

ADA 120773

12

Research Product 81-16

A JOB AID FOR THE STRUCTURED OBSERVATION OF TRAINING

ARI FIELD UNIT AT FORT KNOX, KENTUCKY

September 1981

DTIC FILE COPY



82 10 27 019

U.S. ARMY RESEARCH INSTITUTE for the BEHAVIORAL and SOCIAL SCIENCES

Approved for open release; distribution unlimited

SEP 27 1982
A

U. S. ARMY RESEARCH INSTITUTE
FOR THE BEHAVIORAL AND SOCIAL SCIENCES

A Field Operating Agency under the Jurisdiction of the
Deputy Chief of Staff for Personnel

JOSEPH ZEIDNER
Technical Director

L. NEALE COSBY
Colonel, IN
Commander

NOTICES

FINAL DISPOSITION: This Research Product may be destroyed when it is no longer needed. Please do not return it to the U.S. Army Research Institute for the Behavioral and Social Sciences.

NOTE: This Research Product is not to be construed as an official Department of the Army document in its present form.

Worksheet. For each worksheet, the items comprising the worksheet are identified and defined, and directions are given on how to use the worksheet in observing training.

This job aid is one of four job aids designed to formally evaluate the effectiveness and efficiency of the training process. The other three job aids in the set are: Research Product 81-15, A Job Aid for the Systematic Evaluation of Lesson Plans, Research Product 81-17, A Job Aid for Modifying Ineffective or Inefficient Training Programs, and Research Product 81-18, Guidelines for Conducting a Training Program Evaluation.

Research Product 81-16

A JOB AID FOR THE STRUCTURED OBSERVATION OF TRAINING

Bob G. Witmer

**Submitted by:
Donald F. Haggard, Chief
ARI FIELD UNIT AT FORT KNOX, KENTUCKY**

**Approved by:
E. Ralph Dusek, Director
TRAINING RESEARCH LABORATORY**

**U.S. ARMY RESEARCH INSTITUTE FOR THE BEHAVIORAL AND SOCIAL SCIENCES
5001 Eisenhower Avenue, Alexandria, Virginia 22333**

**Office, Deputy Chief of Staff for Personnel
Department of the Army**

September 1981

**Army Project Number
2Q263743A794**

Education and Training

Approved for public release; distribution unlimited.

FOREWORD

The US Army Research Institute for the Behavioral and Social Sciences Fort Knox Field Unit has a program of research designed to develop user-oriented guidance and instrumentation for evaluating the effectiveness and efficiency of institutional, transition, and sustainment training programs. This job aid is one of a series of four to come out of that research. This line of effort is responsive to requirements specified by the Army Training Study in HRN 79-269 Methodology for Training Effectiveness Analysis (TEA), and by the US Armor Center in HRNs 80-104, Methodology for Training Effectiveness Evaluation, and 81-223, Methodology for Training Program Evaluation. The work was conducted under Army Project 2Q263743A794, Education and Training.


JOSEPH ZEINER
Technical Director



Distribution For	
DTIC	<input checked="" type="checkbox"/>
NSA	<input type="checkbox"/>
State	<input type="checkbox"/>
Other	<input type="checkbox"/>
Distribution	
Availability Codes	
Avail and/or	Special
A	

BRIEF

REQUIREMENT

The Army does not have a standard set of procedures for evaluating the effectiveness and efficiency of training programs. A need for such standardized formal procedures was identified by the Army Training Study in 1978. Guidance from the Army Training Study specified the development of procedural guides that would not require an analyst sophisticated in educational technology, would be applicable to established and developing weapon systems, and could be used in institutional, transition, and sustainment environments. This job aid describes procedures for collecting training and testing data -- the first and perhaps most important step in evaluating the effectiveness and efficiency of training programs. The procedures described are presented in simple terms and are easily understood by persons with little or no knowledge of training methods or educational technology.

PROCEDURE

Data collection procedures and worksheets were designed for obtaining training and testing process data as the training is being conducted. Worksheets were designed for collecting information about training objectives, training equipment and materials, the training environment, training procedures and the test. Each worksheet consisted of a set of individual elements or items to be observed during the training or testing. These items included such things as whether or not everyone practiced the training task to standard, if the training aids specified in the lesson plan were used, whether or not tasks were demonstrated, if testing was contaminated by unwarranted prompting, etc. For each worksheet the items comprising that worksheet were identified and defined, and directions were given on how to use the worksheets in observing training.

This job aid is based on the idea that data collected during training regarding the training process and test administration can be used to identify training related causes of performance deficiencies, and that the inclusion of certain kinds of training procedures increases training effectiveness and efficiency, thereby reducing the number of performance deficiencies. This idea guided the types of items selected for inclusion on the original worksheets. Other notions contributing to the selection of items include the notion that all performance-based training and testing should be based on measurable training objectives and that there is a logical sequence that training events should follow (e.g., state objectives, explain terminology, present demonstration, provide hands-on practice, test for task proficiency).

The items on the original worksheets and the procedures for using them were elaborated and refined through a series of field trials with typical users. The lessons learned from these field trials were incorporated into the job aid. The major field trial was conducted in conjunction with the M1 tank OT-III. Following the M1 OT-III, the worksheets were finalized and the job aid was revised to its present form.

FINDINGS

This job aid has been used in several operational training program evaluations and has provided training process data not heretofore available. The data provided by the procedures described in this job aid were of such a nature that the analysts performing the training program evaluations could identify specific training causes of performance deficiencies. The guidance provided by this job aid was considered useful by most of the users.

UTILIZATION

This job aid was designed to be used in conjunction with three other job aids to evaluate training programs. Research Product 81-15 was designed to evaluate lesson plans. Research Product 81-17 was designed to specify corrections and modifications to training program based on the data collected using the methods described in this job aid. Finally Research Product 81-18 was developed to guide the training analyst through the entire training evaluation process.

Preliminary versions of these job aids have been provided to the Armor Center and School, the Armor and Engineer Board, and the Office of Armor Force Management and Standardization (OAFMS) at Fort Knox, the Soldier Support Center at Fort Benjamin Harrison, the Artillery School at Fort Sill, the Ordnance Center at Aberdeen Proving Ground, the Infantry School at Fort Benning, the US Army Training and Doctrine Command (TRADOC) Deputy Chief of Staff for Training, TRADOC Training Development Institute, and the National Defense Headquarters at Ottawa, Canada. Final versions have been requested. In addition, the system has been implemented, all or in part, at Fort Hood where the TRADOC Combined Arms Test Activity, TRADOC Systems Analysis Activity, the Armor Center, and OAFMS used it to evaluate the New Equipment Training for the M1 tank, at Fort Knox where it has been used to evaluate the Advanced NCO course, M1 Tank Basic Armor Training, M60A3 Basic Armor Training, and at Fort Bliss where it has been used as a baseline for a system for evaluating the NET programs accompanying Air Defense developing weapon systems.

PREFACE

A set of four job aids has been designed to assist individuals who have been charged with the responsibility of evaluating training programs. The job aids address the evaluation of lesson materials, procedures for collecting training process and test data, procedures for modifying training and testing when the data collected suggest problems, and methods to be used in organizing a training program evaluation and in analyzing the effectiveness and efficiency of training. These job aids can be used to evaluate new or existing training programs. The programs are evaluated by comparing them to a preselected set of training effectiveness criteria. These criteria provide broad coverage of training and testing, and conform to generally accepted training practices and principles. Using these criteria, specific deficiencies in training programs can be identified and recommendations for correcting these deficiencies can be made.

This job aid has been designed for use by the training observer. It describes the worksheets that are used to record information about the training objectives, training equipment and materials, training environment, training process, and the test. The worksheets described in this job aid include the: (1) Training Plan Worksheet, (2) Training Environment Worksheet, (3) Training Observation Worksheet, and (4) Testing Observation Worksheet. For each worksheet, the items comprising that worksheet are identified and defined, and directions are given on how to use the worksheet in observing training. While this job aid can be used during training for teaching observers to use the worksheets, it is primarily designed for use by training observers on the job.

TABLE OF CONTENTS

<u>Section</u>		<u>Page</u>
I	Introduction	1
II	Training Observation Worksheets	3
	General Description	3
	General Instructions	3
	Instructions for Completing Headings	4
	Worksheet 1, Training Plan	5
	Worksheet 2, Training Environment	7
	Worksheet 3, Training Observation	8
	Worksheet 4, Testing Observation	9
Appendix A	Sample Training Plan Worksheet	34
Appendix B	Sample Training Environment Worksheet	39
Appendix C	Sample Training Observation Worksheet	41
Appendix D	Sample Testing Observation Worksheet	45

List of Tables

<u>Table</u>		<u>Page</u>
1	Training Environment Worksheet Items	10
2	Training Observation Worksheet Items (Part I, Lecture/ Conference).....	15
3	Training Observation Worksheet Items (Part II, Demonstration and Practice)	17
4	Training Observation Worksheet Items (Part III, General Observations)	23
5	Testing Observation Worksheet Items	29

SECTION I

INTRODUCTION

This job aid gives step-by-step directions for gathering and recording the information needed to evaluate a training program. It describes the worksheets you will use on the job and explains when and how you will use them in observing training.

Training program evaluation (TPE) is a process for determining the quality of a training program and improving the program as necessary. Quality of a training program depends not only on what is trained (training content), but also on how it is trained (training process). Army trainers tend to devote more of their time and effort to deciding what to train than to how it is trained. As a consequence, the procedures used to train soldiers may be poor. This job aid helps you to identify training procedures that are poor by directing your attention to those parts of the training process that are essential to effective training. By looking at the training process and changing those procedures that are poor, the quality of training can be improved.

Performing a training program evaluation is an important job, because poor training produces soldiers who do not have the skills to perform effectively on the job. Without a formal training program evaluation, poor training may go unnoticed. With a well conducted training program evaluation, problems in training programs can be identified and corrected. Soldiers receiving the corrected training programs will be better able to perform the tasks required of them.

Because of its importance, training program evaluation should not be approached casually. It is not a task that just anyone can pick up and do. It requires a training observer to collect the training data and a training analyst to analyze the data and suggest changes in the training program based on that data. The training observer needs to be both knowledgeable about the worksheets and skilled in the art of objective observation. The training analyst must know which training techniques are effective and which are not, and must be able to recognize typical training problems from the data on the observation worksheets and decide which problems require changes in the training program.

The method of training program evaluation described in this job aid may be outlined as follows:

- . You as the training observer will make the necessary observations by carefully monitoring the training and the test as they are being conducted.
- . As you monitor training and testing, you will record information about the training environment, training process, testing process, and implementation of the lesson plan. You will record this information on pre-printed observation worksheets provided to you by the training analyst.

- . You will return the completed worksheets to the training analyst, who will review them in detail. If your observations indicate that there are problems in the training program, the training analyst will determine exactly what these problems are and recommend appropriate training program changes.
- . In response to the changes recommended by the training analyst, the training manager will make the necessary changes in the training program.

To understand how the information that you record on the worksheets can lead to changes in the training program, consider the following example. Suppose you record that a particular task was not demonstrated. Your report that no demonstration was given would cause the analyst to first check the training plan to see if a demonstration is called for. If not, the analyst would encourage the training manager to include a demonstration in the lesson plan. If a demonstration was called for in the lesson plan, but none occurred, the analyst would get with the training manager to find out why the demonstration was omitted. The analyst would stress the importance of the demonstration for effective soldier performance, and argue for its inclusion in the lesson.

Because your observations can lead to changes in the training program, you must take care to be thorough, accurate and objective in reporting your observations. Report only what you see and hear during training; do not report general impressions or your opinions about the training. Consider each item on the worksheets individually. Do not be misled into thinking that there are no problems with the training program simply because the instructor seems to be doing a good job. When you find training problems, do not hesitate to record them. Problems can only be corrected when they are identified on the worksheets. Similarly, when you find that things went very well, comment on this, too. That way, a balanced report of the good and the bad will be given to training management.

As a training observer, your task will consist of monitoring training or testing and recording observations on the worksheets provided. You should not assist in or interfere with the training or testing in any way. At the same time, the instructor should not make it difficult to do your job. You must be allowed to get close enough to the training to make the necessary observations. You should not try to change the way the instructor does his job, nor should the instructor try to change the way you do yours. You both have a job to do and your job is as important as his. Your job is to make observations that will be used to evaluate the training program. Remember; it is the training program, and not the instructor that is being evaluated.

SECTION II

TRAINING OBSERVATION WORKSHEETS

General Description

You will use four different worksheets in observing training and testing. The worksheets are designed so that you may record your observations directly on them. The four worksheets are identified below and the purpose of each is briefly described. Samples of the worksheets may be found in the Appendices.

Worksheet 1, Training Plan. This worksheet outlines the major training activities that have been described in the lesson plan. In addition, this worksheet lists the training equipment and materials needed, the safety requirements, and the training objectives. Using this worksheet, the training observer can determine if the necessary training resources are available and if the training is conducted as planned. This Worksheet is completed by the analyst and used by the observer.

Worksheet 2, Training Environment. This worksheet helps the training observer to identify factors in the training environment that may influence the effectiveness of the training conducted there.

Worksheet 3, Training Observation. This worksheet guides the training observer to make the necessary observations with regard to the training process. Using this worksheet, the training observer can identify strengths and weaknesses in the procedures used to conduct training.

Worksheet 4, Testing Observation. This worksheet helps the training observer in gathering information about the test and testing process. This information may then be used by a training analyst to determine if the test adequately measures soldier performance.

General Instructions

Generally you will receive all the worksheets that you will need to observe training and testing prior to the time that the training or testing is to take place. At the time you receive the worksheets, you will be given the time and location of the class or test.

You should arrive at the class, worksheets in hand, no later than 10 minutes before the class is scheduled to begin. In this way, you will have time to complete the worksheet headings and be ready to record the observations when training begins.

During training, you will observe the training activities and record your observations on the worksheets provided. The worksheets tell you what to look for during training (for samples of the worksheets, see the Appendices). You need only indicate whether the activity described on the worksheet occurred. In most cases, this may be done by simply checking the YES or NO column next to the item or event. Sometimes, though, a YES or NO response does not answer the item fully, or tell enough about what happened during the training. In such cases, you should provide additional information in a comment. Comments are often needed when your response to an item or event indicates that there may be a training problem. Try to include a comment whenever you check NO for an item.

Some of the items on the worksheets may not apply to the particular lesson or class being observed. If this is the case, you should mark the column labeled "NA" for those items. For example, one item asks if job aids were given to the soldiers at the beginning of training. If job aids do not exist for the tasks being taught, then the question about job aids is not applicable to the lesson and should be marked "NA."

You, as the training observer, may not have enough information to answer every item appearing on the worksheets. If you do not know the answer to an item, write "UNKNOWN" opposite the item in the column labeled "COMMENTS."

Upon completing each worksheet, or as soon as possible thereafter, you should check the worksheet for completeness and accuracy. Following the class when all worksheets have been completed and checked, you should return the worksheets to the training analyst.

The remainder of this job aid provides the detailed guidance you will need to complete the training observation worksheets. One section describes how to complete the headings that are found at the beginning of each worksheet. Then each of the worksheets is described in detail. A separate section for each worksheet describes the worksheet, explains how it is used in training observation, and lists and defines the items appearing on the worksheet.

Instructions for Completing Headings

The items on each worksheet are preceded by a heading. In the headings you will identify the class being observed by name and record when and where the training occurred and who was present. All information called for in the headings is listed in the composite heading below. Instructions for completing each item in the headings are also given. Generally, you should complete the headings before the class (or test) begins.

(Composite Heading)

Class/Lesson Title _____	Date _____
Training/Testing Site _____	Training Observer _____
Number of Soldiers _____	Instructor _____
Number of Instructors/AIs _____	Examiner _____
Class/Test Started (Time) _____	Test/Retest _____
Class/Test Ended (Time) _____	

Class/Lesson Title - Record the name of the class or lesson that you are observing.

Training/Testing Site - Record the name (e.g., Richardson Tank Motor Park, 103 Harris Hall) and type (e.g., motor pool, classroom) of the place where the training or test is being conducted.

Number of Soldiers - Record how many of the soldiers being trained were present for class.

Number of Instructors/AIs - Record the number of persons present who served as instructors. Include both Primary and Assistant Instructors (AIs) in your count.

Class/Test Started (Time) - Record the exact time that the instruction or test actually began.

Class/Test Ended (Time) - Record the time that the class or test actually ended.

Date - Record the day, month and year on which the training was conducted.

Training Observer - Write your name or ID number to identify you as the person who is observing training and completing the worksheets.

Instructor - Identify the person(s) presenting the instruction by name or by ID number.

Examiner - Record the name or ID number of the person who conducts and perhaps scores the test.

Test/Retest - If the soldier is being tested for the first time on the task, circle "Test." If the soldier received a NO GO on his first attempt and is being tested again, circle "Retest."

Worksheet 1, Training Plan

For each class that you observe, you will be given a worksheet that outlines the training planned for that class. This worksheet has three parts, and is used to determine whether the instructor followed the lesson plan in conducting the class. (Refer to Appendix A for a sample of a Training Plan Worksheet similar to one you might use in observing training.)

Description (Part I, Equipment and Materials). Part I of the Training Plan Worksheet includes the following information:

- . The training aids, training equipment, and training materials that should be used during this lesson. (Training aids are any equipment or materials used by the instructor for the purpose of making the training process easier or more effective. Examples of training aids include slides, films, projectors, audio and video equipment, charts, magnetic boards, chalkboards, models, mock-ups and sandtables. Training equipment consists of any equipment used by the soldiers during the course of training. Examples of training equipment include weapon systems, tools, test equipment, and simulators. Training materials consist of all printed materials (other than job aids) provided to the soldiers for their use during training. Training materials include such things as technical manuals, workbooks, and handouts.)¹
- . Job aids that are given to soldiers and used during training. (Job aids are step-by-step directions to be used in the actual performance of the tasks on the job. Job aids tell the soldier when-to-perform and how-to-perform.)
- . Requirements that the training site should meet to include preparation of the site for training.

¹For the purposes of this job aid, the term "training aid" is reserved for equipment used by the instructor. All equipment used by the soldiers is referred to as training equipment.

- A listing of safety precautions that should be emphasized and followed during the training.

How Used (Part I, Equipment and Materials). By comparing the information listed in Part I with what you see during training, you can determine if the specified equipment, materials, and job aids were used, if soldiers were told the safety precautions they must take, and if the training site was set up correctly. Although Part I is not a checklist, you should "check off" equipment, materials, aids, and safety precautions as they are introduced during the lesson. If you see safety violations or if the training site does not conform to that described on the worksheet, you should make a note of this in the margin or on the back of the worksheet.

Description (Part II, Training Objectives). Part II of the Training Plan Worksheet lists the training objectives for this lesson by task and subtask number. Each training objective listed in Part II will include a task statement, a conditions statement, and the standards for a GO. The task statement describes the things that the soldier is expected to do after training. The conditions statement tells what will be given to the soldiers in performing the task and the conditions under which the task must be performed. The standards specify how well the soldiers must perform the task in terms of time and accuracy.

How Used (Part II, Training Objectives). Part II is used as the main source for information about the training objectives. Whenever an observation requires that you know the tasks/subtasks, conditions, or standards associated with a particular training objective, Part II of the Training Plan Worksheet provides a ready source of this information.

Description (Part III, Training Events). Part III of the Training Plan Worksheet lists the training events planned for the lesson. A training event consists of training activities grouped together to serve a common purpose in teaching a task or subtask. Training events are listed on this worksheet by task (or subtask) number and by event type. Event type identifies the class of training activities to be conducted (e.g., demonstration, practice, or test). The training activities themselves are listed in the column of the worksheet labeled "Events."

How Used (Part III, Training Events). Using Part III of the Training Plan Worksheet; you can determine whether the training events were conducted as planned. For each training event listed in the "Events" column, you should indicate whether the event did or did not occur by checking "YES" or "NO." In order to be able to say whether or not the event occurred, you need only the description of the event from the "Events" column and the type of event from the "Events Type" column. The five event types that you will encounter in completing the worksheet are listed and defined below.

- OBJECTIVES/PURPOSE (OBJ) - Objectives are stated to include tasks, conditions and standards, and the purpose of the training is explained.
- TERMINOLOGY (TERM) - New terms are identified and unfamiliar concepts are explained.

- DEMONSTRATION (DEMO) - Soldiers are shown how to perform tasks.
- PRACTICE (PRAC) - Soldiers practice tasks or subtasks hands-on.
- TEST (TEST) - Tasks are performed for evaluation purposes, performance is scored, and scores are recorded.

The task number located opposite the training event specifies the task/subtask to which the event applies. This number, along with the event type and the description of the event, completely specifies the training event. If you observe that an event did not occur, or it did not occur for the task listed, or if the event that did occur differed in some way from the event described on the worksheet, you should record your observation in a comment. A separate column has been provided on Part III of the worksheet for this purpose.

Worksheet 2, Training Environment

Description. The training environment consists of all the physical characteristics of the place where training is being given. This includes noise, temperature, lighting, space, people, etc. The training environment worksheet is comprised of a number of items, each of which asks a question about the training environment. The items deal with features of the training environment that are likely to influence how well soldiers are trained and how efficiently training resources are used. The features covered by the items include the number of instructors, the training equipment used, the physical characteristics of the training site (e.g., space, noise, lighting), distractions in the training environment, and the length of the training sessions. The worksheet (shown in Appendix B) has "YES," "NO" and "NA" columns for recording answers and additional space for comments.

How Used. This worksheet is used at the training site to answer questions about the training environment. The items on this worksheet require that you monitor training closely; a brief inspection of the training environment will not provide the necessary information. Most of the items on the training environment worksheet may be answered by checking the "YES" or "NO" column opposite the item. If an item does not apply to the training environment that you are observing, check the column labeled "NA" for Not Applicable. In some cases, you will need to clarify your "YES" or "NO" response with a comment. Suppose, for example, that you observed that not every soldier received a copy of a handout. In a comment you might identify the handout by name and indicate how many soldiers did not receive the handout. You might also indicate why there were not enough handouts and how the shortage affected training. To take another example, consider the case in which your "YES" response indicated that noise distracted the soldiers. A comment may be necessary to identify the source of the noise or to describe how training was affected by the noise.

Items. Items that are likely to appear on the Training Environment Worksheet are listed by number in Table 1 (which begins on page 10). Items that refer to similar features of the training environment are grouped together. Below each item is an explanation of that item. The explanation generally clarifies what is meant by the item. For some items, the explanation also includes guidance on how to respond to the item. (Note: Items marked with an asterisk are usually more difficult to answer in that they typically require you to watch training more closely or to make judgments about the training.)

Worksheet 3, Training Observation

The Training Observation Worksheet is comprised of questions about the training process. The worksheet (shown in Appendix C) has "YES," "NO" and "NA" columns for recording answers and additional space for comments. To make data collection easier, the worksheet is divided into three separate parts. Each part is further divided into groups of similar items. Items within parts and within groups are usually responded to as a set. The worksheet is described below by part.

Description (Part I, Lecture/Conference). Part I consists of questions about some of the training activities that are important for the lecture portion of performance-based training. For example, there are items for determining whether soldiers were told the training objectives. There are also items to determine if new terms and concepts were explained to the soldiers.

Description (Part II, Demonstration and Practice). The items in Part II cover four main areas: (1) Demonstrations, (2) Practice activities, (3) Feedback (information given to soldiers on how well they performed), and (4) Use of job aids. There is also an item on the progression of training events from low realism (e.g., lecture) to high realism (e.g., practice activities).

Description (Part III, General Observations). Part III includes additional items on carrying out the activities described in the lesson plan. Other items deal with how well the instructor performs his duties in conducting the training. There are also items about the training aids and the length of the training session.

How Used. As the training is being given, you will collect information about the training procedures using the Training Observation Worksheet as a guide. You should complete the items in Part I during the lecture portion of the class. Use the items in Part II for gathering information during demonstration and practice. Be aware that lectures and demonstrations may occur together in "walk-throughs" or "talk-throughs." Part III items may be completed at any time during training or at the end of the lesson. As you watch training you will answer each item by checking "YES" or "NO." In some instances an activity listed on the worksheet may not be applicable to the class being observed. In those instances, you should mark the column labeled "NA" for that activity. The worksheet also provides space for your comments. You may comment on any of the training activities that you observe; however, comments are definitely called for when there appears to be a training problem. When your response to an item indicates a training problem, the training analyst needs to know exactly what is wrong, and the only way he will know is for you to record it in a comment on the worksheet. If you do not have enough information to complete an item, you may write "UNKNOWN" in the space provided for comments.

Items. Items that are likely to appear on the Training Observation Worksheet are listed by part in Tables 2, 3, and 4 (pages 15, 17, 23, respectively). Within each part, similar items are listed together as a group. Below each item is an explanation of that item. The explanation generally clarifies what is meant by the item. For some items, the explanation also includes guidance on how to respond to the item. (Note: Items marked with an asterisk are usually more difficult to answer in that they typically require you to watch training more closely or to make judgments about the training.)

Worksheet 4, Testing Observation

Description. This worksheet asks questions about the test and test administration. Items on how well the test measures the lesson content and skills needed on the job are included, as well as items about test instructions and test contamination. Three items on feedback of test performance are also included. The worksheet (shown in Appendix D) has "YES," "NO" and "NA" columns for recording answers and additional space for comments.

How Used. The Testing Observation Worksheet is used as a guide in looking at the test and the testing process. As the test is being given, you will answer the items on the worksheet. Most of the items can be answered by checking "YES" or "NO," but some of the answers may be unknown, or an item may not be applicable to the particular test being observed. If the answer to an item is unknown, write "UNKNOWN" under the comments for that item. If an item is not applicable to the test, mark the column labeled "NA." For each observation made regarding the test, there is a space provided for your comments. Comments may be made no matter how the items are answered; however, comments are definitely called for when your answer to an item indicates a problem with the test or testing procedures.

Items. Items that are likely to appear on the Testing Observation Worksheet are listed in Table 5 (which begins on page 29). The items are organized into groups of similar items. Below each item is an explanation of the item. The explanation generally clarifies what is meant by the item. (Note: Items marked with an asterisk are usually more difficult to answer in that they typically require you to watch training and testing more closely or to make judgments.)

Table 1. Training Environment Worksheet Items

TRAINING ENVIRONMENT: Number of Instructors

*1. Were enough instructors present to provide adequate supervision and assistance?

The number of instructors needed for training depends on the number of soldiers being trained, the type of training being conducted and the time allotted for the training. One instructor may effectively lecture to a large group of soldiers and answer questions as they arise. But to demonstrate the task in the allotted time, additional instructors may be required. This is particularly the case for tasks that can only be demonstrated to a few soldiers at a time. Practice activities require that each soldier be closely supervised by an instructor. Enough assistant instructors must be present to provide the necessary one-to-one supervision during practice. If you see soldiers practicing without instructor supervision, or crowding around an instructor trying to get a clear view of a demonstration, or several soldiers trying to get help from the same instructor at the same time, you should indicate that there were not enough instructors.

2. Did you see any soldier wanting an instructor, but none were available?

When a soldier needs the help of an instructor he will generally raise his hand or try to get the instructor's attention in some other way. If no instructor is available, the soldier may just stop what he is doing and wait until an instructor comes to help. If you see soldiers unable to get help when they want it or several soldiers waiting for help, you should indicate that instructors were not available when needed.

TRAINING ENVIRONMENT: Training Equipment

3. Was the training equipment specified in the lesson plan used in the training?

Training equipment consists of all the things the soldier needs to practice with or to learn to perform the task. The training equipment and how it is used should be described in the lesson plan (and on WORKSHEET 1). Indicate if the training equipment was used as planned, and describe cases in which the equipment was not used or other equipment was substituted.

4. Was there enough training equipment to go around?

When soldiers are forced to share equipment that is in short supply, and this sharing appears to reduce training efficiency, then there is not enough equipment for the soldiers being trained.

*5. Did the training equipment work properly?

You may observe that equipment is not working properly through your knowledge of how the equipment is supposed to work, or the instructor may announce that the equipment is not working and simulate the task, omit part of the training, postpone training, or call someone to repair the equipment. Other indications that equipment is not operating properly include soldier complaints about the equipment or soldiers having problems doing

TRAINING ENVIRONMENT: Training Equipment (cont)

the task, despite the fact that they seem to be using the correct procedures.

6. Was the equipment necessary for training readily available when needed?

The instructor and soldiers should have the training equipment available when and where they need it. It should not be necessary to interrupt instruction in order to hunt for or go get a needed piece of equipment.

7. Did each soldier receive a copy of handouts or other materials used?

When handouts or other materials are given to the soldiers, each soldier should get a copy. When every soldier has a copy, you will not see soldiers sharing materials.

TRAINING ENVIRONMENT: Training Site

8. Could all soldiers see and hear the instruction?

A training site should be chosen and set up so that all soldiers being trained can see and hear the instruction. You may notice that some soldiers are positioned where they cannot see the instruction and are straining to get a better view. Or soldiers may indicate they cannot hear by cupping their hands on their ears or asking the instructor to repeat what he just said.

9. Did the soldiers have enough elbow room?

Soldiers should have enough room to perform, whether they are just taking notes or practicing a task. If the training site is too small for the number of soldiers, and soldiers are cramped for space, they tend to be easily distracted by their fellow soldiers and may perform poorly.

*10. Did the physical layout of the training environment make seeing demonstrations or audiovisuals difficult?

In order for demonstrations or audiovisual presentations to be effective, the soldiers must be able to see them; but sometimes the training site is poorly chosen or poorly arranged so that not all the soldiers being trained can see the demonstrations or audiovisuals.

11. Was the training site so noisy that you had trouble hearing the instructor?

You, as an observer, should be able to hear what the instructor is saying at all times. If a noisy training site prevented you from hearing much of what the instructor said, you should indicate this and comment on what was making the noise.

TRAINING ENVIRONMENT: Training Site (cont)

- *12. Did the noise in the training area distract soldiers and make hearing the instructor difficult?

You can see that noise is a problem when it diverts a soldier's attention from the instruction, causes the instructor to have to repeat himself and causes students to draw closer to the instructor or cup their hands over their ears in order to hear.

- *13. Is this a poor training site from the standpoint of noise distractions?

When you observe that the site chosen for training was noisy during much of the training and is likely to remain noisy because the site chosen is usually noisy, you should indicate this.

14. Was there enough light for you to see what was going on?

As a training observer you should be able to see what is going on (e.g., demonstrations, soldier performance). When there is not enough light for you to see what is going on, you should indicate this and perhaps describe the lighting problem.

- *15. Was there enough light for the soldiers to see what was going on?

When inadequate lighting makes it hard for you to see, it may also prevent the soldiers from following the instruction or seeing what they are doing. Soldiers may complain about it being dark or otherwise indicate that they are having trouble seeing by squinting or drawing closer to what they are trying to see. These soldier reactions may indicate that the lighting is poor.

TRAINING ENVIRONMENT: Distractions

16. Were there observers at the training site other than yourself?

If there were other observers at the training site, indicate how many and describe them (military or civilian, officers or enlisted men, etc.).

- *17. Were soldiers distracted by the presence of civilian observers or high ranking officers?

When soldiers show that outside observers are distracting them by looking back over their shoulders or faltering in their performance when a high ranking officer or civilian appears, you should record this.

18. Was training interrupted at any time?

You should keep track of any interruptions that occur during the training. Comment on what interrupted the training and how long the interruption lasted. Listed below are some examples of interruptions

TRAINING ENVIRONMENT: Distractions (cont)

that might occur.

- Instructor or soldiers being trained leave before class is complete.
- Equipment breaks down.
- Delays due to weather.
- Delays due to missing equipment.

***19. Was any training left out as the result of an interruption?**

When you see that much training time was lost due to an interruption, watch training closely in order to detect any changes in the training from what was planned. Indicate when training events were modified, shortened or left out to make up for lost time.

20. Did the soldiers complain a lot about the weather during training?

If you hear more than one complaint during training about being uncomfortable because of the weather, then you should indicate that soldiers complained about the weather.

***21. Were the weather conditions so uncomfortable that soldiers were distracted from training?**

Soldiers may find it difficult to concentrate on what the instructor is saying or doing when the weather is much too cold or much too hot. Wind and rain may cause soldiers to assume postures that reduce the discomfort from these elements, but which interfere with watching the instructor or performing a task. When a soldier is shivering or sweating a lot, you can be pretty sure that the weather is a distracting influence.

***22. Were weather conditions at the training site so bad that training was seriously affected?**

In some cases the weather obviously affects both instructor and soldier performance, and may even result in training being stopped or postponed until more favorable weather conditions are present. You should record such cases.

TRAINING ENVIRONMENT: Training Duration

23. Did the instructors cover all the training events in the allotted time?

The lesson plan (and WORKSHEET 1) tells what training events are supposed to occur and the amount of time allotted for these events. Indicate if the instructor covered all of the training events planned in the

TRAINING ENVIRONMENT: Training Duration (cont)

allotted time. Record how much time was used over that allotted and any training events that were left out.

- *24. Was training so long that soldiers became bored or so short that instructors were cutting practice time?

Long training sessions in which the type of activity engaged in by the soldier does not change, combined with infrequent breaks can result in soldiers becoming bored or fatigued. Training sessions that are too short may not allow enough practice time or otherwise reduce the amount of training given. You should note whenever the training sessions seem much too long or much too short.

- *25. Was the allotted training time too short or too long for the training objectives?

All soldiers should be required to meet the training objectives during training. Unless there was sufficient training time for all soldiers to perform, unassisted, the tasks listed in the training objectives at least one time to standard, the allotted time was too short for the training objectives. The allotted time is too long when soldiers meet all the training objectives well before the class is supposed to end (i.e., more than one-fourth of the allotted time remains when the class ends).

Table 2. Training Observation Worksheet Items
(Part I, Lecture/Conference)

TRAINING OBSERVATION: Objectives/Purpose

26. Were soldiers told the training objectives?

At the beginning of training, the instructor should tell the soldiers what it is that they will be expected to do at the conclusion of this training.

*27. Were the soldiers told the training objectives, including tasks, conditions, and standards?

At the beginning of training, the instructor should explain each training objective to include statements about the tasks, conditions, and standards. The task statement tells the soldiers what it is they must be able to do following training; the conditions statement tells them what they will have to do it with and the conditions under which they will have to perform; and the standards statement tells the soldiers how accurately and/or how quickly they will have to do it to get a GO.

28. Were soldiers told why this training is necessary?

Indicate whether the instructor motivated the soldiers to learn how to perform the tasks by explaining the reasons for learning the tasks. These reasons should be "real" reasons and should tell the soldiers what they will be using this skill/knowledge for and why they have to learn it now instead of later on in a unit.

29. Were soldiers told how this task fits in with their eventual job duties?

The instructor should explain clearly, but without a lot of detail, how the tasks to be learned fit in with the overall job duties that the soldiers may perform in the future.

30. Were soldiers told how this training fits in with previous and future training?

You should note if the instructor told the soldiers how the present lesson fits in with things that they have already learned and things that they will learn later.

31. Were soldiers told what would happen to them if they did (or did not) learn this task?

Indicate if soldiers were told the rewards for learning the task(s) or the penalties for not learning the task(s). The instructor may describe the consequences of learning (or not learning) for the soldiers themselves or for their job performance.

TRAINING OBSERVATION: Objectives/Purpose (cont)

32. Did soldiers have a training schedule available to them?

A training schedule should indicate what training is scheduled and when and where it will take place. Each soldier should either be provided with a copy of the training schedule or the schedule should be posted in a known location where it will be accessible to all soldiers. Indicate whether soldiers had a training schedule available to them.

TRAINING OBSERVATION: Terminology

33. Did the instructor question the soldiers about what they were already supposed to know?

To find out if the soldiers have enough knowledge to start this instruction, some instructors will ask the soldiers a few questions before starting the training. Indicate whether the instructor questioned the soldiers before starting the training.

34. Did the instructor tell the soldiers how the equipment worked and label the parts?

When soldiers are first learning to use a piece of equipment, they need to be told something about how it works and have parts of the equipment identified for them. You should record whether the instructor explains the equipment to the soldiers, and make a note of any equipment that was not explained or parts that were not identified.

*35. Did the instructor define terms new to the soldier and identify newly introduced equipment?

The instructor should define terms new to the soldier and identify new equipment and equipment parts when the terms or equipment are first introduced. Comment on any terms that were not defined or equipment that was not identified.

*36. Did the instructor provide the concepts and terminology needed by the soldiers?

In the lecture the instructor should introduce and explain the concepts and terminology that the soldiers will need to know to follow the instructor's demonstration and to understand what they are doing during practice.

Table 3. Training Observation Worksheet Items
(Part II, Demonstration & Practice)

TRAINING OBSERVATION: Demonstrations

37. Were the tasks demonstrated by the instructor?

The instructor should show all soldiers how to perform each of the tasks listed in the training objectives. The instructor should demonstrate the tasks by performing each of the actions that the soldiers must learn to perform.

*38. Was each subtask demonstrated?

When the task listed in the training objective consists of a number of smaller tasks (i.e., subtasks) that can be performed independently, the instructor should show the soldier how to perform each of these subtasks.

*39. Were demonstrations conducted on the equipment listed in the lesson plan?

Indicate if the task was demonstrated using the equipment listed in the lesson plan (and on Worksheet 1). Comment if the situation was otherwise (for example, a simulator or mockup was used rather than the real item as listed in the lesson plan).

*40. Could demonstrations be seen and heard by all soldiers?

The instructor should ensure that all soldiers can see and hear the demonstration. If the instructor tries to demonstrate the task to too many soldiers at a time, you may notice the soldiers shifting positions trying to get a better view. Sometimes the instructor will perform the demonstration so that he can see what he is doing, but most of the soldiers cannot. Other times the instructor will turn his back to the soldiers, talking all the while, not realizing the soldiers can no longer hear what he is saying. Soldiers may indicate that they didn't hear by asking the instructor to repeat himself. Describe any situation that prevented the soldiers from seeing or hearing the demonstration.

*41. Were demonstrations conducted in small enough steps so that the soldiers could easily follow the instructor's actions?

Sometimes a step in a demonstration will cover too much ground and the soldiers will not be able to follow what the instructor is doing. When the instructor leaves the soldier behind by taking large steps during the demonstration, soldiers may indicate that they do not understand what the instructor did, or ask a question that causes the instructor to backtrack and provide additional information. If the added information appears to increase soldier understanding, then the step size used in the demonstration was probably too large.

TRAINING OBSERVATION: Demonstrations (cont)

If step size was too large, indicate at which point the soldiers could not follow the demonstration. (Note that the soldier's failure to follow the demonstration did not arise simply because the soldier could not see or hear the demonstration, but because the soldier failed to understand the instructor's actions. Also note that in backtracking, the instructor did not just repeat the demonstration, but instead added information that seemed to increase soldier understanding.)

42. Did the instructor ask the soldiers for questions immediately following the demonstration?

As each subtask is demonstrated, the instructor should ask the soldiers if they have any questions on what they saw. When the whole task has been demonstrated, the instructor should again ask the soldiers if they have any questions.

TRAINING OBSERVATION: Practice

43. Did all soldiers practice?

All soldiers should get hands-on practice for each of the tasks listed in the training objectives. Comment on practice which was not hands-on and identify any tasks that were not practiced. If all soldiers did not get hands-on practice, say how many did and how many did not.

- *44. Were soldiers initially allowed to practice subtasks in isolation from one another?

When a task is comprised of a number of smaller tasks (i.e., subtasks) that can be performed independently, soldiers should initially practice each subtask separately.

- *45. Was the practice on each subtask hands-on using the equipment listed in the lesson plan?

Indicate if the practice activities allowed soldiers to perform subtasks on the equipment specified in the lesson plan (and on Worksheet 1). Comment if the situation was otherwise (for example, a simulator or mockup was used rather than the real item as listed in the lesson plan).

- *46. Were soldiers required to practice subtasks under the various conditions that they are likely to encounter on the job?

If soldiers are likely to be required to perform subtasks under a variety of conditions on the job, then soldiers should be allowed to practice the subtasks under the range of conditions that they are likely to encounter on the job. For example, in practicing to track targets using the Tank Gunner's Primary Sight, the gunner should be

TRAINING OBSERVATION: Practice (cont)

allowed to track different targets, moving at different speeds, in different directions with regard to the tank, and at several different ranges. The gunner should also practice tracking targets from a moving platform and from a stationary position.

- *47. Did each soldier practice each subtask to standard, unassisted, before going on to whole-task practice?

Whenever training objectives list standards for individual subtasks, each soldier should be required to practice each subtask until he reaches standard on at least one unassisted trial before being allowed to progress to whole-task practice.

- *48. Were the soldiers allowed to practice the task as a whole (i.e., practicing the subtasks together)?

Even though soldiers may have demonstrated that they can perform all of the subtasks one at a time, they may not be able to perform the subtasks together. Therefore the soldiers should be allowed to practice the entire task, combining subtasks in the correct sequence.

- *49. Were the soldiers required to meet the overall standard in performing the entire task unassisted?

Before practice is complete each soldier should be required to perform the entire task, unassisted, to the standard listed in the training objective.

50. Did a lot of soldiers have trouble with the same step during practice?

You should watch practice closely, identifying parts of the task that cause particular difficulty for the soldiers. If several soldiers have trouble with the same step during practice, you should describe the step and the difficulty soldiers were having with it in your comments.

- *51. Was sufficient repetition allowed during practice?

Soldiers should be allowed to practice each task and subtask to standard on at least one unassisted trial. For tasks or subtasks that are novel to the soldiers or unusually difficult, soldiers may require two or three additional trials to standard in order to become proficient at the task. If soldiers did not practice, unassisted, to standard at least one time, or if they practiced unassisted to standard, but you feel that one trial to standard is not enough, you should indicate that sufficient repetition was not allowed and comment on how much practice soldiers received.

TRAINING OBSERVATION: Practice (cont)

52. Did every soldier practice under the direct supervision of an instructor?

As each soldier practices the tasks and subtasks, an instructor should supervise the practice. It is important that the instructor observe all of the practice activities of the soldier. Comment on any unsupervised practice.

53. Was remedial training scheduled for the soldiers who had not performed to standard during practice?

When a soldier is unable to perform a task or subtask to standard during practice, even after being given ample opportunity to do so, the instructor should schedule additional training for the soldier to bring him up to par with the other soldiers.

TRAINING OBSERVATION: Feedback

54. Were soldiers told what they were doing right or wrong during practice?

As soldiers practice, the instructor who is supervising the practice should tell the soldier when he is performing correctly and when he is not. If a soldier makes a mistake during practice, the instructor should stop the soldier, tell the soldier exactly what he did wrong, and show the soldier how to perform correctly.

*55. Was feedback provided as soon as possible following actions?

During practice the instructor should provide feedback telling the soldier what he did wrong and how to correct it as soon as feasible following incorrect actions, rather than routinely waiting until the soldier has completed the task or subtask. Small errors should be corrected as they occur rather than waiting for them to grow or multiply. When a soldier is performing correctly, it may not be necessary to provide feedback about his performance after each action, but soldiers should be told when they are performing well and when they have successfully completed a task or subtask.

*56. Was feedback specific to actions and free of ridicule?

When a soldier makes an error in performing a task or subtask, it is not enough to tell him that he performed the task incorrectly or that his performance is a NO-GO. Even telling the soldier that he missed step three of the task is not sufficient. The instructor should tell the soldier what he did right and what he did wrong in performing the task. Feedback to the soldier should not just inform him he did something wrong, but it should let him know exactly what he did wrong. Feedback should not ridicule the soldier or punish the soldier for poor performance. Comment if the feedback provided to the soldier consisted of general statements about poor performance or negative statements about the soldier himself.

TRAINING OBSERVATION: Feedback (cont)

*57. Was faulty performance identified and corrected?

When a soldier fails to perform an action correctly or demonstrates a lack of understanding in some way, the instructor should point out the soldier's mistake and help the soldier to overcome his difficulty through additional instruction.

*58. Was the amount of feedback given a soldier gradually reduced as the soldier progressed?

During the early stages of practice the soldier may be unsure of himself and make many errors. Thus the instructor will need to provide frequent feedback at this stage. As the soldier progresses and gains confidence, feedback will be required less often. In the latter stages of practice, the soldier may be able to catch his own errors and the instructor may need to provide little, if any, feedback.

TRAINING OBSERVATION: Job Aids

59. Were job aids given to the soldiers at the beginning of training?

Instructors should provide the soldiers with any job aids they may need at the beginning of training so that the soldiers may use the job aids during practice. Providing job aids to the soldiers just before they leave class is not a good training practice.

*60. Did the instructor require the soldiers to use job aids as prescribed in the lesson plan?

The lesson plan (and WORKSHEET 1) should describe how the job aids are to be used in training. Indicate if the instructor required the soldiers to use the job aids in accordance with the lesson plan.

*61. Did the job aids appear to be accurate and beneficial to the soldiers?

Job aids should help the soldiers perform tasks more easily. When there are problems with the jobs aids as indicated by instructor or soldier comments, or when soldiers cannot use the job aids effectively, then the job aids may be inaccurate or designed so poorly that they hinder, rather than help, soldier performance.

TRAINING OBSERVATION: Progression of Training Events

*62. Did the training events progress from lecture to demonstration to practice?

Teaching soldiers how to do something as opposed to teaching soldiers about something requires that certain types of training events occur in a particular order. In general, the first type of training events that

TRAINING OBSERVATION: Progression of Training Events (cont)

soldiers should be exposed to are lecture events. Lecture events should be followed by an actual hands-on demonstration of the task by the instructor. Following the demonstration, soldiers should engage in hands-on practice activities under the supervision of an instructor. Comment if the training events followed any progression other than that outlined above. (Note that talking through the steps of a task is no substitution for an actual hands-on demonstration. Neither is having the soldier explain the actions he would take in performing a task an adequate substitute for hands-on practice.)

Table 4. Training Observation Worksheet Items
(Part III, General Observations)

TRAINING OBSERVATION: Implementation of Training Plan

*63. Did the instructor follow the lesson plan?

The instructor should teach soldiers the content outlined in the lesson plan and conduct the planned training activities in the same sequence as they appear in the lesson plan. WORKSHEET 1, when completed, may be used to determine whether or not the instructor followed the lesson plan.

64. Were training aids and training materials called for in the lesson plan actually used?

Training aids are any equipment or materials used by the instructor for the purpose of making the training process easier or more effective. Examples of training aids include slides, films, audio or video equipment, charts, magnetic boards, graphic training aids, chalkboards, models, mock-ups, and sandtables. Training materials consist of all printed materials (other than job aids) provided to the soldiers for their use during training. Training materials consist of such things as technical manuals, workbooks and handouts. Indicate whether the instructor used all the training aids and materials called for in the lesson plan during the training.

65. Did the instructor follow the sequence on the training plan worksheet?

The training plan (WORKSHEET 1) lists the training events in the sequence that they are supposed to occur during the training. Indicate if the instructor followed this sequence.

*66. Was the instructor's presentation well organized?

Instruction that has been carefully planned and well rehearsed will seem to proceed smoothly. Each training event prepares soldiers for the next training event and soldiers have little, if any, difficulty in following the presentation. In a well organized presentation, the instruction does not jump around a lot, and the instructor does not have to continually backtrack to fill gaps in the soldier's knowledge.

*67. Were basic rules and standard procedures presented before exceptions?

The instructor should, in accordance with the lesson plan, always present basic rules and standard procedures before presenting exceptions to those rules and procedures.

TRAINING OBSERVATION: Implementation of Training Plan (cont)

*68. Were critical discriminations emphasized?

A critical discrimination is something you see that provides the basis for deciding whether to take action A or action B. For example, if the instructor is teaching replacement of the brake shoes, he should teach what it is he "sees" that makes him decide whether to replace or not replace. Critical discriminations are emphasized by calling them to the attention of the soldiers, identifying them as a separate subtask or step, showing the soldiers what to look for by giving examples that the soldiers can see, and requiring the soldiers to practice making the discriminations during the practice event. For instance in the brake shoe replacement task, the instructor should tell the soldiers what to look for in deciding whether to replace brake shoes. He should then show the soldiers some examples of good and defective brake shoes, taking care to point out the differences that he sees that serve as the basis for deciding whether to replace or not replace. Finally, the soldiers should be given practice in identifying good and defective brake shoes during the practice event.

*69. Did the training focus on how to do something rather than talking about what to do?

The lesson should teach how to do something. All training activities, including lecture and demonstration, should be directed towards getting the soldier to the point that he can perform the task. Training, however, that is restricted to lecture and/or demonstration, where the primary training activity is explaining principles or talking about performance, is not sufficient to teach the soldier how to do something. To learn how to do something, the soldier must have, in addition to lecture and demonstration, the opportunity to practice the task performance.

70. Were soldiers sometimes standing around with nothing to do during training?

You may see soldiers milling around or talking who, for the moment at least, are not being trained. These soldiers may be waiting until the instructor finishes with other soldiers or waiting for equipment which is missing or not operating to become available. The instructor should not leave the soldiers with nothing to do. The only time during training that soldiers should not be involved in learning activities is during scheduled breaks.

*71. Did the instructor seem to have enough time to conduct the training as planned?

The time allotted for training should be enough that the instructor completes all the training events as described in the lesson plan. If training events were shortened or eliminated from the training in order to finish in the allotted time, identify those training events that were cut short or left out.

TRAINING OBSERVATION: Implementation of Training Plan (cont)

72. Did the instructor give a summary?

At the end of the lesson or at other appropriate points in the instruction, the instructor should provide a review or summary of what was covered. The summary should highlight the training objective and important parts of the lesson content.

TRAINING OBSERVATION: Training Aids

***73. Did the instructor use the training aids effectively?**

Training aids are any equipment or materials used by the instructor for the purpose of making the training process easier or more effective. Examples of training aids include slides, films, audio or video equipment, charts, magnetic boards, graphic training aids, chalkboards, models, mock-ups, and sandtables. The instructor should make sure to use training aids in a way that allows soldiers to see what they need to see and hear what they need to hear. The writing on chalkboards and charts must be readable from where the soldier is sitting. When the instructor is using a chalkboard, magnetic board, chart or graphic training aid, he must take care not to block the aid with his body or talk to the training aid rather than to the soldiers. The instructor must operate audiovisual equipment properly so that the picture is in focus and the sound can be heard by all present. Slides should be left up long enough for soldiers to read them or see what is on them. Report instances in which the instructor failed to use the training aids effectively.

***74. Were the training aids accurate?**

When training aids contain information that is in error or out-of-date, they are likely to take away from rather than add to training. Errors in training aids are most often identified by the instructor or soldiers during the training. You may, however, at times notice errors that were not identified by the soldiers or the instructor. Record any errors contained in the training aids.

***75. Did the training aids seem to confuse the soldiers?**

Information presented by training aids should tie in with other training events so that soldiers do not become confused when the training aids are introduced. Too much detail on slides or charts or complex graphs or figures without adequate accompanying explanation may also cause confusion. Soldiers may indicate that the training aids are confusing by asking questions that show that they do not understand the information presented by the training aids.

TRAINING OBSERVATION: Instructor Performance

***76. Did the instructor move smoothly from one learning activity to the next?**

When the instructor moves from one training objective to another, or any time there is a change in the type of training activity being conducted, the instructor should relate the new activity to the preceding activity. Identify any instances in which the instructor abruptly began a new training activity without tying it in with the preceding activity.

***77. Did the instructor emphasize what the soldiers need to know?**

The instructor should provide the skills and knowledges necessary for the soldier to be able to perform the tasks listed in the training objectives. The information most important for accomplishing the training objectives should receive particular emphasis by the instructor. The instructor may emphasize information essential to task performance through frequent repetition of information, by dwelling on information for a longer period of time, and through stressing the importance of the information to the soldiers.

78. Did the instructor include material that is not in the lesson plan?

It should not be necessary for the instructor to add material that was not covered in the lesson plan. Make a note about any information provided by the instructor that was not included in the lesson plan.

***79. Did the instructor minimize unnecessary detail and refrain from telling unrelated "war stories"?**

The instructor should not go into a lot of detail that is unnecessary for performing the tasks listed in the training objectives. Things that are nice to know, but which are only marginally related to the training objectives are better left out of training. War stories that are entertaining but not directly related to the training objectives waste valuable training time and should be omitted from training.

***80. Were soldiers encouraged to actively participate (i.e., questioning, discussing, performing) during training?**

Opportunities for soldiers to actively participate during training should be built into the instructor's presentation. The instructor should periodically offer topics for discussion or ask questions that lead to discussion. The instructor should make it clear to the soldiers that he is open to any questions that they might have, and occasionally the instructor should ask the soldiers if they have questions. Perhaps the most important way in which instructors can encourage soldiers to actively participate is by letting the soldiers actually perform the tasks during training. If the instructor does all of the talking during training, providing little opportunity for the soldiers to be heard from or otherwise participate, it indicates that soldiers were not encouraged to actively participate.

TRAINING OBSERVATION: Instructor Performance (cont)

81. Did the instructor ask the soldiers if they had any questions during lecture, demonstration, and practice?

From time to time, the instructor should ask soldiers if they have any questions. The instructor should ask for questions several times during the training and not just at the end of the lesson. As a minimum, the instructor should ask for questions following the lecture, the demonstration, and the practice activities.

- *82. Did the instructor set a tone which encouraged soldier questioning?

An instructor can encourage soldier questioning by indicating that he will be glad to answer any questions the students may have, and by then pleasantly answering a question when asked. Students will be discouraged from asking questions if the instructor indicates by word or deed that he finds soldier questions bothersome. If the instructor "puts off" answering questions or acts annoyed when asked a question, soldiers are not likely to ask many questions. Questions are also discouraged when the instructor "puts down" the soldiers who ask them.

83. Did the instructor answer the soldier's questions?

When a soldier asks a question, the instructor should answer it promptly, accurately and in language the soldier understands. If the instructor does not know the answer to a question, he should say "I don't know, but will find out." He should not try to talk around the question, pass it off as a dumb question, or make a joke out of it.

- *84. Did the instructor answer all the soldier's questions?

As soldiers ask questions during training, keep a count of questions that were answered and questions that were not. In this way you can determine if all soldier questions were answered.

- *85. Did the instructor answer all the soldier's questions to their satisfaction?

Whenever a question is answered, the instructor should ensure that the soldier asking the question is satisfied with the answer provided. If the soldier seems puzzled following an answer or otherwise indicates that he still doesn't understand, the instructor should further explore the question with the soldier. Make a note any time the instructor cannot provide an answer which is satisfactory to the soldier.

TRAINING OBSERVATION: Instructor Performance (cont)

*86. Did the instructor use class time efficiently?

Class time should be used for training soldiers to meet the training objectives. The instructor should ensure that his activities and those of the soldiers use class time in this way. Inefficient use of class time includes such things as: soldiers standing around waiting to practice instead of being at concurrent training stations; class time being used to locate, set up, or adjust training equipment; breaks that come too often or are too long; and stopping training early (because it is a nice or bad day, there is an inspection or day-off coming, etc.) despite the fact that not all soldiers have demonstrated task performance to standard. It is the instructor's responsibility to see that class time is used productively.

*87. Did the instructor show a positive attitude towards the training and the soldiers?

The instructor should be enthusiastic about the material he is teaching. He must show the soldiers that he thinks what he is teaching is useful and important. He should not treat teaching the material as a chore that he'd rather not do or finish as quickly as possible. The instructor should indicate confidence in his soldiers and treat them with respect. He should be helpful to the soldiers and show them that he wants them to learn. When a soldier makes a mistake or fails to perform a task correctly, he should help the soldier to correct his mistake and never ridicule the soldier or make him feel inadequate because of his error.

TRAINING OBSERVATION: Training Duration

88. Did the class sessions start and end on time?

The training schedule tells the time that each class is supposed to start and end. If the class started or ended at any time other than that appearing in the training schedule, you should record both the actual starting time and the actual ending time.

89. Was the actual training time somewhat shorter or longer than the time allotted?

The time allotted for training may be found either in the lesson plan or in the training schedule. If the allotted time appears in both places, the times listed in the two should agree. If the training time is more than a few minutes shorter or longer than the allotted time, you should record the amount of time actually spent in training.

Table 5. Testing Observation Worksheet Items

TESTING OBSERVATION: Test Instructions

90. Did the examiner read the test instructions directly from the lesson plan?

Each time a soldier is tested, the examiner should read the test instructions directly from the lesson plan. The examiner should never restate the instructions in his own words or try to repeat the test instructions from memory.

- *91. Were the test instructions stated clearly enough for the soldiers to know what they were expected to do?

The test instructions should be read clearly and deliberately enough for soldiers to know what they are expected to do from the test instructions alone. The test instructions should tell the soldiers the tasks and subtasks to be performed, the conditions they will have to perform under, the equipment/tools they will have and can use, and the standards they must meet. The instructions should also tell the soldiers what cues will be given to signal them to start or stop performing a task or subtask.

92. Were pass/fail standards provided to the soldiers?

Just prior to taking the test, soldiers should be given the standards that will be used to score test performance. Pass/fail standards describe how accurately and/or how quickly the task must be performed in order to pass the test.

- *93. Were pass/fail standards clearly explained such that soldiers would know when they performed correctly?

The examiner should explain pass/fail standards clearly enough for soldiers to determine for themselves when they have performed to standard and when they have not. If soldiers indicate through their words or actions that they do not understand the test standards, it is likely that the test standards were not clearly explained.

TESTING OBSERVATION: Test-Training Match

- *94. Did the test occur soon after the completion of training?

The test should follow the training as closely in time as possible in order to minimize the effects of forgetting on test performance. If the test is not given immediately upon completion of the training, you should record the length of the delay between training and testing in a comment.

TESTING OBSERVATION: Test-Training Match (cont)

95. Were all tasks specified in the training objectives tested?

All tasks specified in the training objectives should be tested. List any tasks that were specified in the training objectives but were not tested. Worksheet 1 contains the training objectives.

96. Were soldiers tested on any tasks that were not taught?

The test should include only those tasks that were taught. If tasks were tested that were not taught, or if a task that was taught is changed in any way for the test, you should describe the differences between what was taught and what was tested. What was taught will show up on Worksheet 1.

*97. Were the testing conditions the same as the training conditions?

The conditions statement in the training objective tells the soldiers the materials they will be required to use and the physical conditions under which they must perform. The conditions described in the training objectives should be present during both training and testing. If conditions during testing differ from those during training, or if either differs from the conditions described in the training objective, you should record the differences. Use Worksheet 1 to get the training conditions.

*98. Were the standards specified in the training objectives used to score test performance?

The standards specified in the training objectives describe how accurately and/or how quickly the soldier must perform the task in order to get a GO on that task. These standards should be used to score test performance. If standards other than those listed in the training objectives (see Worksheet 1) were used to score performance, record what standards were used.

TESTING OBSERVATION: Test Realism

*99. Were critical decisions and difficult actions required on the job omitted from the test?

The test should not omit the more difficult parts of a task. Critical decisions and difficult actions that soldiers must know how to do on the job and are included in the training objective should be included on the test.

*100. Were critical discriminations included on the test?

A critical discrimination is something you see that serves as the basis for deciding to take action A or action B (see item 68 for an example). Critical discriminations emphasized in training should be included on the test, especially when performing the tasks listed in the training objectives requires such discriminations.

TESTING OBSERVATION: Test Realism (cont)

- *101. Did the test come as close as possible to measuring performance as it would occur under actual job conditions?

The test should come as close as possible to measuring performance as it would occur under actual job conditions. This does not mean that all job conditions must be reproduced for the test. In some cases, job conditions cannot be reproduced in a training environment, or it may cost too much in time and money to faithfully reproduce job conditions. What it does mean is that the test should include as much realism as possible, given the constraints of the training environment. The actions that are required of the soldiers and the order in which those actions are performed should be relatively close to what is required on the job. When performance required on the test differs greatly from that which the job requires, you should comment.

- *102. Did the test require that soldiers perform tasks together that must be performed as a unit on the job?

When several tasks are being performed on the test that are typically performed in conjunction with one another on the job, these tasks should be performed together on the test. Tasks that belong together should not be artificially separated for testing purposes.

TESTING OBSERVATION: Contamination

103. Did the same person act as both examiner and instructor?

The person who tests the soldiers to determine if they can perform the tasks should not be the same person who trained the soldiers to perform those tasks.

104. Did the examiner help the soldiers in any way during the test?

During a test the soldiers are supposed to perform the tasks without any help from the examiner. If you see the examiner doing any part of the task that the soldier is supposed to perform, or offering hints, suggestions, or other help, you should make a note describing the kind and amount of help provided. Any hints or prompts or cues (clearing the throat, looking up to "heaven", muttering under the breath, etc.) when soldiers start an action counts as "help" from the examiner.

TESTING OBSERVATION: Contamination (cont)

- *105. Did the examiners apply the standards specified in the training objectives consistently and objectively?

Examiners should score test performance using the standards listed in the training objective. Each examiner should apply these standards in the same way in every instance for every soldier. Standards should not be relaxed because something interfered with test performance or because the examiner "felt" that the soldier could do the task. If soldiers do not perform to standard, they should not be given a GO no matter how close they came to meeting the standard and regardless of the apparent reason for their failure. Describe any instance in which examiners did not apply standards objectively and consistently.

- *106. Did the soldiers receive artificial cues or help during the test?

Soldiers should not receive outside help of any kind on the test. They should be provided only with those materials specified in the conditions statement of the training objectives. They should not be allowed to watch other soldiers being tested prior to taking the test, nor should they be present to help other soldiers with the test after having themselves been tested. During the test the examiner should monitor the test, but only for the purpose of scoring it and providing feedback to the soldiers following the test. The examiner must not give feedback, hints or cues of any kind during the test. Most importantly, the examiner must not do parts of the task for the soldier on the test. Describe any situation in which you saw a soldier receiving outside help during the test.

TESTING OBSERVATION: Feedback

107. Were soldiers told what they did right and wrong on the test?

Following the test, soldiers should be told how they did on each task. If a soldier received a NO-GO on any task, the examiner should tell him which parts of the task he performed correctly and which parts of the task he did wrong. The examiner should show soldiers how to perform those parts of the task they missed and offer suggestions on how the soldiers can improve their performance.

TESTING OBSERVATION: Feedback (cont)

*108. Was feedback given as soon as possible after the test?

Soldiers should be given information on how well they performed (i.e., feedback) as soon as possible after the test. For hands-on tasks that can be scored as they are performed, the feedback should immediately follow the test (If the test consists of several subtasks or tasks, each with its own standard, feedback can be given after each task or subtask). For tests that involve written responses and are administered to a large group of soldiers, time must be allowed to score the test. Even so, the soldiers should receive feedback about their performance as soon as possible.

*109. Was feedback specific to the soldier's actions and free of ridicule?

When the soldier is told about his test performance, the information provided (i.e., feedback) should be specific rather than general and directed toward the soldier's actions rather than toward the soldier personally. The soldier should not just be told that he did something wrong, but should be told exactly what he did wrong. A soldier should never be attacked personally or ridiculed because of poor test performance.

APPENDIX A

SAMPLE TRAINING PLAN WORKSHEET

This appendix shows what the Training Plan Worksheet might look like for a lesson on operator maintenance of the cal. 50 machinegun. The sample worksheet shows the training plan as it would appear when you received it. Given a worksheet like the sample, you would check to see if the equipment and materials listed were used, that the training site was set up as described on the worksheet, and that the safety precautions were emphasized and followed. During training you would record whether or not the events listed in Part III occurred and comment as necessary.

The information on the Sample Training Plan Worksheet is meant for illustrative purposes only. Therefore no claims are made about the completeness or technical accuracy of the information regarding maintenance of the .50 cal machinegun.

WORKSHEET 1, TRAINING PLAN - PART I, EQUIPMENT AND MATERIALS

Class/Lesson Title Operator Maintenance on Cal. 50 M2 HB Machinegun

Training Observer (Your Name)

1. List under the appropriate heading below the training aids, equipment, and materials that will be used during this lesson.

Training Equipment

Training Materials

Training Aids

One .50 Cal. Machinegun per student	TM 9-1005-213-10	
Headspace & Timing Gauge	Handout, "Machinegun M2,	
Five-round belt of dummy ammunition	Cal .50 HB"	

2. List any job aids that will be provided to soldiers and used during this training.

None.

3. From the lesson plan, briefly describe the characteristics required of the training site. Include how the site should be prepared for training.

Training site should be a large classroom with tables for assembly/disassembly. Each Cal .50 M2 HB machinegun should be checked by AI before class to ensure it is operational. Machineguns and all associated equipment to include headspace and timing gauge, dummy ammunition and .50 cal link should be present.

4. List safety precautions that should be emphasized and followed during this training.

(a) Ensure weapon is clear before starting disassembly.

(b) Before removing backplate, ensure that recoiling parts are forward to prevent injury.

(c) If headspace is set improperly or timing is early, the round may fire before fully seating in the chamber causing damage to parts or injury to personnel.

(Attach additional pages as necessary)

WORKSHEET 1, TRAINING PLAN - PART II, TRAINING OBJECTIVES

Class/Lesson Title Operator Maintenance on Cal .50 M2 HB Machinegun

TRAINING OBJECTIVES		
Task No.	Objective	Source
1	<p>Task: Perform operator maintenance on a cal .50 M2 HB machinegun.</p> <p>1A Subtask: Clear the weapon in sequence following procedures on page 3 of the handout.</p> <p>1B Subtask: Disassemble the cal .50 M2 HB machinegun.</p> <p>1C Subtask: Assemble the cal .50 M2 HB machinegun and perform operational check.</p> <p>Conditions: Provided with a cal .50 M2 HB machinegun in a classroom with a table for assembly/disassembly.</p> <p>Standards:</p> <p>(1) Subtask 1A is performed correctly within 10 seconds.</p> <p>(2) Subtask 1B is completed within 4 minutes.</p> <p>(3) Subtask 1C is performed within 6 minutes.</p>	Lesson Plan, Operator Maintenance on cal .50 M2 HB machinegun, May, 1981.
2	<p>Task: Set and check headspace and timing on a cal .50 M2 HB machinegun to ensure proper firing.</p> <p>Conditions: Provided with a cal .50 M2 HB machinegun, headspace and timing gauge, and a cal .50 ammunition link in a classroom.</p> <p>Standards:</p> <p>(1) Check and/or set headspace and timing on the cal .50 M2 machinegun IAW procedures on page 37, paragraph 2, of TM 9-1005-213-10.</p> <p>(2) Task must be completed within 5 minutes.</p>	

WORKSHEET 1, TRAINING PLAN - PART III, TRAINING EVENTS

Class/Lesson Title Operator Maintenance on Cal .50 M2 HB Machinegun

TRAINING EVENTS					
Task No.	Event Type	Events	Occur?		Comments
			Yes	No	
1	OBJ	Instructor states training objective (see Part II).			
1	TERM	Instructor shows .50 cal to the soldiers and labels each part listed below. 1. Butterfly Trigger Safety 2. Barrel 3. Cover Group 4. Charger Handle 5. Barrel Locking Spring Lug 6. Receiver 7. Barrel Extension Group 8. Extension Spring 9. Backplate Assembly 10. Driving Spring Rod Assembly 11. Bolt 12. Bolt Stud 13. Barrel Buffer Body Group 14. Barrel Buffer Assembly 15. Retaining Pin			(Note: TERM may be given during DEMO.)
1	TERM	Instructor identifies the following: 1. Ammunition Belt 2. Extractor 3. Ammunition Box			
1A	DEMO	Clear the cal .50 machinegun.			
1A	PRAC	Clear the cal .50 machinegun.			
1B	DEMO	Disassemble the cal .50 machinegun.			
1B	PRAC	Disassemble cal .50.			

WORKSHEET 1, TRAINING PLAN - PART III, TRAINING EVENTS (CONT)

Class/Lesson Title Operator Maintenance on Cal .50 M2 HB Machinegun

TRAINING EVENTS					
Task No.	Event Type	Events	Occur		Comments
			Yes	No	
1C	DEMO	Assemble cal .50.			
1C	PRAC	Assemble cal .50.			
2	OBJ	Instructor states training objective (see Part II).			
2	TERM	Instructor identifies the following for the soldiers: Trunnion T-slot GO/NO GO Gauge Timing Gauge "No fire" Gauge "Fire Gauge" Timing Adjustment Nut			
2	DEMO	Set and check headspace and timing on cal .50.			
	PRAC	Set and check headspace and timing on cal .50.			
1A	TEST	Clear the .50 cal machinegun.			
1B	TEST	Disassemble the .50 cal.			
1C	TEST	Assemble the .50 cal.			
2	TEST	Set and check headspace and timing on .50 cal.			

APPENDIX B

SAMPLE TRAINING ENVIRONMENT WORKSHEET

This appendix shows a sample of the Training Environment Worksheet. Although the sample worksheet shown is not identical to the worksheet you will use, the worksheet you use will be similar in form to the sample. The worksheet you use will likely have more items, and some of the sample items may not be included. The items included on the actual worksheet will be selected from Table 1 by the training analyst.

Note that each item on the worksheet is numbered. These numbers correspond to the item numbers in Table 1. When you come across an item on the Training Environment Worksheet that you do not understand, you can use the number on the worksheet to quickly locate the item and its explanation in Table 1.

WORKSHEET 2, TRAINING ENVIRONMENT

Class/Lesson Title _____

Training Site _____

Number of Soldiers _____ Date _____

Number of Instructors/AI's _____ Training Observer _____

ENVIRONMENTAL FACTORS	YES	NO	NA	COMMENTS
*1. Were enough instructors present to provide adequate supervision and assistance?				
3. Was the training equipment specified in the lesson plan used in the training?				
*4. Was there enough training equipment to go around?				
*5. Did the training equipment work properly?				
6. Was the equipment necessary for training readily available when needed?				
7. Did each soldier receive a copy of handouts or other materials used?				

Additional Comments: _____

APPENDIX C

SAMPLE TRAINING OBSERVATION WORKSHEET

This appendix shows a sample of the Training Observation Worksheet. Parts I, II, and III of the worksheet are shown. Although the sample worksheet is not identical to the worksheet you will use, the worksheet you use will be similar in form to the sample. The worksheet you use will likely have more items, and some of the sample items may not be included. The training analyst will select the items appearing on the worksheet from Tables 2, 3, and 4. Items included in Part I will come from Table 2, items in Part II from Table 3, and items in Part III from Table 4.

Note that each item on the worksheet is numbered. These numbers correspond to item numbers in Tables 2, 3, and 4. When you come across an item on the Training Observation Worksheet that you do not understand, you can use the number on the worksheet to quickly locate the item and its explanation in Tables 2, 3, or 4.

WORKSHEET 3, TRAINING OBSERVATION - PART I, LECTURE/CONFERENCE

Class/Lesson Title _____

Class Started (Time) _____

Class Ended (Time) _____ Instructor _____

OBSERVATIONS	YES	NO	NA	COMMENTS
*27. Were soldiers told the training objectives including tasks, conditions, and standards?				
29. Were soldiers told how this task fits in with their eventual job duties?				
30. Were soldiers told how this training fits in with previous and future training?				
32. Did the soldiers have a training schedule available to them?				
33. Did the instructor question the soldiers about what they were already supposed to know?				
34. Did the instructor tell the soldiers how the equipment worked and label the parts?				

Additional Comments: _____

WORKSHEET 3, TRAINING OBSERVATION - PART II, DEMONSTRATION AND PRACTICE

Class/Lesson Title _____

OBSERVATIONS	YES	NO	NA	COMMENTS
37. Were the tasks demonstrated by the instructor?				
*38. Was each subtask demonstrated?				
*39. Were demonstrations conducted on the equipment listed in the lesson plan?				
*40. Could demonstrations be seen and heard by all soldiers?				
43. Did all soldiers practice?				
*44. Were soldiers initially allowed to practice subtasks in isolation from one another?				
*45. Was the practice on each subtask hands-on using the equipment listed in the lesson plan?				

Additional Comments: _____

WORKSHEET 3, TRAINING OBSERVATION - PART III, GENERAL OBSERVATIONS

Class/Lesson Title _____

OBSERVATIONS	YES	NO	NA	COMMENTS
*63. Did the instructor follow the lesson plan?				
64. Were audiovisual materials, handouts, manuals or other training aids called for in the lesson plan actually used?				
*68. Were critical discriminations emphasized?				
70. Were soldiers sometimes standing around with nothing to do during training?				
*73. Did the instructor use the training aids effectively?				
*86. Did the instructor use class time efficiently?				

Additional Comments: _____

APPENDIX D

SAMPLE TESTING OBSERVATION WORKSHEET

This appendix shows a sample of the Testing Observation Worksheet. Although the sample worksheet is not identical to the worksheet you will use, the worksheet you use will be similar in form to the sample. The worksheet you use will likely have more items, and some of the sample items may not be included. The items included on the actual worksheet will be selected from Table 5 by the training analyst.

Note that each item on the worksheet is numbered. These numbers correspond to the item numbers in Table 5. When you come across an item on the Testing Observation Worksheet that you do not understand, you can use the number on the worksheet to quickly locate the item and its explanation in Table 5.

WORKSHEET 4, TESTING OBSERVATION

Class/Lesson Title _____ Date _____

Testing Site _____ Examiner _____

Test Started (Time) _____ Test/Retest _____

Test Ended (Time) _____

OBSERVATIONS	YES	NO	NA	COMMENTS
90. Did the examiner read the test instructions directly from the lesson plan?				
*91. Were pass/fail standards provided to the soldiers?				
*94. Did the test occur soon after the completion of training?				
95. Were all tasks specified in the training objectives tested?				
*98. Were the standards specified in the training objectives used to score test performance?				
103. Did the same person act as both examiner and instructor?				

Additional Comments: _____

