather than a separate teaching method. It is used with many teaching methods that are usually preceded by or concurrent with the demonstration. Teaching methods can be lecture, conference, programmed self-study, or some other method of explanation. For the greatest benefit, the demonstration should be followed by a hands-on practical exercise during which the soldier is encouraged to practice the skill or procedure he has just seen demonstrated. The most common use for the demonstration is to introduce new skills or procedures, but it can also be used for other purposes. The demonstration can teach:

a. **Step-by-Step Procedures.** The skills taught can be manual or mental. Skills are abilities whose performance can be improved by accurate, repeated practice trials. In order to provide the soldier with the greatest help, the demonstration must be perfectly performed, and the same procedure must be followed every time the skill is demonstrated. If the procedure is very complicated or consists of many steps, each step should be performed slowly to be sure that the soldiers understand. It may be necessary to have each step, or each few steps, practiced separately before attempting the whole procedure. Examples of this in the medical field might be the procedures for pharmaceutical calculations and the techniques used in physical assessment.

b. **Demonstration of Principles.** Many technical fields use theories based on physical principles. Frequently the demonstration can show how these principles affect the work of the technician. This contributes to the soldiers' understanding of why things work as they do. Even though the blood's solids are not apparent to the naked eye, their importance can be demonstrated by using a centrifuge to separate the solids from the plasma.

c. **Problem Solving.** If soldiers are aware of the methods for solving certain types of problems and are then presented with facts and a problem to be solved, they can apply these methods. This process is frequently used in field training exercises which are part of the Medical NCO resident course.

d. **Demonstration of Methods.** The inner workings of the human body are not generally available for student study. These are frequently demonstrated to classes using a training film, cutaway model, or videotape.

e. **Cooperation of Persons or Groups.** Demonstrations of this type show the internal implementation of regulations, standing operating procedures (SOP), or other activities which depend on the successful interaction of two or more people. These are frequently illustrated by a group of students performing a skit or by a role-play situation.

f. **Gain Student Approval.** Almost any kind of demonstration that runs smoothly will result in the approval of those watching and their appreciation of the method of procedure demonstrated.

3-32. PLAN AND CONDUCT A DEMONSTRATION

For any type of demonstration, you must make certain that all needed supplies and equipment are arranged for your use. If a practical exercise is to follow the demonstration, all supplies and equipment for the students must be in place. Pay careful attention to these points:

a. **Planning.** Lack of complete planning can ruin any demonstration. You will need to take these steps.

(1) Tools/equipment. Arrange tools and equipment in the order they will be used. This is a time saver and will also be a double check against forgetting some needed item.

(2) Student view/hear. Provide for viewing by every student in the class. If noisy equipment is used, you should not try to talk while the equipment is operating. All students must be able to hear your remarks.

(3) Lesson plan. Be certain to follow the procedural steps in your lesson plan exactly. If you appear sloppy about the procedure, the students will get the idea that they can shortcut the procedure. In the medical field, cutting corners can be disastrous.

(4) Demonstration. Demonstrate one procedure at a time. If there is another method, demonstrate this separately. When you complete a step, be sure the students can recognize that the next step is not part of the preceding one.

b. **Check Student Reactions Frequently.** Be alert to the student reactions. Students cannot be expected to perform well on procedures they have not seen and understood.

(1) Unobstructed view. If you are using large or cumbersome equipment or supplies, be sure all the students have an unobstructed view. Do not block off any part with your body. If only a few students can get near enough for a good view, repeat the procedure until the whole class has had a chance to see clearly.

(2) Student attention. Students' attention should be on the steps of procedure whether you or an assistant are demonstrating. Tell them where to look. When you are demonstrating, talk to the class, not to the equipment.

(3) Student questions. Student should be encouraged to ask questions between each major step. Don't let them interrupt a step with questions. If they do not ask, you should ask them questions to be sure they understand what they have seen.

(4) Small equipment. Sometimes you will need to use equipment that has markings or adjustments too small to be seen well. A chart or model nearby, with enlarged detail, will help student understanding. Be sure the students have a performance checklist or at least a list of the steps being performed. This is a vital memory aid. If the students are forced to make their own list, they may miss part of the demonstration.

c. **Explanations.** Some procedures are best explained before the demonstration, and some are best explained during the demonstration. If you are explaining during the demonstration, practice to make sure your delivery is smooth and well coordinated. If you falter or seem to leave awkward pauses, the students will lose confidence in your ability. If there is a very difficult or intricate step, tell the students ahead of time. Then if this step doesn't go right, you can turn this into a learning experience for them.

d. **Safety.** Points that require special safety precautions for the student or for the patient should be stressed. Any rules or regulations about safety should be taught again even if you have taught them earlier.

3-33. CLOSING

a. **Training in Today's Army.** Training has always been of major importance in the Army. In today's changing world, it is even more important for soldiers to be well trained. They must be able to accomplish the mission wherever and whenever necessary. Recently, Army personnel have participated in hurricane relief in Hawaii, Florida, and Louisiana as well as Operation Restore Hope in Somalia. Success of the mission depended on each soldier's thorough knowledge of his skills and his ability to adjust instantly to the special requirements of the mission.

b. **Your Importance in Training.** These soldiers received their training from instructors like you who worked constantly to improve their teaching skills. Information you have just read on speech, questions, training aids, and demonstrations is a good starting point. You can continue to improve your skills by observing other instructors and discussing instruction with your peers. It is vital for you to be an effective instructor. You are training soldiers who must be prepared to perform under adverse conditions -- at any time and any place.

Continue with Exercises

EXERCISES, LESSON 3

INSTRUCTIONS. Answer the following exercises by selecting the response that best answers the question or best completes the incomplete statement or by writing the answer in the space provided. After you have completed all the exercises, turn to the solutions at the end of the lesson and check your answers.

SITUATION FOR EXERCISES 1 THROUGH 4. You are an Army instructor and have just entered the room in which the students for your 1000 hours class are seated. The soldiers are talking among themselves. You put your materials on the desk and are now ready to begin the class, but the students are still talking.

1. First, you must get the attention of the soldiers. Select the correct method(s) of doing this from the responses below.
 - (1) Walk to the center of the platform.
 - (2) Start a conversation with the students in the front row, and the rest of the soldiers will become quiet.
 - (3) State in a normal voice but loudly enough so that all the students can hear, "Your attention, please."
 - (4) Begin giving your instruction and the students will become quiet.
 - a. 1 & 3.
 - b. 2 & 4.
 - c. 4 only.
 - d. 1, 2, & 3.

2. To establish eye contact with the students, you should _____.

3. When instructing, you should let the students know that you and they have something in common by using the pronouns _____ or _____.

4. One of your students does not seem to be paying attention. You can reestablish his interest by:
- a. _____.
 - b. _____.
 - c. _____.
5. Write three techniques an instructor can use to overcome his nervousness.
- a. _____.
 - b. _____.
 - c. _____.
6. Students in a class have certain expectations of their instructor. They expect the instructor to _____ and _____.
7. Since soldiers react to what they see as well as what they hear, it is vital that a military instructor meet military standards of _____, _____, and _____.

8. Gestures are an effective way to communicate with your students. Select the correct statements about gestures.
- (1) Rehearse your gestures so that they appear at the proper points in your instruction.
 - (2) Your arms and your hands are the principal tools of gesture.
 - (3) Gestures should arise spontaneously from your enthusiasm, conviction, and emotion about your subject.
 - (4) A gesture is the movement of a body part to reinforce what you are saying.
- a. 1 & 3.
 - b. 2 & 4.
 - c. 1 & 2.
 - d. 3 & 4.

9. A number of mannerisms used by an instructor can distract students and make it difficult for them to learn the subject matter. Three such mannerisms are:

- a. _____.
- b. _____.
- c. _____.

10. What is the basis of an instructor's enthusiasm while teaching a subject?

_____.

11. An instructor can make his voice quality expressive and pleasing by changing his voice _____, _____ and _____ or by a combination of all three.

12. An instructor must adjust how fast or how slowly he speaks while teaching according to the class learning ability and the complexity of the course material. The normal speaking rate is _____ words per minute. The class will have trouble keeping up with an instructor who speaks faster than _____ words per minute.
13. A student will be less likely to daydream in a lecture class if he knows the instructor may _____.
14. Asking a question of a student is a good way to reinforce learning. The two main reasons to ask questions about the subject matter are to _____ and to _____.
15. The speech patterns of several instructors may be different, depending on what part of the United States they are each from. Students will be able to understand each instructor if each instructor _____
_____.
16. Begin the question you ask a student with one of these words: how, who, when, where, or why. The reason is that questions starting with these words usually require _____.
17. A good reason to ask the same question of several students before actually talking about the answer is _____.

18. List four types of training aid devices.

a. _____.

b. _____.

c. _____.

d. _____.

19. Training aids stimulate the sensory modes of students. The sensory modes are

_____, _____, _____,
_____, and _____.

20. A good way to teach the steps in a procedure or to present instruction from an outline is to use _____ training aid.

21. A chalkboard is a training aid of many uses. On a chalkboard, you can place:

a. _____.

b. _____.

c. _____.

d. _____.

e. _____.

f. _____.

22. To show nuclear fireballs dramatically, draw them on a chalkboard using _____ chalk and shine a black light on the board.

23. To make a blanket board training aid, follow these steps:
- a. Stretch an Army blanket over _____.
 - b. Back cardboard cutouts with _____.
 - c. Slap cutouts against the _____, and they stick.
24. A film teaches faster and more fully than a lecture. A film is especially useful in teaching concepts and procedures that are _____.
25. You are giving instruction to a class of 12 soldiers. List four advantages of using training aids in the class.
- a. _____.
 - b. _____.
 - c. _____.
 - d. _____.
26. List five characteristics of a good training aid.
- a. _____.
 - b. _____.
 - c. _____.
 - d. _____.
 - e. _____.

27. Four general instructions to remember when using training aids are:

a. _____.

b. _____.

c. _____.

d. _____.

28. The _____ is the most realistic training device. If the class is large, however, a larger model, a film, or slides may be necessary so that all students can see.

29. Why is a line drawing often a more effective training aid than a picture?

30. An excellent use of slides as a training aid is to show students

_____.

31. The overhead projector has advantages for both the student and the instructor.

a. The projector can be used in a well-lighted room. This allows students to

_____.

b. The instructor's advantage is that he can _____.

32. The overhead projector projects transparencies on a screen or a flat wall surface. An opaque projector, on the other hand, can project material from:
- a. _____.
 - b. _____.
 - c. _____.
 - d. _____.
33. A soldier is more likely to pay close attention to an instructor's demonstration if _____
34. For students to get the greatest benefit from a demonstration, the instructor should _____.

Check Your Answers on Next Page

SOLUTIONS TO EXERCISES, LESSON 3

1. a (para 3-2a)
2. Look directly at the students. (para 3-2b)
3. You and I.
We. (para 3-2c)
4. Looking at him directly, making eye contact.
Taking a step toward the student.
Asking the student a question. (para 3-2d)
5. You are correct if you listed any three of the following:
 - * Be thoroughly prepared.
 - * Assume the proper mental attitude.
 - * Begin well, knowing what you are going to say first.
 - * Review previous instruction.
 - * Inject humor by telling a story (if you do this well).
 - * Deliberately talk slower so that you speak normally.
(para 3-3b through g)
6. Have full knowledge of the subject.
Be able to teach the subject effectively. (para 3-3c(2))
7. Appearance.
Bearing.
Bodily control. (para 3-4a)
8. d (para 3-4c)
9. You are correct if you listed any three of the following:
 - * Exhausted looking instructor leans heavily on the lectern and never moves from this position.
 - * Instructor stands with hands clasped in front below his waist and never moves.
 - * Instructor in constant movement while talking.
 - * Instructor rocks back and forth, weight first on one foot and then on the other.
 - * Instructor waves pointer around, not using this tool to point to something.
(para 3-5a through f)

10. A thorough knowledge of the subject and its usefulness to the students. (para 3-6)
11. Pitch.
Volume.
Rate of saying words. (para 3-7a)
12. 120 to 150
160 (para 3-7d(2))
13. Ask a question about the lecture at any minute. (para 3-11a)
14. Stimulate student thinking about the subject matter.
Check whether the students understand the subject matter.
(para 3-11a(1) and (2))
15. Speaks (enunciates) clearly, pronouncing or accenting each syllable distinctly.
(para 3-8d(1))
16. An explanation. The explanation allows the instructor to find out whether or not the student understands the material. (para 3-11e)
17. That the different answers from several students will indicate whether or not the students really understand the material the instructor is presenting. (para 3-13a)
18. You are correct if you listed any four of the following:

* Charts.	* Films.
* Pictures.	* Filmstrips.
* Graphs.	* Videotapes.
* Slides.	* Skits. (para 3-16a)
19. Sight.
Hearing.
Taste.
Smell.
Touch. (para 3-17a)
20. A Venetian blind. (para 3-23)
21. Topics.
Questions.
Sketches.
Diagrams.
Teaching points.
Other written material. (para 3-24a)

22. Fluorescent. (para 3-24a(4))
23.
 - a. A frame.
 - b. Coarse sandpaper.
 - c. Blanket. (para 3-25)
24. Difficult to explain in the classroom. (para 3-26)
25. Stimulates the student's sensory modes.
Aids interest and perks up instruction
Clarify difficult points in the subject matter.
Allows the student to learn faster (para 3-17a through d)
26. Easily visible.
Uncomplicated.
Easily used.
Professional.
Appropriate. (para 3-18a through e)
27. You are correct if you listed any four of the following:
 - * Explain the training aid.
 - * Cover the training aid when it is not in use.
 - * Be sure all students can see the training aid.
 - * Instructor always faces the class when using the training aid.
 - * Instructor uses a pointer to draw students' attention to the training aid. (para 3-19a through g)
28. Actual equipment. (para 3-21)
29. A picture may include too much extraneous detail. (para 3-22a)
30. A procedure which they will practice. (para 3-22b)
31.
 - a. Take notes.
 - b. Face the students while operating the projector. (para 3-28a)
32. Books.
Magazines.
Newspaper.
Other printed matter. (para 3-29)
33. He respects the instructor. (para 3-30a)
34. Follow the demonstration with a hands-on practical exercise of what the student has just seen demonstrated. (para 3-31)

End of Lesson 3

LESSON ASSIGNMENT

LESSON 4

Conducting and Evaluating Training.

LESSON ASSIGNMENT

Paragraphs 4-1 through 4-18.

LESSON OBJECTIVES

After completing this lesson, you should be able to:

- 4-1. Identify possible reasons for poor soldier performance.
- 4-2. Identify the requirements for an accurate training objective.
- 4-4. Identify the method for preparing a lesson plan.
- 4-5. Identify methods for informally and formally evaluating student performance.

SUGGESTION

After studying the assignment, complete the exercises at the end of this lesson. These exercises will help you achieve the lesson objectives.

LESSON 4

CONDUCTING AND EVALUATING TRAINING

Section I. DETERMINE TRAINING NEEDS

4-1. INTRODUCTION

Perhaps the most important task you will have as a Medical NCO is to train soldiers in medical skills. No matter who has the top responsibility for training within your unit, your medical expertise will be required frequently. To be most effective, training should be carefully planned, skillfully executed, and then fully evaluated. The foremost objective of all training is to develop a skilled soldier who can perform his job well under both peacetime and wartime situations. The Combat Medical Specialist who is poorly trained and unable to perform well is far worse than an untrained soldier. He is a menace to the men in his unit. Errors made by the Combat Medical Specialist in the field can cost life and limb.

4-2. REASONS FOR TRAINING

Training should be planned only when a need has been established. If soldiers are all performing a task within prescribed standards, there is no need for additional training. Similarly, if the only reason for unacceptable performance of a task is lack of time or supplies and equipment, training would not remedy the situation. There might be a number of reasons why training should be given. These include poor soldier performance, changed unit or individual requirements, recent soldier assignment to the unit, or lack of motivation. Any or all of these factors could require initial or refresher training.

4-3. POOR SOLDIER PERFORMANCE

Inadequate skill performance may be displayed by individuals or by all soldiers performing similar duties.

a. **Verify Poor Performance.** Reports of poor performance should be verified by direct observation. In addition, you should check the evaluation reports. Check the soldier's performance records during his participation in ARTEPs and FTXs. Look at his last SDT record. Any documentary evidence available will help you to determine whether the lack of skill is recent or of long standing duration.

b. **Cause of Poor Performance.** These may also give you clues as to the kind of training needed. Did the soldier forget the skill because it was not used for a long period, or has he never learned the skill? Was he ever told that his skill was inadequate? If so, what steps were taken to improve his poor performance? If the drop in performance was recent, check for personal problems. A problem at home can have a serious impact on a medic's job performance.

4-4. CHANGED UNIT OR INDIVIDUAL REQUIREMENTS

a. **Army Reorganization.** Check the unit's mission requirements. Knowing the frequency with which reorganization takes place in the Army, you should check the mission of the unit to determine if there have been any changes that may impact on the medical personnel. Certain parts of a medical facility could be added, or these could be transferred to another location. If medical personnel find themselves performing jobs they have not done recently, their skills in certain areas may need refresher training.

b. **Soldiers' Initial Training.** It is also possible that a soldier's initial training may not have included the now required skill training. The newly required individual skill could now be included in the MOS duty list even though soldiers who were trained at an earlier date were not offered the opportunity to learn it.

4-5. RECENT ASSIGNMENT TO THE UNIT

Any soldier who has been newly assigned to a unit needs orientation time and some help in adjusting to a new situation.

a. **Duties Different from Military Occupational Specialty.** Even if a soldier has been newly trained in his military occupational specialty (MOS), there will be unit SOPs which are unfamiliar, and these will impact on his job performance. Many times soldiers are assigned duties which have little or nothing to do with their MOS, but which are vital to the function of the unit's mission. The soldier may have adjusted well to these duties in a specific position.

b. **New Position/New Duties.** When the soldier is transferred to another unit or to another duty position in the same unit, he may be unprepared for the widely different duties required in his new position. A Combat Medical Specialist who has been assigned to an ambulance section might be reassigned to a clinic. This change could require him to recall skills which he learned in MOS training two or three years earlier, but has not used since that time. This can result in faulty recall of that prior skill training.

4-6. LACK OF MOTIVATION

a. **Negative Motivation.** Without realizing the impact on job performance, supervisors frequently fail to provide for soldier motivation. This can happen in several ways. If the soldier is frequently required to take on unusual duties that need his attention during after duty hours, this can impact on his personal life. A soldier who must often miss family events such as children's birthdays, anniversaries, or everyday family meals is generating problems at home. When this is caused by an unfair division of duty assignments, it can easily result in a lack of motivation for good job performance.

b. **Job Performance Reward.** Without realizing the consequence, supervisors often punish good job performance and reward poor job performance. This is especially true in the medical field and provides no incentive for the poor performers to improve their skills. When the supervisor becomes aware of a person who is a poor job performer, he frequently feels that this person must be assigned to work only those shifts or in those areas where the poor performer can be closely supervised. This usually means a daytime shift or in an area where the supervisor is present most of the time. This is a reward because the poor job performer never has to work the night shifts or in out lying areas. The good job performer is penalized by the fact that the poor performer is in a unit. If the poor performer gets all the good assignments, the good job performer is the one who is assigned to take up the slack. Because this good person can be trusted, he is assigned to the evening shifts, night shifts, or out lying areas where supervision is not regularly available.

Section II. PREPARATIONS TO CONDUCT TRAINING

4-7. THE RESOURCES

Even though education can take place under very primitive conditions, the use of adequate training resources will help most instructors. The most vital resources that affect training are equipment, supplies, time, and space. Other resources that affect the learning situation are talent, knowledge, and the availability of the students. If the commander is convinced of the need for training, he will generally supply the students. Instructor talent and knowledge have been discussed in Lesson 2 and Lesson 3. The resources of equipment and supplies along with time and space should be dependent upon the training objective(s).

4-8. THE TRAINING OBJECTIVE

What should the learners be able to do after completion of training? What is the best way to train the learners in order to accomplish this objective? The answers to these two questions will tell you what kinds of supplies and equipment you will require; how much time you will need for training; and how much space (of what type) you will need to use. In effect, the training objective (TO) should affect the preparation, the conduct, and the evaluation of training. Frequently more than one TO is required.

4-9. STEPS IN DEVELOPING THE TRAINING OBJECTIVE

a. **The Task Statement.** The task statement should give an exact description of what the soldier will be able to do following completion of the required training. All task statements should contain an action verb that is observable and measurable. The verb should mean the same to everyone and should be easily tested with similar results to anyone who conducts the test. If the results of testing could be interpreted in several ways, the task statement is not clearly written. For example, the task statement says that the student will conduct a routine physical examination of a patient. The statement does not answer questions such as:

- (1) Whether the student will perform the act or direct others to do so.
- (2) Whether or not the examination should be in a specific order.

(3) Whether the examination should also include the patient's medical history and present complaint. A better place to start is a general goal statement which will tell, in plain language, what the trained soldiers are to do.

b. **A Goal Statement.** A goal statement can come from the commander, any officer in charge, or the NCO in charge. The statement should tell, quite simply, what behaviors are expected following the completion of the training. The statement might say, "We can expect to operate a lot on or near water. I want my soldiers to be able to save their own lives if they have to swim ashore. They should all be able to swim at least a quarter mile. At first, they should be able to do it without gear, but later I expect them to be able to do it with gear." This statement will tell you that each soldier must be taught to swim. They need to swim at least one-quarter mile with gear.

c. **Write a Task Statement.** The good task statement is written so that the performance is easily recognized when it has been accomplished. The verb used is an action word. It is selected, based on the kind of behavior needed. Figure 4-1 lists some of the measurable and/or observable verbs.

INFORMATION	MENTAL SKILL	PHYSICAL SKILL	ATTITUDE
State		Execute	
Name	Discriminate	Operate	Volunteer
Recite	Classify	Repair	Allow
Describe	Generate (a solution)	Adjust	Recommend
List	Apply (a rule)	Manipulate	Defend
Relate	Solve	Handle	Endorse
Tell	Derive	Manufacture	Cooperate
Write	Prove	Calibrate	Accept
Express	Analyze	Remove	Decide to
Recount	Evaluate	Replace	Agree
		Present	

Figure 4-1. Examples of action words to use in a task statement.

d. **Examples of Task Statements.** Examples of each type are:

- (1) Information. List the major cavities of the human body. State the definition for "apnea." Tell the initial treatment for a heat exhaustion patient.

(2) Mental skill. Apply the "rule of 9" to a described burn victim. Classify a series of patient descriptions as minimal, immediate, or expectant for mass casualty treatment. Analyze the equipment and supply needs for training a group of twenty students in the specified tasks.

(3) Physical skill. Swim ashore. Adjust the sight to the selected target. Handle the equipment safely.

(4) Attitude. Agree to abide by the majority vote. Defend his position without antagonizing others in his unit. Volunteer for an extra-duty assignment. These types of statements are often difficult to write.

e. **Develop the Condition Statement.** This part of the training objective should specify the conditions under which the objective is to be accomplished. The conditions are generally those which will make the task specific or unusual. These would include:

(1) Time. "Under the cover of darkness" or "in the predawn hours" will specify time. If daylight is indicated or if time is unimportant, this would not be specified.

(2) Special supply or equipment needs. "Using a specially-filtered infusion set" or "by using a job aid" would be examples of needed items. If pencil and paper are the only supplies required, these are usually not listed.

(3) Environmental conditions. "During a nuclear, biological, or chemical (NBC) attack" or "in a densely-forested area" are special conditions.

(4) Limitations or restrictions. "After successful completion of an advanced training course" and "under the direct supervision of a physician" are restrictive conditions. Such items as a current health card or an Army driving permit are also restrictive because the training objective cannot apply unless these permits are in force.

f. **Standards.** The standard will indicate how well the task must be done in order to satisfy the training objective. If the task is to be completed without error, this is generally implied and need not be stated (see figure 4-2).

(1) Accuracy. The accuracy statement tells "how many" or "how much" will be considered sufficient for the satisfaction of the training objective. "Seven out of ten tries," "within 50 meters," or "calibrated within two millimeters" are all accuracy standards. If the standard is to attain seventy percent accuracy on a pencil and paper test, this need not be stated. Seventy percent accuracy is a widely used Army standard. The accuracy statement always specifies the minimum acceptable performance.

NO.	DESCRIBE STANDARDS BY	EXAMPLE
1	Referring to a Standing Operating Procedure	"Given the situational requirements for an instrument approach and the local airfield regulations, perform the procedure the pilot follows to complete an instrument landing. The performed steps will be in correct order as stated in AFRs and local regulations."
2	Implying the standard of NO ERROR	"Given the length and width of a rectangle and the appropriate formula, use a calculator to compute the exact surface area of the rectangle." NOTE: Adding "He will perform without error" would not increase the requirement for accuracy.
3	Specifying minimum acceptable level of performance	"Using a slide rule, multiply two three-digit numbers and write the answer "with no more than 0.5% deviation." NOTE: This clearly states the degree of accuracy required for satisfactory achievement of the objective.
4	Specifying the time requirements	"Given a 200-word rough draft, type a letter in standard military format without error at a minimum speed of 40 words per minute." NOTE: Time is an important factor, so it is included in the objective.
5	Specifying the rate of production.	"Given a rough draft of a final report, type pages without error at a minimum of 20 pages per day." NOTE: The amount produced daily is an important factor, so it is included in the objective.

Figure 4-2. Examples of standards in training objectives.

(2) Completeness. Must all the steps be performed? Should all the steps be performed in a specified order? If one or both of these conditions are needed, this must be stated in the training objective. "All preliminary steps are taken" and "there will be no deviation from the approved order of procedure" are examples of completeness standards.

(3) Quantity. Any item that may be counted can be quantity standard. These can include ounces, yards, millimeters, milliliters, number, and rounds. "To a depth of four feet" or "100 yards downstream" are both quantity standards.

(4) Time. If accomplishment of the training objective within a specified time limit is important, it should be stated. "Circulation must be restricted for no longer than two minutes" and "the bottle must be changed every 24 to 48 hours" are examples of time standards.

(5) Rate. The rate is a combination of time and quantity. If a certain output must be accomplished within a specific period, this is rate. "One unit within four hours" and "no more than six grains in a 24 hour period" are considered rate standards.

(6) Qualitative standards. The use of qualitative standard is not generally advised in the medical field because these are open to subjective interpretation by the evaluator. "Without further injury" and "during a reasonable time period" are qualitative standards. They raise questions about what constitutes "further injury" and how much time is "reasonable." Wherever possible, specify the quantitative standards ((1) through (5) above). Figure 4-2 shows some examples of standards.

4-10. INTERMEDIATE TRAINING OBJECTIVES

If a task is simple and straightforward, training can be prepared from a single task objective. Frequently this is not possible because the task is very complicated or it rests heavily on previously learned skills. If this happens, one or a series of objectives should be prepared which will lead up to the required final objective. The intermediate training objectives (ITOs) should be prepared in the reverse order in which they will be taught. Each intermediate objective consists of the same parts as the final objective, namely:

- a. The task statement that describes the action to be performed.
- b. The conditions under which the action will be performed.
- c. The training standards that describe how well the task should be performed under the listed conditions.

4-11. AN EXAMPLE OF INTERMEDIATE TRAINING OBJECTIVES

a. **Developing Intermediate Training Objectives.** Using an example of a training objective, you can develop the ITO series in this manner. The training objective is to "Calculate the dosage of a medication to be administered to a patient within the period and in the strength ordered by the physician in his doctor's order." The general order of difficulty, from complex to simple could be:

- (1) The student will calculate the amount prescribed by the physician from the contents of the medication container.
- (2) The student will demonstrate his ability to read and interpret the doctor's order.

(3) The student will solve problems that demonstrate his ability to read and interpret labels on medication containers.

(4) On a series of prepared problems, the student will demonstrate his knowledge of basic mathematics skills and how to apply these skills.

b. **Working Through Intermediate Training Objectives.** A medic who has never learned basic mathematics skills will be unable to successfully complete the original objective. If the student or students need instruction in these skills, this instruction must come before any other skill listed in the series. If you find that the students can read and interpret the doctor's order (or some other intervening step), then skip this instruction and go to the next step. If you think through each training objective, you will be able to locate those skills that are presumed to be mastered for the successful completion of the required training.

4-12. PREPARE THE LESSON PLAN (SEE FIGURE 4-3)

a. **Sections.** When the training objectives have been established to your satisfaction, it is time to prepare the lesson plan. The lesson plan (LP) is the blueprint for the instructor's planned activities. The lesson plan consists of three or more major sections:

(1) Heading. The heading will list the administrative requirements, the resource requirements, and matters pertaining to student preparation.

(2) Body. The body will list the introduction, the main teaching points, the subpoints, and their order of presentation. This may include sections on lecture, demonstration, and student practice (among others).

(3) Closing. The closing will include the summary and closing remarks. If there are annexes, they are included after the closing section.

b. **Time.** The section heading for the body and closing also include the time required to teach each section. If you are using prepared lessons, these will be done for you. If not, you will need to write your own. Under either condition, it will be necessary for you to research the subject matter until you know it thoroughly.

c. **References.** The prepared lesson plan will have the references listed in the heading. You will need to locate your own references when you prepare the lesson. Your primary resource for those lessons you write yourself should be the Soldier's Manual for the skill level of the MOS you are instructing. The Soldier's Manuals are very important because the SDT testing is based on the tasks explained there.

4-13. EXPLANATION OF LESSON PLAN FORMAT

The explanation that follows is an example of a typical lesson plan format.

a. **Heading.** This section is vital for the preparation of all the resources and requirements needed to present the lesson. If these have been provided in another manner, the heading page can be modified to suit the instructor. Remember that it may become necessary for another instructor to use your lesson plan, so do not leave out too much.

(1) The **HEADING** will make it immediately apparent that the lesson plan originated in your section, unit, or division.

(2) The **INSTRUCTIONAL UNIT** will make it easier for you to locate the specific lesson you want and to allot the required time.

(3) When you teach classes at several places, the **CLASSES PRESENTED TO** line will make it easier to locate the specific one you want.

(4) **REFERENCES** should list name, author, and date for civilian sources plus name and number for military ones.

(5) If the students have a **STUDY ASSIGNMENT** before class, they must have access to the required material. If the assignment is after class, distribute it at the close of class.

(6) **STUDENT UNIFORM AND EQUIPMENT** will indicate if the students should be told to come in their whites, fatigues, or another uniform. If they need to have some of their standard equipment, they should also be told ahead of time.

(7) **TOOLS, EQUIPMENT, AND MATERIALS** show the annex letter of all paper handouts as well as those tools and the equipment which must be available. If the list of supplies and equipment is very long, list them in a separate annex and refer to it from this section.

(8) **PERSONNEL** will indicate the number of assistant instructors required as well as the main instructor (for example. One instructor (91B/91C) and three assistant instructors).

(9) If slides and charts are needed, these should be listed as **TRAINING AIDS** along with the equipment needed to use the aids. A detailed list will be in the Annex, so that these training aids can be reassembled if mislaid or out of proper order.

(10) **TROOP REQUIREMENTS** are rarely used in the medical field, but may be necessary for a mass casualty type lesson.

(11) TRANSPORTATION REQUIREMENTS may be required for a field exercise.

(12) TYPE OF INSTRUCTION should list all the types used in this particular lesson.

b. **Body.** Be sure to list the time requirements for the introduction, teaching points, and closing sections.

(1) Your OPENING STATEMENT should get the attention of the students and make them want to learn the lesson.

(2) The OBJECTIVES will be the list of training objectives which you carefully formulated before you wrote the lesson.

(3) If the lesson has a demonstration, practical exercise, or some other part, the students should be alerted to this fact in the CLASS PROCEDURE AND LESSON TIE-IN.

(4) The EXPLANATION indicates that this is a lecture section. It may also be called DEMONSTRATION, FILM VIDEOTAPE, DISCUSSION, or PROGRAMMED INSTRUCTION, depending on the instructional method you are using. If a DEMONSTRATION is to be 15 minutes or less, it can be included in the EXPLANATION section (and called EXPLANATION/DEMONSTRATION). If the DEMONSTRATION is longer, it should be included as a separate section, following the EXPLANATION.

(a) All the main points you intend to cover should be listed in this topical outline.

(b) If there are subpoints that back up or explain the main points, list them. If you intend to use stories from your own personal experience, add notes on the side to jog your memory. These notes should not be considered part of the lesson plan since they would mean nothing to another instructor who might teach the class.

(c) The NOTE, QUESTION/ANSWER, ILLUSTRATION, or CAUTION under Part II C should be used as necessary. The Academy of Health Sciences recommends that at least two questions and answers be included in each lesson plan. This reminds the instructor to include student participation in each lesson.

(5) A PRACTICAL EXERCISE should follow a DEMONSTRATION section if this is at all possible. Students learn better when they do something for themselves. The format included in figure 4-3 is standard for the practical exercise. Only those parts of the format that are needed should be included. Unlike the HEADING, you may leave out parts of this section.

(6) The REVIEW is a necessary part of each lesson plan. This is the last part of the lesson plan style.

- (a) Tell what you are going to teach.
- (b) Teach what you promised.
- (c) Tell what you have just taught.

(7) QUESTIONS FROM STUDENTS should always be sincerely requested. Some students may be too timid to ask unless you make this request.

c. Closing.

(1) The SUMMARY OF THE LESSON should be only a listing of the points you want to emphasize. Do not try to reteach the lesson.

(2) The CLOSING STATEMENT should make the students feel that the time they spent in class was well worth their attention. This statement will also help provide motivation for their careful attention at the next lesson.

(3) The ANNEXES may include:

- (a) A list of every handout given to the students.
- (b) A sketch of each illustration or diagram to be drawn on the chalkboard.
- (c) A short description of each slide, chart, etc., used for the lesson.
- (d) A description of each film or videotape (or audiotape) used in the lesson.
- (e) A description of the demonstration and the supplies/ equipment needed.
- (f) The "Steps of Procedure" for the practical exercise.
- (g) A copy of each study handout given to the students.
- (h) Supplementary information for use of the instructor.
- (i) Any other information that is required for the lesson.

SAMPLE LESSON PLAN

HEADING
(your location and division)

LP number
Julian date

INSTRUCTIONAL UNIT
(name of subject to be presented and time allotted)

CLASSES PRESENTED TO: (who will receive instruction?)

REFERENCES: (where is the subject matter found?)

STUDY ASSIGNMENTS: (what should the student study before or after class?)

STUDENT UNIFORM AND EQUIPMENT: (how should the student dress, and what should he bring?)

TOOLS, EQUIPMENT, & MATERIALS: (what items will the instructor need to supply to the students?)

PERSONNEL: (number and MOS of the instructors needed)

TRAINING AIDS: (what training aids will be required? Put a detailed description of aids into an annex to the lesson plan.)

TROOP REQUIREMENTS: (what demonstration troops, if any, will be needed?)

TRANSPORTATION REQUIREMENTS: (what form of transportation, if any, will be needed to take student to the training site?)

TYPE OF INSTRUCTION: (which methods will be used? lecture, conference, demonstration, evaluation, practical exercise?)

NOTE: Place all information regarding preparation necessary for the conduct of the lesson in the heading of the lesson plan. DO NOT omit elements of the heading. If any elements do not apply, write NONE. The heading serves as a checklist for the preparation stage.

Figure 4-3. Sample of a lesson plan (continued).

I. INTRODUCTION (indicate time required for this section)

A. **Opening Statement.**

Tell students why they are to learn the subject. Stress its importance. The introduction is an attention-getting device. If some special technique is used to gain the attention of the class, like a demonstration or skit, put it into the lesson plan as a **NOTE**.

B. **Objectives.** List the training objectives for the lesson.

C. **Class Procedure and Lesson Tie-in.**

Indicate the instructional activities that will occur during the lesson (unless the lesson is to be lecture only). Indicate how this lesson fits into the students' job and/or course of instruction.

II. EXPLANATION (indicate time required)

A. All main subject matter points of the explanation should be designated "A," "B," "C," etc.

B. Supporting points for the main subject matter ideas in subparagraph II. A above are indicated by 1, 2, 3, etc. If these supporting points need further support, the instructor should indicate such support by a, b, c, etc.

C. When notes, training aids, questions, and other instructional procedures supplementary to the lesson are used, they are put in the plan as follows:

NOTE: Show slide 7.

QUESTION: What are the advantages of using a topical outline?

ANSWER: A topical outline is much easier to read than a narrative.

ILLUSTRATION or DIAGRAM: Draw the diagram from Annex D on the chalkboard. (Be sure the diagram is included in the Annex section exactly as you want it to appear on the chalkboard.)

CAUTION: DO NOT GIVE THE INJURED MAN ALCOHOL.

Figure 4-3. Sample of a lesson plan (continued).

- D. When a demonstration is used, include questions to check understanding, notes on the use of equipment, and safety precautions. The steps of procedure should be included in an Annex or can be included in this section if the demonstration is short.

III. PRACTICAL EXERCISE (indicate time required)

A. Directions to Student.

1. Purpose.
2. Tools and equipment to be used.
3. Procedure for the conduct of the practical work.
4. Safety precautions to be observed.

B. Directions to Instructors.

1. How to introduce the practical work.
2. How to conduct the practical work.
3. Checks to be made on the presence and working conditions of tools and equipment.
4. Supervision of students and assistant instructors.
5. Duties of assistant instructors.
6. How to summarize the practical work.

C. Practical Work.

1. Description of the practical work.
2. List of problems and answers.
3. Practical exercise situations, requirements, and steps of performance are normally included as an annex to the lesson plan.

Figure 4-3. Sample of a lesson plan (continued).

IV. Review (indicate time required)

A. **Questions from Students.** Ask students for questions on any points of difficulty.

B. **Summary of the Lesson.**

1. List the main points (as shown in the lesson).
2. List the subpoints as necessary.

C. **Closing Statement.** Write out a statement which summarizes the lesson and builds student interest for the lessons which will follow.

NOTE: If annexes are used to supplement the lesson plan, list them on the first page of the lesson plan under TOOLS, EQUIPMENT, AND MATERIALS or TRAINING AIDS (as appropriate).

Figure 4-3. Sample of a lesson plan (concluded).

4-14. PREPARE FOR TRAINING

At some point after the training was requested you should be mentally or actually listing those resources you consider necessary for the planned lesson(s). Most of these resources will be shown in the "conditions" portion of your training objectives. This list should be checked against your own experience and common sense. You will need to find out what is available, what you can supply, and what must be supplied by the commander. You will need to know the number and background of the people to be trained.

a. **What is Available.** If you are in a unit which has little access to medical supplies and equipment, this will severely limit your medical training capabilities. If your unit is near a major medical center, there are likely to be more avenues for supplies and equipment than you need (and also references, experts, etc.). Check on the availability of space needed for the number of students you are planning to train, the time needed, and your access to training aids.

b. **You Will Supply.** You will probably need to arrange for supplies and the use of equipment. Sometimes this will be as easy as giving a copy of the articles needed to the supply NCO of your unit. Sometimes you will need to arrange with other units on your own. If you require training aids, you will need to borrow or make them. There may be suitable training aids available to you through a learning center supply room, Training Aid Support Center (TASC), or a civilian source (such as the Red Cross). Always view a film or videotape, learn to operate the equipment smoothly, and examine unfamiliar supplies before class. If you find that equipment such as a slide projector, extension cord, or extra batteries are not on your list, add them. You may find that training devices (such as manikins) would be more effective than the real items. If so, try to arrange for their use.

c. **The Commander Should Supply.** The commander should supply the training location. Whether a classroom or field setting is required, it should be approved by the commander or his representative. You should now be able to include the amount of time needed for training and the most beneficial date(s) and time(s) for the training. Include some alternates, if possible. The commander must also approve the release of the students from their regular duties for the period of instruction. Sometimes instruction is only an hour or so. Frequently, the instruction period is longer and, depending on the regular assignments of the students, adequate provision for assignment coverage is required. If special unit equipment is needed, the use must be requested and given. Make all requests far enough ahead of time to avoid delaying your instruction plans. The chain of command sometimes works slowly.

d. **The Number and Background of the Students.** This information will be very important for your lesson planning. Never assume that because your students have training in basic skills, their proficiency for current lessons will be sufficient. Some forget faster than others, especially if they have not used the skills lately. It may be necessary for you to pretest in order to plan accurately.

(1) Instruction starting point. Always try to start your training where the proficiency of your students stops. If the students have forgotten (or never learned) how to take an accurate blood pressure reading, be sure you teach this skill before you teach them how to start an intravenous infusion. Some students could be proficient while most of the class needs review. Take advantage of their proficiency by using these students as peer tutors. This can be very valuable when assistant instructors are not available or insufficient in number.

(2) Class size. In order to plan for the space, supplies, equipment, and help required, you will need to know how many students you will be teaching. It makes a great deal of difference whether you will be teaching two or twenty people at a time. If you feel unsure about the supplies or equipment needed, ask help from those who are more experienced (either in your own or in other units). Sometimes the supply NCO can help. He will know how many of certain supplies are packed to the box and how many ounces are contained in the bottle.

Section III. CONDUCT AND EVALUATE TRAINING

4-15. CONDUCT TRAINING

Informal evaluation of training must be made during training. This is especially vital if you are conducting skill training. Never allow your students to practice incorrect performance. For this reason, conducting and evaluating training are discussed together in this section. For further information on conducting training consult FM 21-6, How to Prepare and Conduct Military Training.

a. **Beginning Training.** If your preparations have been done well, the training should go smoothly. You have rehearsed the procedure, checked the equipment and training aids, and feel confident of your abilities.

(1) Students. Be sure all students are present or accounted for before beginning your lesson. Students who are late will disrupt the flow of the lesson and require extra time. All students should have needed supplies and equipment with them. Check before you begin the lesson and make provisions for anything that is missing. Hand out materials before class starts. Do not try to hand out materials after class has started. You will lose the attention of the class.

(2) Training objective. State and hand out or post the statement of training objective(s). Make sure that all students understand these objectives. There is little that can cause more confusion than not understanding the objectives. Each student must know exactly what is expected of him. If you see signs that the students did not understand a training objective, restate it using different words. If the soldiers still seem confused, ask one or more of them to explain it to you and correct any mistakes.

(3) General cautions. If there are caution statements that apply to the whole lesson, these should be discussed and understood before beginning the actual procedure. Examples of this are, "This is a sterile procedure," or "Deviations from this step order may produce a false reading." Specific cautions that apply to individual steps should be discussed at the time the step is taught.

(4) Demonstration. Plan on demonstrating any procedure the students will be expected to do. For many students, it is not realistic to expect mastery learning from a piece of paper. They must see it done, and done correctly, before they will be able to do it. One of the earliest learning methods used by humans is imitation. They must have something to imitate.

(5) Practice. Following demonstration, students should be allowed to practice the procedure. This is the best method to assure learning of a skill. As time permits, the initial practice session should take place immediately after the demonstration. The closer to the demonstration the practice is held, the fewer the likely errors. While practice is being done, you should make on-the-spot corrections. These corrections are the most valuable part of their practice sessions. Good corrections will keep the students from picking up bad habits and practicing incorrect procedures. These corrections are required for learning a skill.

b. **Informal Evaluations.** The on-the-spot corrections (See figure 4-4) are a major part of the informal evaluations. Depending on the skill and the level of mastery required, you may also decide to hold individual or small group conferences with the students. If you find that many on-the-spot corrections are required, it may be necessary for you to repeat the demonstration. If some students are performing the task much better than others, use these students as peer trainers. Let them help those students who are having problems mastering the skill. If necessary, provide these peer trainers with special coaching sessions. Practice should continue until the students have reached the desired level of proficiency.

(1) Elements of corrections. Those corrections that you make during student practice sessions should consist of the following:

- (a) State what was wrong- be specific.
- (b) Tell why it was wrong - and why it is important that it be done right.
- (c) Show/tell how to perform the procedure correctly - and how this differs from the way the soldier performed it.
- (d) Allow the soldier to practice the correct procedure.
- (e) Use constructive methods for making corrections ("You will find that this way works better," rather than "How could you be so stupid?").

Example: CPL Jones, a Combat Medical Specialist has left a blood pressure cuff in place too long while attempting an intravenous insertion. In the figure below, note the elements indicating problems and the corrections.

(2) Immediate praise. When students are doing the skill correctly, a word of praise is warranted. A mention that the soldier is doing a good job can help to cement learning. We tend to remember skills better when we receive a verbal pat on the back. You might mention why the performance is correct, using this rather than demonstrating the skill again yourself for those students who still need help.

ELEMENT	CORRECTIONS
What was wrong ...	"CPL, you left the cuff tightened too long."
Why it was wrong ...	"If you cut off the patient's circulation for more than two minutes, you could cause physiological damage."
How to perform correctly ...	"You should loosen the cuff after two minutes. If necessary, you could attempt insertion on the other arm."
Follow correction with practice ...	"Do the procedure while I am watching, so I can help."

Figure 4-4. Elements of on-the-spot corrections.

4-16. EVALUATING STUDENT PERFORMANCE

After practice has been sufficient to allow students to reach the required level of proficiency, formal evaluation can be a practical test and/or an objective test. For skill training, there should be testing in both modes. For knowledge training, the testing will be objective.

a. **Practical Testing.** A performance checklist listing all steps of the task should be prepared and given to the students. The performance checklist should follow the sequence in which the students are taught. Critical steps should be indicated on the checklist. The test proctors should know the exact manner in which the students were trained. If there is any doubt, the proctors should be trained by the primary instructor prior to the testing period. The lack of coordination among practical test proctors is a frequent failing. Make sure all your students are graded using the same standards. If students are given a "no go" or a "fail" on a performance test, they should be informed of the reason(s).

b. **Objective Testing.** Each nonperformance and each performance objective should be tested by one or more objective items. Objective items may be written in several modes--essay, short answer, list, true-false, or multiple-choice.

(1) Essay. The essay question requires writing skill from the student. The points that must be included in the answer (to be correct) should be listed ahead of time by the instructor. An essay answer can be subjectively graded and interpreted differently by different graders. For this reason, the essay question is generally not used below graduate level courses in the Army.

(2) Short answer. The short answer test item can be answered by one or a few words. Answers are generally not more than one sentence long. In order to use this type of question, all acceptable answers for each test item must be listed ahead of time. These items (and the essay items) cannot be computer graded. For a large group of students, the short answer item is often impractical.

(3) List. The test item asks the student to recall several items. This is often a good test of learning. However, it is only suitable where a listing is involved. This item cannot be computer graded.

(4) True-false. The true-false items are statements that are true or not true (false). If any part of the statement is false, the whole statement is false. This type of item is fairly easy to write. The students can often finish a 50 or 100 item test in just a few minutes. With only two alternatives (true or false), the smart test taker has a 50-50 chance of being correct and can often bluff his way through a true-false test by guessing.

(5) Multiple-choice. A greater part of the test items in Army courses are multiple-choice type (such as the items on the examination for this subcourse). These items can be computer graded (as can the true-false items). The value of these items depends on the skill used in writing them. There should be distracters (wrong answers) that are very close to the correct answer, but obviously wrong to someone who knows the material. See figure 4-5 for examples of all five types of test items.

4-17. RETESTS

Students should be informed of the results of a test as soon as possible. In this way, the test can serve as a learning instrument. If students who failed the objective test are to be retested, use another test. If you are writing the test yourself, you should have at least two versions. If the tests are to be reused by other classes, be sure to get the test papers back from the students after corrections are checked.

4-18. CLOSING

Evaluating training is fully as important as preparing and conducting training. Only by full evaluation can you determine whether your instruction has resulted in the students becoming skilled in the subject or whether some modification should be made to your training program.

OBJECTIVE: Write a test item in five different forms for the following.

The proportions of electrolytes in body fluids will depend upon their location in the body. Intracellular fluids and extra-cellular fluids have different proportions of electrolytes, and these differ from the proportions of electrolytes contained in fluids of the digestive system. Extracellular fluid contains much more sodium than intracellular fluid, and intracellular fluid contains much more potassium than extracellular fluid.

1. **Essay.**

Discuss electrolyte proportions in body fluids.

2. **Short Answer.**

From class discussion, it can be stated about the amounts of sodium and potassium in extracellular and intracellular body fluids that

_____.

3. **List.**

List the three body fluids, discussed in class, that contain electrolytes.

(1) _____.

(2) _____.

(3) _____.

4. **True-False.**

Extracellular fluid contains less sodium than intracellular fluid. T or F

5. **Multiple-Choice.**

Proportions of electrolytes in body fluids are the same for:

- a. None of the location types mentioned.
- b. Intracellular and extracellular.
- c. Extracellular and digestive.
- d. Intracellular and digestive.

Figure 4-5. Five types of test items.

Continue with Exercises

EXERCISES, LESSON 4

INSTRUCTIONS. Answer the following exercises by completing the incomplete statement or by writing the answer in the space provided. After you have completed all the exercises, turn to the solution sheet at the end of the lesson and check your answers.

1. A soldier's performance in some skills was good until recently. Then his performance dropped. The reason might be _____

2. List four reasons why training might need to be given.
 - a. _____
 - b. _____
 - c. _____
 - d. _____

3. When unfair division of duty assignments causes a soldier to miss important family events frequently, the soldier may lack _____ to do his best work.

4. An instructor of a training class, you are making preparations for the class. You must determine the supplies and equipment needed, the amount of time necessary, and the space needed. List two questions to ask to determine this information.
 - a. _____
 - b. _____

5. The task statement of a training objective should _____.

6. The goal statement of a training objective should _____.
7. "Execute," "repair," and "replace" are action verbs you would use to write a training objective dealing with _____ skill.
8. The words "classify," "analyze," and "prove" are all verbs you would use in writing a training objective dealing with _____ skill.
9. The parts of an intermediate training objective are:
 - a. _____
 - b. _____
 - c. _____
10. The three major sections of a typical lesson plan are:
 - a. _____
 - b. _____
 - c. _____
11. Tools, equipment, and materials needed as well as the number of instructors to assist the main instructor are included in the _____ portion of a lesson plan.
12. The summary of the lesson in the closing of the lesson plan should _____
_____.
13. If a diagram for the lesson is to be drawn on the chalkboard, a copy of the diagram should be included in the lesson plan _____.

14. When you are instructing, begin training the students at the point where

15. You have stated and handed out the training objectives to the students. Some students do not understand the objectives. You state the objectives again, but in different words. Several students are still confused. What do you do?

16. You, the class instructor, have just given a demonstration, and the students are practicing the task. Walking around the class evaluating the students' performance informally, you find that many on-the-spot corrections are necessary. The students do not seem to understand the procedure. What should you do?

17. Telling a student that he is doing a good job can _____

18. List five types of objective test items.

a. _____

b. _____

c. _____

d. _____

e. _____

Check Your Answers on Next Page

SOLUTIONS TO EXERCISES, LESSON 4

1. That there is a problem at home. (para 4-3b)
2. Poor soldier performance.
Changed unit or individual requirements.
Recent assignment to the unit.
Lack of motivation. (para 4-2)
3. Motivation. (para 4-6a)
4. What should the learners be able to do after training?
What is the best way to train the learners in order to accomplish this objective?
(para 4-8)
5. Give an exact description of what the soldier will be able to do following the completion of the required training. (para 4-9a)
6. Tell simply what behaviors are expected following completion of the training.
(para 4-9b)
7. Physical. (figure 4-1)
8. Mental. (figure 4-1)
9. Task statement.
Conditions.
Training standards. (para 4-10a through c)
10. Heading.
Body.
Closing. (para 4-12a(1) through (3))
11. Heading. (para 4-13a(7) and (8))
12. Be a listing of the points in the lesson that the instructor wants to emphasize.
(para 4-13c(1))
13. Annex. (para 4-13c(3)(b))
14. The students' proficiency stops. (para 4-14d(1))

15. Ask one or more of those students who do not understand the objectives to explain to you what confuses them. Then, explain clearly and concisely the correct meaning of the objectives. (para 4-15a(2))
16. Repeat the demonstration. (para 4-15b)
17. Help the student remember this information. (para 4-15b(2))
18. Essay.
Short answer.
List.
True-false.
Multiple-choice. (para 4-16b(1) through (5))

End of Lesson 4