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MAINTENANCE PERFORMANCE SYSTEM
GUIDE FOR INDIVIDUAL TECHNICAL TRAINING IN DIRECT SUPPORT UNITS
VOLUME 1: TRAINING METHODOLOGY

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The Maintenance Performance System (MPS) is a computer-based system for gathering and processing maintenance data in direct support maintenance battalions of mechanized and armored divisions. This is Volume 1 of a two-volume guide that is designed to help unit leaders accomplish training and is directed at company commanders, senior supervisors, and first-line supervisors. This guide is meant to supplement, not supercede, other standard training references. This guide is meant for both MPS and non-MPS users.

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TABLE OF CONTENTS

LIST OF FIGURES AND TABLES

CHAPTER 1

INTRODUCTION

PURPOSE OF THIS GUIDE

This is Volume 1 of a two-volume guide that is designed to help unit leaders accomplish technical training. It is directed primarily at such company-level leaders as company commanders, senior supervisors, and first-line supervisors in their roles as training managers and trainers. Battalion training managers such as the S3 will also find much of the material in this guide useful. This guide is meant to supplement, not supersede or replace, other standard training references used by unit leaders (such as FM 25-2, FM 25-3, AR 350-1, Battalion Training Management System (BTMS) documentation, Soldier's Manuals, etc.). It consolidates much of the training information contained in many different documents and presents it in a more usable form. This guide does not present a new training method so much as a strategy for using existing Army training approaches and resources. The guide assumes that the reader is generally familiar with Army training doctrine, philosophy, training methodology, and resources. Given these, the guide will help the reader put the pieces together to do effective technical training in his unit.

The Maintenance Performance System (MPS) is a computer-based system for gathering and processing maintenance data in direct support maintenance battalions of mechanized and armored divisions. The processed information is provided to unit maintenance managers and trainers to help them make management and training decisions. This guide was written for units both with and without the MPS. It presents a strategy for unit-level technical training that applies equally to MPS and non-MPS units.

This guide was written because technical training has increasingly become a unit responsibility. Unit leaders cannot expect the training pipeline to provide soldiers who are fully qualified in technical MOS's. Graduates of AIT courses have received training on the basic common skills and knowledges of their MOS and in a small percentage of the technical tasks. That training prepares them for repair tasks at what is normally considered to be the "apprentice" level. The Army

estimates that the new AIT graduate has received "hands-on" training on about 15 percent of the technical tasks of his MOS. Obviously, more training is needed before the soldier is fully qualified to perform his job. Unit leaders are responsible for reinforcing the skill and knowledge training and for providing training on the remaining technical tasks.

OBJECTIVES OF THIS GUIDE

This guide is designed to achieve the following objectives:

- To define the roles and responsibilities of unit-level training managers and trainers.

- To provide a strategy to accomplish unit individual technical training goals.

- To help trainers identify and assign priorities to technical training objectives.

- To provide guidance for identifying the best training approaches to meet training objectives.

- To provide detailed task, key step, and training materials information for skill levels one and two in MOS's 31E, 41C, 44B, 45B, 45K, 45L, 52D, 63G, 63H, and 63W.

- To describe planning requirements for individual technical training.

- To describe technical training evaluation requirements and guidelines.

HOW THIS GUIDE IS ORGANIZED

Most of this guide is devoted to explaining the steps in the Unit Training Strategy (UTS) and the specific things that trainers and training managers must do to make it work in their units. The guide is presented in two volumes:

- Volume 1:   Training Methodology

- Volume 2:   Training Reference Information.

Volume 1 explains the UTS and how to apply it. Volume 2 contains reference information that supports the UTS.

Both Volumes 1 and 2 of this guide apply to you, whether or not you have the MPS. If you do not have it, you can still apply the UTS. Skip chapter sections that have "MPS" in their titles. Substitute your judgment for MPS computer printouts. If you do have the MPS, then do not skip anything in the guide. Everything applies,

including the manual records. The MPS will help you determine training objectives and their priorities accurately and painlessly. But since the MPS is designed to be part of the larger Army training system, it will not operate on its own. You must still maintain manual records on training.

TRAINING MANAGERS AND TRAINERS

The key company-level trainer is the senior supervisor. Senior supervisors are the senior enlisted personnel in each of the five maintenance sections. They are the automotive repair foreman, armament maintenance foreman, field radio repair supervisor, generator equipment repair foreman, and service and recovery section chief. The senior supervisor is the kingpin of unit-level technical training. He has the broadest range of training responsibilities, and the most difficult job to perform. He is responsible for the work his section performs, as well as for training his personnel. He must be a good maintenance manager, able to coordinate his work force, program jobs through his shop, assure adequate quality control, and see that jobs are done on time. His training responsibilities are similar to his maintenance responsibilities. He must program training, just as he programs maintenance. He must assign certain people to conduct training, and others to receive it. He must keep track of training and assure that it occurs according to his plan. And he must assure that training quality is high. He must coordinate with the training manager in designing and carrying out training. The training manager will set training policy, but the trainer must turn policy into practical training programs that will improve the performance of shop personnel.

The key training manager is the company commander. Within the overall training policy set by the battalion commander, the company commander collaborates with the trainer to set goals for individual technical training. The training manager will not be able to spend as much time at training locations as will the trainer. But he must arrange to make periodic visits to give command emphasis to training. The training manager also has substantial responsibilities in the area of evaluation (described in Chapter 8 of this guide). If the trainer is the kingpin of training, then the training manager may be thought of as the prime mover: the training manager must allocate resources and motivate personnel to make training happen.

1-3

Other personnel are involved in training in supporting roles. The battalion S3 is a source of training information and materials that can be tapped by the training manager/trainer. Platoon leaders and sergeants support training by coordinating personnel and making them available for training. First-line supervisors will conduct about 80 percent of individual technical training. Technical experts such as maintenance technicians will frequently be called upon to conduct training on difficult or critical job tasks. The battalion commander has ultimate responsibility for everything that happens in his battalion, including training. But he will seldom have time to attend to details of training. However, it is important that he support technical training by monitoring training events and by making spot checks to assure high quality.

Although many personnel may be involved in unit-level individual technical training, this training will succeed or fail because of the efforts of the trainer and training manager. These key personnel can call upon others for help, but the planning and conduct of training is their responsibility. This guide is designed to help them carry out those very important responsibilities.

NOTE TO READERS WITH THE MPS

This guide is one of four guides that have been prepared to support the MPS. The remaining three guides are:

User's Reference Manual — describes MPS features, operation, inputs, outputs, and calculations. A basic document that applies to all MPS users—system operators, maintenance managers, training managers, and trainers.

Operator's Manual — describes methods and procedures for MPS operators to operate and maintain the MPS, including data collection, data entry, quality control, and report generation.

Interpretation Booklet — summarizes report interpretation information contained in the Reference Manual. Applies to maintenance managers and trainers.

CHAPTER 2

OVERVIEW OF THE UNIT TRAINING STRATEGY

OVERVIEW

This guide describes a strategy for planning, conducting, and managing unit-level individual technical training that is referred to as the Unit Training Strategy (UTS). The method does not require new training or management skills.

The Unit Training Strategy consists of six steps:

1. Establish and maintain records.
2. Identify training objectives.
3. Set training priorities.
4. Select training approaches.
5. Plan and conduct training.
6. Evaluate training.

These six steps are illustrated in Figure 2-1. Note that an arrow extends from Step 6 back to Step 1. This represents the "feedback" path. The six steps form a cycle, with the last step always returning to the first. The steps are inter-related. Each one affects the next.

The UTS starts with Step 1 (establish and maintain records). The records that must be established and maintained for the UTS to work are those that reflect soldier experience, training, and skill. Manual records such as the Job Book must be maintained. Units with MPS will also automatically maintain computerized records.

Step 2 (identify training objectives) makes use of the training records maintained in Step 1. Training objectives are derived from the job tasks that must be covered by unit individual technical training. Records are analyzed by training managers and trainers who use their judgment to identify training objectives. Training objectives are generated for tasks on which soldiers need additional skill.

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        ┌─────────────────┐
        │ 1.  Establish and│
   ┌───▶│     Maintain     │
   │    │     Records      │
   │    └─────────────────┘
   │             │
   │             ▼
   │    ┌─────────────────┐
   │    │ 2.    Identify   │
   │    │      Training    │
   │    │     Objectives   │
   │    └─────────────────┘
   │             │
   │             ▼
   │    ┌─────────────────┐
   │    │ 3.      Set      │
   │    │      Training    │
   │    │     Priorities   │
   │    └─────────────────┘
   │             │
   │             ▼
   │    ┌─────────────────┐
   │    │ 4.     Select    │
   │    │      Training    │
   │    │     Approaches   │
   │    └─────────────────┘
   │             │
   │             ▼
   │    ┌─────────────────┐
   │    │ 5.    Plan and   │
   │    │      Conduct     │
   │    │      Training     │
   │    └─────────────────┘
   │             │
   │             ▼
   │    ┌─────────────────┐
   │    │ 6.    Evaluate   │
   │    │      Training    │
   │    └─────────────────┘
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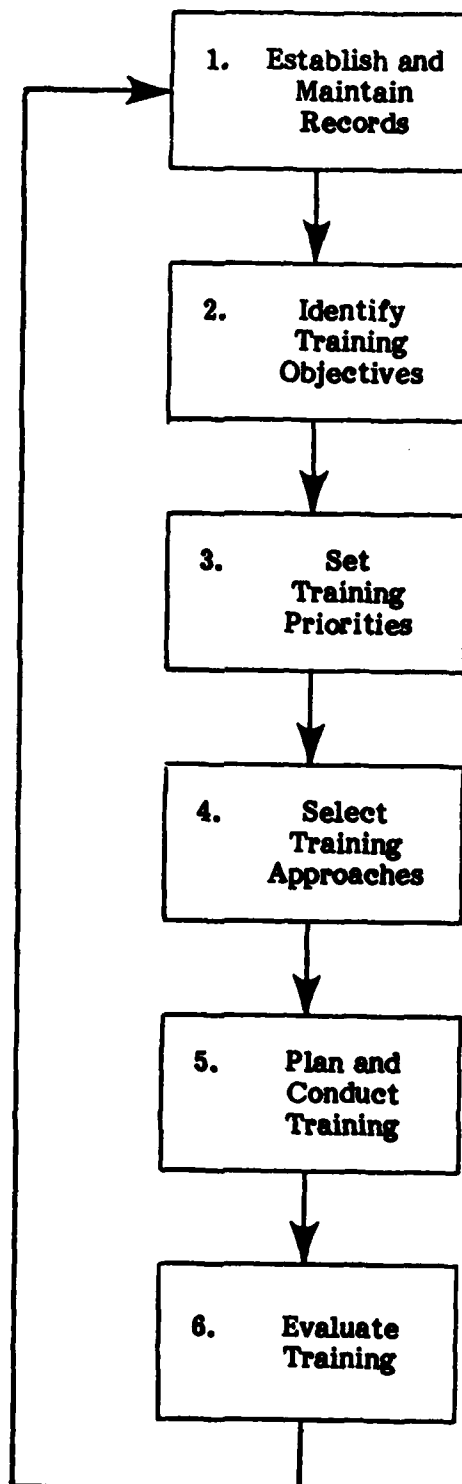
Figure 2-1. The Six Steps of the Unit Training Strategy.

Step 3 (set training priorities) contains procedures to determine which training objectives are most and least important. The most important training objectives have the highest priority and must be met first. Lower-priority training objectives may be met later.

Step 4 (select training approaches) is performed for each logical combination of training objectives. Training approaches are determined from an assessment of training objective, unit, and resource factors.

In Step 5 (plan and conduct training) a training plan is developed and carried out. The plan covers such training details as scheduling, training approaches, and resources. The plan governs which training resources are allocated and how training is conducted.

Step 6 (evaluate training) occurs during and after training. Both the training program and its effects upon maintenance are evaluated.

After evaluation, the procedure returns to Step 1. Records must be updated to reflect the additional training and experience that trainees have gained. As each training objective is met, training records are updated. This affects the records; when Step 2 is performed again, new training objectives will emerge.

FEATURES OF THE UNIT TRAINING STRATEGY

The UTS Focuses on Technical Skill Training

The UTS is a general strategy for determining training objectives, planning training, and evaluating results. As such, it could be applied to many different types of training. However, as presented in this guide, the UTS is concerned only with technical training and not with improving basic common skills.

The UTS Focuses on Individual Training

Individual training is training that prepares the individual to perform specified duties and tasks related to his assigned MOS or duty position. Collective training is training that prepares groups of individuals (crews, teams, squads, platoons) to accomplish tasks required of the group as an entity. The UTS is only concerned with individual training. It is not concerned with collective training.

The UTS Uses All Available Training Approaches and Resources

The UTS will make use of every available and appropriate training approach. No particular approaches are preferred to others. However, the UTS does provide guidelines for selecting the most effective training approaches for a given set of circumstances. The UTS uses the training framework contained in FM 25-2 (**How to Manage Training**), tailored to the unique requirements of direct support units. For example, Step 2 of the UTS (identify training objectives) corresponds to the setting of training goals and objectives as described in Chapter 4 of FM 25-2. Step 5 (plan and conduct training) of the UTS describes topics that are covered in greater depth in Chapters 5-8 of FM 25-2. Step 6 (evaluate training) of the UTS corresponds to topics that are discussed in Chapters 2, 3, and 10 of FM 25-2. Unit Training Strategy Steps 1, (Establish and Maintain Records), 3 (Set Training Priorities), and 4 (Select Training Approaches) are implied in FM 25-2 although not described explicitly in that publication.

The UTS is Designed With Unit Training Constraints in Mind

The many constraints on unit training sometimes prevent individual technical training from occurring at all. However, the UTS will consider these constraints and permit you to develop and conduct training tailored to unique conditions in your unit.

The UTS is Performance Oriented

The Army is committed to performance-oriented training and testing as defined in Army Regulation 350-1. This is not a particular training approach. It is a philosophy of training that can influence any training approach. The overall idea of performance-oriented training is that the soldier should practice what he is trained on by actually doing it. After training, he is expected to demonstrate his skill by performance and mastery of a task. This is clearly preferable to "learning" something without ever getting "hands on" experience.

The UTS Uses a Simple, Common-sense Approach

The UTS is simple and requires no special background or familiarity with sophisticated training techniques. It requires mainly common sense, accurate record keeping, and a willingness to train.

Each of the chapters that follows covers one step of the UTS in detail. Note that you have considerable flexibility in applying this strategy. Read each chapter closely and identify the specific tasks that you are responsible for and must perform. Then review the Training Checklist at the end of the chapter--this will help organize your thinking and planning.

CHAPTER 3

STEP ONE: ESTABLISH AND MAINTAIN RECORDS

This chapter covers three types of records. Job books are discussed first, followed by MPS records. The Trainer's Notebook is introduced and described in the latter part of the chapter. The final section of this chapter contains a Training Checklist that identifies key action items for training managers and trainers.

GENERAL

Establishing Records

The Unit Training Strategy (UTS) is largely record-driven. If records are not properly maintained, then the strategy will not work. These records are one of the major sources of information for determining training objectives. Records such as Job Books and certain MPS records (described below) must be kept up to date. In addition, trainers should maintain a Trainer's Notebook (described in detail later) for their own use in planning and conducting training.

Records must be established before they can be maintained. If Job Books are not used in a unit, for example, then the time to start doing so is now. When the UTS is introduced into a unit, new records must be established. Trainers who are starting to use the UTS for the first time must establish a Trainer's Notebook. Personnel who must establish records, and provide recorded information, are often unenthusiastic about more paperwork. But once records are established, the UTS will run more smoothly.

Training managers and trainers play important roles in establishing and maintaining records. The training manager and trainer must work together and conscientiously monitor events that call for establishing new records. When a new soldier enters the unit, for example, a Job Book must be initiated, the Trainer's Notebook must be updated, and, if the unit has the MPS, the soldier must be added to the MPS personnel roster and an MPS-6 form (Task Experience History) must be completed.

Maintaining Records

Once records are established, they must be maintained. The trainer is in a good position to judge how well records are being maintained. He is directly responsible for maintaining Job Books on his subordinates. He must also assure that Job Books maintained by his subordinates are kept up to date. The trainer must keep his Trainer's Notebook up to date. If his unit has the MPS, then he must monitor the MPS reports to assure that MPS record keeping is accurate. When MPS reports show data that appear inaccurate or unusual, then poor MPS record keeping may be the cause. The trainer must investigate further by determining if the data producing those results were both accurate and correctly entered into the computer. The training manager is primarily dependent on the trainer to monitor record keeping. However, he must periodically spot check records to assure that the trainer is conducting record checks.

Training objectives can be determined without using records, but not very accurately. Without records, the objectives will be subjective, with no factual data base. Properly maintained records are the most reliable basis for determining training objectives.

JOB BOOKS

The Job Book lists all common and duty position critical tasks at skill levels one and two and is based on the Skill Level One/Two Soldier's Manual. There is (or eventually will be) a Job Book for every MOS. The Job Book is divided into two sections, one for each skill level. Each section lists relevant common tasks and technical tasks. The Job Book is intended to help supervisors record and track individual repairman proficiency on critical MOS tasks. Every first-line supervisor is required to establish and maintain a Job Book for each soldier he supervises in paygrade one or two (E1-E5).

How to Maintain Job Books

Trainers should establish and maintain Job Books on their subordinates. Trainers may supervise first-line supervisors who, in turn, should maintain Job Books on their subordinates. When a soldier is transferred, determine from the

commander what should be done with his Job Book--whether to give it to the soldier or his new supervisor, or to destroy it. If the soldier's supervisor is transferred, then the Job Book should be given to the new supervisor.

Typically, maintenance of Job Books is given low priority. The trainer must therefore assure that entries are made consistently. Assure that you and any first-line supervisors who work for you take Job Books seriously. You need not hold an inspection every day, or even every week for that matter, but do inspect regularly.

When the soldier demonstrates task performance, the supervisor evaluates performance by standards cited in the Soldier's Manual. The supervisor records results in the Job Book. He writes his initials in GO or NO-GO column, as appropriate, and enters the date. In general, update Job Books whenever any of the following events occurs:

1. After training, to reflect increased skills that have been gained through training.

2. After taking the SQT or other performance test, to reflect test results.

3. After observing a soldier on the job, when he has demonstrated mastery of new skills.

The supervisor should have quick access to Job Books and should make entries immediately after observing any of the above events. If this is impractical, then the Job Book should be updated soon after the event--in no case more than one day afterward.

The Job Book may be thought of as a manually maintained "profile" of soldier skill. It shows what tasks each soldier has mastered (GO's) and what tasks he needs more training on (NO-GO's). To prepare training objectives, training managers and trainers need to know what tasks their personnel do not do well. Tasks on which many soldiers have NO-GO's in their Job Books are good training objective candidates. The Job Book, therefore, fulfills a purpose in addition to its basic function of maintaining proficiency records--it helps define training objectives.

When a new soldier joins a unit without a Job Book, you must establish one for him. Interview him and have him identify the tasks on which he is sufficiently skilled to receive a Job Book GO. Observe him on the job. Give him opportunities

to demonstrate his proficiency. It is important to get the Job Book started and brought up to date as quickly as possible. You will need the Job Book information later, when you identify training objectives. Trainers who have the MPS must also have the soldier complete an MPS-6 (Task Experience History) to "initialize" the soldier's skill profile in the MPS data base. In units without the MPS, it is all the more important that the Job Books be established and brought up to date quickly because there is no automated system to fall back on.

MPS RECORDS

Overview

The MPS generates 58 reports. These include a set of interpretation comments, a roster, and nine different types of tables. Eight of these nine tables are subdivided into different versions to give full MOS coverage. You will receive copies of reports for those MOS's with which you are concerned. You will also receive a copy of the interpretation comments. Tables 1, 2, 3, 4, and 5 are maintenance management reports. These reports do not directly relate to training.

Tables 6, 7, 8, and 9 are training reports. These reports are generated every six weeks and are distributed to training managers and trainers. This guide is concerned only with Tables 6 through 9.

The various MPS reports and MPS forms are described in detail in the User's Reference Manual. The discussion that follows assumes that you have reviewed that manual and are familiar with MPS forms and reports. If you are not, then review the Reference Manual before proceeding.

Relationships Among MPS Reports and MPS Forms

The MPS computer generates reports based on data that have been entered from MPS forms by the system operator. These reports directly reflect the accuracy and completeness of his data entries. If you and other system users do not complete the required MPS forms, then the computer cannot generate complete and accurate reports. Therefore, it is mandatory for system success that you fill out appropriate MPS forms according to proper procedures and submit them

on time. If required procedures are not followed, training reports will be inaccurate and lead training managers and trainers to the wrong conclusions. Just as you must assure that Job Books are properly maintained, you must also assure that MPS forms that influence training reports are completed accurately and are submitted on time.

Table 3-1 shows the relationships among MPS forms and MPS training reports. MPS Table 6, for example, is generated based on MPS forms 2, 4, 5, and 6. If any one of these forms is improperly maintained, then MPS Table 6 will be affected. You can see by examining Table 3-1 that these four MPS forms affect all training reports. In addition, Table 9 is also influenced by MPS forms 7 and 9.

TABLE 3-1
RELATIONSHIP BETWEEN MPS FORMS AND MPS TRAINING REPORTS

MPS TABLE NUMBER	MPS FORM NUMBER								
	1	2	3	4	5	6	7	8	9
6		X		X	X	X			
7		X		X	X	X			
8		X		X	X	X			
9		X		X	X	X	X		X

How to Check MPS Record Keeping

Both training manager and trainer want accurate MPS reports. The training manager/trainer must monitor MPS reports closely and be alert for indications that the reports are inaccurate. If such signs exist, then corrective action must be taken. Table 3-1 can be useful in identifying the source of the problem. For example, suppose that you have obtained an MPS Table 6 that contains information that you suspect is incorrect. What is the next step? Refer to Table 3-1. Table 3-1 shows that MPS Table 6 is affected by MPS Forms 2, 4, 5, and 6. If the MPS

table is inaccurate, then one of these forms is the cause. The trainer is responsible for providing the MPS-5. The first-line supervisor is responsible for the MPS-2. The MPS system operator is responsible for obtaining the MPS-4 and MPS-6, the latter with your cooperation. Which of these forms may be causing the inaccurate Table 6 requires investigation, and perhaps discussion with the MPS operator.

Investigate and take action when you get inaccurate reports. Inaccurate reports may be caused by inaccurate data submissions, incomplete data submissions, or data entry errors. Be alert to obvious signs of report errors such as:

- Inaccurate MPS roster—still listing soldiers who have left the unit, and not listing new soldiers who have come in. (Indicates system operator has not been maintaining MPS-4—Roster Update accurately.)

- "N" opposite soldier's name on roster. (Indicates that MPS-6—Task Experience History—has not been entered into computer. Either the soldier has not yet completed the form, or the MPS operator has not yet entered it.)

- Low skill or growth indexes on Table 6. (Indicates that MPS-2's (Job Performance) and MPS-5's (Training/Performance Demonstration) are not being maintained and/or entered into the computer.)

- Table 8—if you are receiving Table 8's for soldiers who have left the unit, and not receiving them for new soldiers who have come in, then the MPS operator is not maintaining the roster.

- Table 9—it is difficult to evaluate the accuracy of Table 9 by itself because the way the computer generates it is fairly complex. In general, if you are satisfied with the accuracy of the roster and of Tables 6 through 8, then trust the accuracy of Table 9.

More detailed information on these tables is contained in the User's Reference Manual. Refer to that source for information on data interpretation and on the underlying data sources for each table. Discuss any questions that you have with the system operator.

The usefulness of MPS training reports will depend heavily on your participation. You must check these reports and assure that personnel provide accurate data inputs. The training manager also must periodically make checks on the training data inputs and outputs of MPS. The training-related data input requirements are summarized below and covered in greater detail in Appendix A of this guide.

MPS-5 (Training/Performance Demonstration) — The senior supervisor is responsible for generating an MPS-5 each time a training or testing event occurs. The MPS-5 may be completed by a first-line supervisor or the senior supervisor. It is checked and submitted by the senior supervisor. It must be submitted within 48 hours of the training or testing event.

MPS-7 (Special Priority Flag) — The MPS-7 is the responsibility of the training manager and trainer. The MPS-7 is completed, checked, and submitted by the training manager and trainer. It must be submitted and entered prior to report generation. Together, manager and trainer determine which tasks have special (S—highest possible) priority for the unit, and which tasks have "null" (N—lowest possible) priority. Special and null priority flags can be attached to tasks, using the MPS-7. (Procedure is described in in Appendix A.) Failure to use the MPS-7 does not affect report accuracy, but does affect the amount of information presented.

MPS-9 (Training Requirement Priority Threshold) — The MPS-9 is completed by the training manager and trainer. It must be submitted and entered prior to report generation. The MPS-9 affects only Table 9. It does not affect the accuracy of information on Table 9, but does affect the amount of information. If the threshold is set at 1, then only tasks that personnel have done that many times or a fewer number of times will appear on Table 9. The larger the priority number is set, the more training requirements will appear on Table 9. (MPS-9 procedures are covered in Appendix A.)

TRAINER'S NOTEBOOK

Every unit trainer should maintain a Trainer's Notebook for each MOS he is responsible for. This notebook is used to organize the information he needs to design, plan, conduct, and evaluate training. The notebook should be maintained in a three-ring binder, preferably with dividers. The notebook is arranged as follows:

Section 1: Roster of personnel in MOS

Section 2: List of training objectives

Section 3: Training plan

Section 4: Observer's log

Section 5: Working notes

Section 6: Copy of current and next-most-recent MPS printouts of Tables 6, 7, 8, 9, and 3 (if unit has MPS)

Section 7: Evaluation notes

The various parts of the Trainer's Notebook are described in greater detail in the chapters that follow. If you are reading this chapter for the first time, obtain a two-inch, three-ring binder and name dividers for the sections identified above. The chapters that follow will help you prepare and use the notebook.

TRAINING CHECKLIST

STEP ONE: ESTABLISH AND MAINTAIN RECORDS

This checklist will help trainers and training managers identify the specific tasks they must perform to accomplish this step of the Unit Training Strategy. The trainer is responsible for performing these tasks, unless otherwise indicated. Training managers are responsible for periodically spot-checking to assure that these tasks are being performed adequately. Training managers are also responsible for coordinating with trainers, as indicated below, and for providing the resources trainers will need to take the actions specified.

JOB BOOKS

- Establish Job Books for all personnel you supervise in pay grades E1-E5.

- Establish Job Books as new soldiers come under your supervision.

- If you are transferred, or change jobs, give Job Books to your replacement.

- When a soldier leaves the unit, give his Job Book to him or to his new supervisor, as directed by your commander.

- Update Job Books whenever any of the following events occurs:
    1. After training, to reflect increased skills that have been gained through training.
    2. After taking the SQT or other performance test, to reflect test results.
    3. After observing a soldier on the job, when he has demonstrated mastery of new skills.

- Periodically spot check Job Books maintained by your subordinates to assure they are kept up to date.

MPS RECORDS

- Assure that MPS-2 (Job Performance) form is completed and submitted to MPS operator for each MPS task performed by your section.

- Check MPS roster every two weeks to assure that it is up to date for the MOS's you supervise (that it lists all new soldiers and does not list soldiers who have departed); if not up to date, check with MPS operator.

- Complete MPS-5 (Training/Performance Demonstration) each time a training or testing event occurs. Refer to Volume 1, Appendix A, for details.

- Assure that MPS-6 (Task Experience History) is completed by each new soldier. MPS operator should request this history. If he does not, then initiate action. ("N" will appear opposite soldier's name on roster if MPS-6 has not been completed.)

- Complete MPS-7 (Special Priority Flag) for tasks that you and training manager want to assign special or null priorities to. Refer to Volume 1, Appendix A, for details.

- Complete MPS-9 (Training Requirement Priority Threshold) to increase or decrease the number of training requirements appearing on Table 9. Refer to Volume 1, Appendix A, for details.

- Check each set of training reports (Tables 6-9) for accuracy:

    1. Review skill and growth indexes on Tables 6 and 7.

    2. Assure that you are receiving Table 8's for all soldiers you supervise, and none for those who have left.

    3. Review Table 9 accuracy through Tables 6-8—if Tables 6-8 are accurate, then Table 9 will be accurate.

TRAINER'S NOTEBOOK

- Establish a Trainer's Notebook for each MOS that you supervise.

- Use a two-inch, three-ring binder with dividers for the following sections:

    Section 1:   Roster of personnel in MOS.

    Section 2:   List of training objectives.

    Section 3:   Training plan.

    Section 4:   Observer's log.

    Section 5:   Working notes.

    Section 6:   Copy of current and next-most-recent MPS printouts of Tables 6, 7, 8, 9, and 3 (if unit has MPS).

    Section 7:   Evaluation notes

- Maintain notebook according to procedures given in Chapters 4-8 of Volume 1.

CHAPTER 4

STEP TWO: IDENTIFY TRAINING OBJECTIVES

GENERAL

This chapter describes the procedure for determining training objectives within the framework of the Unit Training Strategy. Training objectives are the foundation of unit-level training. For purposes of the UTS, a training objective is derived from a task upon which personnel in a given MOS lack proficiency and thus need training. One of the trainer's most important responsibilities is to identify training objectives. The trainer should use available information to perform an analysis of the skills of his soldiers and determine the tasks on which training is most needed. The tasks identified lead to training objectives.

The trainer will eventually conduct training based upon his list of training objectives. To each **task** statement, he must add **conditions** and **standards** statements. The conditions statement describes the conditions under which the task must be performed (physical location, tools provided, etc.). The standards statement describes the level of proficiency that must be demonstrated at the conclusion of training, usually in terms of accuracy and speed. Soldier's Manuals contain conditions and standards statements for each Soldier's Manual task, and the trainer can use these directly. However, he may have to develop statements for non-Soldier's Manual tasks on which he wants to conduct training. The UTS does not cover the development of conditions and standards statements, as this is a fairly complex subject that is adequately covered in a number of other Army documents. For a more detailed discussion of training objectives, readers should refer to FM 25-2, Chapter 4; and to the BTMS Training Management Workshop discussions of training objectives and training status determination. Unit-level individual technical training can only occur within the limits set by the battalion and company commanders. They must select and prioritize the missions to train, as described in the BTMS Workshops. Within these limits, unit personnel responsible for the actual conduct of training operate.

The Soldier's Manual is the basic reference that defines the critical tasks each soldier is responsible for in his MOS. In the unit, the soldier will perform some tasks frequently, some rarely, and some never. In addition, he is likely to perform a number of tasks that are not listed in the Soldier's Manual. The trainer's job is to develop a list of training objectives that includes Soldier's Manual tasks as well as tasks unique to the unit. If the unit has the MPS, then that will cover most of the critical and important tasks that are regularly performed in typical forward support units.

The trainer must become thoroughly familiar with all of the tasks performed by the MOS's he supervises. He will need this knowledge as he gathers information to determine training objectives for the MOS. The training manager must assure that this process occurs by periodically meeting with the trainer and by making spot checks to assure that data are being systematically gathered and analyzed.

The procedure for identifying training objectives consists of a sequence of related steps, as follows:

- Become familiar with the lists of technical tasks that you must train your soldiers to perform.
- Observe shop operations and gather information.
- Talk to supervisors, maintenance experts, and soldiers to determine the tasks that most of them agree training is needed on.
- Analyze records such as Job Books and compile information to determine where skill deficiencies lie.
- If you have the MPS, study MPS Table 9 and use it to help you decide what tasks to train on.

After going through this process, you will have a good idea of skill deficiencies, what the training objectives are, and where training should start.

INFORMAL ANALYSES

Get to Know the Task Lists

Each MOS has three relevant task lists: (1) Soldier's Manual technical tasks, (2) MPS Table 9 tasks list, and (3) technical tasks unique to your unit. If your unit does not have the MPS, then you need only be concerned with Soldier's Manual and

unit-unique tasks. The list of Soldier's Manual tasks is far more lengthy than that contained in any MPS Table 9. Most MPS task lists contain around 40 tasks. You will quickly become familiar with these as you review MPS reports. However, you may have to make a special effort to familiarize yourself with the more lengthy lists of tasks in Soldier's Manuals. MPS Table 9 tasks are not a replacement for those in Soldier's Manuals. MPS tasks are based on Soldier's Manual tasks, but the MPS does not include all Soldier's Manual tasks. It covers only those for important tasks that are commonly performed in typical forward support units. The training manager or trainer in an MPS unit cannot therefore rely upon the MPS alone to determine his training objectives.

Review Soldier's Manuals for the MOS's that you supervise. Study the technical tasks. Relate these tasks to work done in your shop. Determine which tasks are performed frequently, rarely, and never. As you perform this review, make a judgment of the proficiency of your soldiers on each of the tasks. Try to rank tasks according to whether your soldiers are highly proficient on them, somewhat proficient, or completely lacking in proficiency. If you have first-line supervisors as subordinates, assure that they also go through this familiarization process. Every first-line and senior supervisor should know the Soldier's Manual tasks. He should also have a good idea of the proficiency of his subordinates on each task. Senior supervisors should be able to ask a first-line supervisor what their soldiers' level of proficiency on Soldier's Manual tasks is and get an informed answer. Training managers should also periodically ask such questions.

Section 5 of your Trainer's Notebook (Working Notes) is for making notes. Use it to log your personal observations and any thoughts that occur to you in the course of developing training objectives. Use it, for example, to note tasks described in a Soldier's Manual. Then rank the tasks according to how often they are performed in your unit and how proficient your personnel are in task performance. These notes will be useful as you develop your training objectives.

Use Personal Observation

If evidence shows that many soldiers lack proficiency on a task, that task becomes a training objective. As a training manager or trainer, you have often

identified training objectives. You may, for example have observed a soldier doing a job poorly. Perhaps he did not follow proper procedures, made errors, did not use a technical manual, used improper tools, took too long, or damaged a part. You observed one or more of these indicators and decided to do something. Perhaps you stepped in and corrected the error, or you may have assigned someone else to do it. But in taking these actions, you identified training objectives and acted on them. That procedure is a part of the UTS—using personal observation.

You receive information on a daily basis, in one form or another, on the training objectives for your subordinates. When you are out in the shop supervising or observing repairmen do their jobs, you judge whether or not they do them properly. When a supervisor reports to you that PFC Klutz does not do his job properly, or cannot be assigned a particular task because he lacks ability, you are receiving information on training objectives. When jobs take too long to do, are rejected at final inspection, or are refused acceptance by customer units because repairs have not been properly done, you are receiving another kind of information on training objectives. To capitalize on these events, all you need to do is note them, perhaps a little more conscientiously than you have in the past. When they occur, do the following:

- Recognize that you are getting information on training objectives.
- Record the information in your Trainer's Notebook.

Use your Trainer's Notebook to keep track of training-related events that occur in your shop. Write down those things that signify that training objectives exist. List tasks and personnel involved. If you have an average work flow in your shop, you should probably be recording two or three observations per day. You will probably observe indications of training objectives at least this often. Keep track of this information and it will save work later on. It is easier to consult a log than to remember events that happened days ago.

Make up a Preliminary List

You must make up a preliminary list of training objectives (tasks) over a period of about a week. You begin to compile this list by observing soldiers on the job and noting tasks that they do not perform proficiently. Additionally, ask

soldiers what tasks they find most difficult to perform. You will gain insight and may find that repairmen see their strengths and weaknesses somewhat differently from you and other leaders. Talk to first-line supervisors and get their opinions. As you collect information, do **not** limit the number of tasks you write down. Do **not** attempt to order tasks in terms of importance. When you finish this process, you should have a composite, unranked list of tasks for each MOS. Your next step is to expand and modify your preliminary list. When you have made up your preliminary list, put it in Section 5 of your Trainer's Notebook (Working Notes). Keep it there for future reference. You will use that list to help develop a final list of training objectives. You will also need it in the future, when you revise your list of training objectives (this will be done at least quarterly).

FORMAL ANALYSES

Analyze Manual Records

Job Books — Well-maintained Job Books contain useful training information. A Job Book that is complete and up to date is essentially a record of a soldier's proficiency on his MOS tasks. The NO-GO's show areas of weakness. From all of the Job Books, you can "profile" the level of proficiency of an entire MOS. You can count up the NO-GO's for each task and use this to decide what tasks to train on. Use the procedure described below to do this analysis. If you are the first-line supervisor, review the Job Books and do the analysis yourself. Otherwise, direct first-line supervisors to review the Job Books and provide NO-GO summaries to you for compilation.

Compile Job Book information — A convenient way to compile Job Book information is to use a matrix (see Figure 4-1). This matrix is derived from a TEC Lesson Management Form that has been modified for summarizing Job Book information. If you do not have one, make up your own matrix. The form is used to show the number of GO and NO-GO soldiers by task. Use this form, or something similar, to compile the Job Book information that you and your first-line supervisors obtain.

MOS Tasks

PLATOON,_____ COMPANY/ BATTERY/ TROOP/_____

DUTY POSITION	NAME & RANK	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
45K	Adams, E3	+		+			+		+	+					+			+
45K	Edwards, E4	+	+	+		+	+		+	+	+		+	+	+	+	+	+
45K	Hobbs, E2								+						+			+
45K	Long, E4	+		+			+	+	+				+	+	+		+	+
45K	Roberts, E2								+						+			+
45K	Thomas, E3	+		+			+		+						+			+
Total NO-GO's		3	5	2	3	5	2	5	3	0	4	6	4	0	5	4	0	0

+ = Go Status

Figure 4-1. TBC Lesson Management Form.

Substitute Soldier's Manual task numbers for TEC lesson numbers across the top of the form. List names down the side. Go through the Job Books or task summaries your supervisors have given you. Post the GO or NO-GO status for each soldier under the SM task number. When you finish, count the number of NO-GO's for each task. If there are many NO-GO's, then the task is a training objective. If there are no NO-GO's, then the task is not a training objective. In between, use your judgment. The number of NO-GO's reflects task **priority** as a training objective. (Priority will be discussed in greater detail in Chapter 5.) Put the NO-GO summary in Section 5 of your Trainer's Notebook (Working Notes) for safe-keeping. You will use it later.

Review SQT results — The SQT is designed to be an indicator of training needs. The individual soldier receives immediate feedback during the hands-on portion of the SQT. Results of the written component arrive 30 days later, where local scoring is available. Training managers and trainers will receive SQT result summaries from the Army Training Support Center to show how well their soldiers performed each SQT task.

However, SQT's are only given once per year, not every MOS can be tested, and only a few Soldier's Manual tasks are selected for testing. The Job Book still remains the most complete and readily available source of training information. Moreover, it is available on a continuing basis, not just once per year.

Review MPS Table 9

MPS Table 9 (Training Requirements Summary) is the most important MPS report for determining training objectives. An example of Table 9 is shown in Figure 4-2. If you assure that MPS records are properly maintained, Table 9 will help you determine training objectives. The table has four columns: PRIORITY, NAMES, EQUIPMENT/TASKS, and TRNG REF #. Priority will be discussed in Chapter 5. The remaining table information is covered below.

The EQUIPMENT/TASKS column lists equipment type (or task type, for MOS 44B) and, beneath this, tasks that are training objectives. Every MOS holder works on several equipments, and so Table 9 is subdivided into different equipment categories. Training objectives are listed beneath each equipment/task heading. A

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TABLE 9 (63H/W): TRAINING REQUIREMENTS SUMMARY

THRESHOLD: 2

REPORTING PERIOD ENDING: 0284 (10 OCT 80)

PRIO-RITY	NAMES	EQUIPMENT/TASKS	TRNG. REF.
		M60 FAMILY	

1	MOOSIE(63H-E5) NORRIS(63W-E2)	2 REPL FUEL INJ NOZZLE	B79/81
1	HARPER(63J-E2) NORRIS(63W-E2)	4 REPL FUEL TANK	B79/81
1	HARPER(63J-E2) NORRIS(63W-E2) ZIMMERMANN(62D-E3)	5 REPL TURBOCHARGER	B79/82
2	NORRIS(63W-E2)	1 REPL ENG/TRANS	B79/81
S2	NORRIS(63W-E2)	3 REPL FUEL INJ PUMP	B79/81
		M113 FAMILY	

1	FULLER(52D-E4) NORRIS(63W-E2) SIMPSON(63H-E1) ZIMMERMANN(62D-E3)	4 ADJ FUEL INJ RACK CONTR	B79/83
1	FULLER(52D-E4) HARPER(63J-E2) NORRIS(63W-E2) SIMPSON(63H-E1) ZIMMERMANN(62D-E3)	5 ADJ GOVERNOR	B79/83
1	HARPER(63J-E2) NORRIS(63W-E2) SIMPSON(63H-E1) ZIMMERMANN(62D-E3)	6 REPL ENG AIR BLOWER	B79/83
		M109/M578	

1	MOOSIE(63H-E5) NORRIS(63W-E2)	2 REPL CYL HEAD	B80/83

Figure 4-2. Training Requirements Summary.

particular equipment/task category may have several training objectives or none at all, depending upon personnel experience, training, and demonstrated proficiency.

The NAMES column lists the names of personnel who need training on the task.

The TRNG REF # contains the reference number of the training objective as listed in Appendix B of Volume 2 of this guide. If you want to provide training for a particular task, determine its reference number and look it up in Appendix B. There you will find information that will help you conduct training.

Section 6 of your Trainer's Notebook is for MPS printouts. Keep Tables 6, 7, 8, 9, and 3 for the current reporting period and for the previous period. You do not need to keep older MPS printouts. The current MPS Table 9 is the most important MPS table for determining training objectives. It will be used together with the NO-GO summary and your informal analyses to determine training objectives, as described below.

DEVELOP COMBINED TRAINING OBJECTIVES LIST

So far, you did an informal analysis and generated a list of training objectives based on your judgment and the judgment of other maintenance supervisors. You did a formal analysis by collating the NO-GO's in Job Books and by considering SQT results. If you have the MPS, you have also studied Table 9. What next?

Generate a combined training objectives list by combining all of the training objectives you identified. Your Trainer's Notebook makes it fairly easy to develop the combined list. Make up this list by combining the information from the Job Book NO-GO summary, unit-unique tasks that you noted, and tasks listed on MPS Table 9 (if you have the MPS). Your combined training objectives list consists of all the tasks from these three sources.

Are you finished? Not quite. You must determine training objective priorities--that is, decide which training objectives are most important, which least important, and where the others fall in between. How you do this is described in Chapter 5.

THE IMPORTANCE OF THE TRAINER'S NOTEBOOK—A REMINDER

The Trainer's Notebook was referred to several times in this chapter. It is used to record personal observations, to log comments made by subordinates, to provide a repository of working notes, to keep current and recent MPS printouts, and for other purposes. The notebook becomes increasingly important as you apply the UTM. You will find it difficult to maintain and keep track of the various bits and pieces of information necessary to plan and conduct your training unless you use the notebook as suggested.

TRAINING CHECKLIST

STEP TWO: IDENTIFY TRAINING OBJECTIVES

This checklist will help trainers and training managers identify the specific tasks they must perform to accomplish this step of the Unit Training Strategy. The trainer is responsible for performing these tasks, unless otherwise indicated. Training managers are responsible for periodically spot-checking to assure that these tasks are being performed adequately. Training managers are also responsible for coordinating with trainers, as indicated below, and for providing the resources trainers will need to take the actions specified.

INFORMAL ANALYSES

- Review and study Soldier's Manual technical tasks for all MOS's you supervise.

- Relate Soldier's Manual tasks to work done in shop:
    1. Determine which tasks are performed frequently, rarely, and never.
    2. Assess soldier's proficiency on tasks.

- Assure that all first-line supervisors are familiar with Soldier's Manual tasks.

- Assure all first-line supervisors are informed regarding proficiency of subordinates on Soldier's Manual tasks.

- Make notes on task frequency and soldier proficiency for inclusion in Section 4 of your Trainer's Notebook.

- Identify tasks performed in your shop that are not included in Soldier's Manual and make a list of them for inclusion in section 5 of your Trainer's Notebook.

- Use Trainer's Notebook Section 5 to keep track of events that occur in your shop that signify that training objectives exist. These events include:
    1. Observation of incorrect maintenance procedures, errors, non-use of technical manuals, use of improper tools, excessive time, damage during maintenance, etc.
    2. First-line supervisor reports of subordinate lack of proficiency.

- Use Trainer's Notebook Section 5 to keep track of tasks on which training is needed and personnel involved.

- Make Trainer's Notebook entries daily.

- Make up preliminary list of training objectives over a period of about a week:

    1. Observe repairmen at work.

    2. Talk to first-line supervisors.

    3. Talk to repairmen.

    4. Do not limit number of tasks or attempt to order in terms of importance.

    5. Keep preliminary list in Section 4 of Trainer's Notebook.

FORMAL ANALYSES

- Compile Job Book information (or have first-line supervisors compile) in matrix and tally "NO-GO's" as described in Chapter 4.

- Maintain NO-GO summary in section 5 of Trainer's Notebook.

- Review SQT results and identify tasks on which training is needed. Record in Section 5 of Trainer's Notebook.

- Review MPS Table 9 to identify MPS training objectives. Record in Section 5 of Trainer's Notebook.

DEVELOP COMBINED TRAINING OBJECTIVES LIST

- Develop combined list of training objectives based on:

    1. Job Book NO-GO summary.

    2. Unit-unique tasks you have noted.

    3. MPS Table 9 tasks.

- Keep list in Section 5 of Trainer's Notebook.

CHAPTER 5

STEP THREE: SET TRAINING PRIORITIES

GENERAL

Priority means importance. The more important something is, the higher its priority. The Army has priorities for maintenance, for readiness, and for other things. Priorities are also necessary and useful in training. They help you decide when to attack each training objective. If you have a long list of objectives (as you certainly would if you followed the procedures in Chapters 3 and 4), you cannot possibly train on all of them at once. You need a method to decide which of the objectives are most important, which least important, and where the others fall in between. This chapter provides that method--it gives a method to attach a priority to each training objective.

Every soldier in the Army is important. Every soldier needs training on certain technical tasks in his MOS--these are his individual training objectives. However, the unit training manager/trainer who has more than one subordinate does not have the time to conduct one-on-one training with each of his subordinates. He must find a more effective way to train--preferably to train several subordinates at the same time. While each soldier has his own individual training objectives, there are also training objectives that are shared by many soldiers. These can be thought of as "group" training objectives. This chapter describes a procedure for identifying these shared objectives. Training that is conducted to satisfy them will have maximum payoff. It is more effective to train several soldiers on tasks on which they lack proficiency than to train one soldier on a task on which he alone lacks proficiency.

This chapter is concerned with **training objective priority**--given a list of training objectives, how do you decide which has the highest priority for training? The answer is that you must take several factors into account. The procedure for determining priorities is to set them initially based on **objective** factors and then adjust the priorities based on various subjective factors. Objective factors are clear-cut and are based on factual data. In setting priorities, you consider two

main objective factors: the number of people affected by a training requirement, and **average skill level** on that requirement (as reflected by the Job Book NO-GO analysis and/or MPS Table 9).

Subjective factors are more numerous, and also more difficult to deal with. Among the subjective factors are the frequency, difficulty, and combat criticality of tasks, equipment type, and the importance of the task to the particular unit. The trainer is usually safe when setting training priorities based on objective factors, but he may have to consult with the training manager to learn battalion/ company policy on matters relating to the subjective factors.

PRIORITY TERMINOLOGY

Higher Priorities Have Smaller Number Values

The Army uses a priority system in which the "highest" priority has the lowest number value. In requisitioning parts, for example, the highest Issue Priority Designator (IPD) that can be used is one. IPD's may range down to 15. The highest priority thus has the lowest number. The UTS and MPS both follow the same convention. (The highest possible UTS or MPS priority is one. Lowest possible is seven.)

MPS Priorities

Special and null priorities — If everyone in a unit has done a task 100 times, then they almost certainly do not need training on it. Such a task should be assigned **null** priority. That way it would never appear on Table 9 as a training objective. But some tasks are especially important for the unit. These should be assigned **special** priority. Special priority tasks will always appear on the list of training objectives in Table 9.

The only hard and fast rule about special and null priorities is that they may be imposed by the commander, for his own reasons. Beyond that, the rules for assignment are a matter of local policy.

A special or null priority is assigned with an MPS-7 data entry form. Tasks that are especially important to your unit may warrant special priority. Tasks for a pending SQT or ARTEP are examples. (See Appendix A for further details on special and null priority assignment.)

Priorities in Table 9 — MPS Table 9 automatically generates lists of training objectives with their calculated priorities. Table 9 will indicate what to train people on, and where to start. The computer bases its priority calculation on two factors: (1) the **number** of personnel needing training on a task, and (2) the **average skill level** of those personnel. Priority rises as the number of personnel increases. Priority also rises as the average skill level decreases.

Figure 5-1 is a sample Table 9 for MOS 63H/W. Highest priority tasks have priority 1. Lower priority tasks have lower priority numbers. The Table 9 in the figure shows several tasks with priority 1 and several others with priority 2. (One of the tasks has a priority of "S2." The "S" means that the task has a special priority attached.) The higher the priority, the more people need training and the lower the average skill level. However, since several tasks may have the same priority, you must decide which are of greater or lesser importance for training. You must exercise human judgment to further refine the MPS priorities. The procedure is described in the next section.

HOW TO REFINE PRIORITIES

Remove the master list of tasks from Section 5 of your Trainer's Notebook.

Consider Objective Factors

Organize your master list into different sections according to **equipment type.** When developing and conducting training, it would be unusual to work on a single training objective. Usually you will group related training objectives and conduct training to meet all of those objectives simultaneously. In MOS 63H/W, for example, list all M60 tank training objectives in one column, all those for M113 carrier in another, and so on.

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TABLE 9 (63H/W): TRAINING REQUIREMENTS SUMMARY

THRESHOLD: 2

REPORTING PERIOD ENDING: 0284 (10 OCT 80)

PRIO- RITY	NAMES	EQUIPMENT/TASKS	TRNG. REF.
		M60 FAMILY	
1	MOOSIE(63H-E5) NORRIS(63W-E2)	2 REPL FUEL INJ NOZZLE	B79/81
1	HARPER(63J-E2) NORRIS(63W-E2)	4 REPL FUEL TANK	B79/81
1	HARPER(63J-E2) NORRIS(63W-E2) ZIMMERMANN(62D-E3)	5 REPL TURBOCHARGER	B79/82
2	NORRIS(63W-E2)	1 REPL ENG/TRANS	B79/81
S2	NORRIS(63W-E2)	3 REPL FUEL INJ PUMP	B79/81
		M113 FAMILY	
1	FULLER(52D-E4) NORRIS(63W-E2) SIMPSON(63H-E1) ZIMMERMANN(62D-E3)	4 ADJ FUEL INJ RACK CONTR	B79/83
1	FULLER(52D-E4) HARPER(63J-E2) NORRIS(63W-E2) SIMPSON(63H-E1) ZIMMERMANN(62D-E3)	5 ADJ GOVERNOR	B79/83
1	HARPER(63J-E2) NORRIS(63W-E2) SIMPSON(63H-E1) ZIMMERMANN(62D-E3)	6 REPL ENG AIR BLOWER	B79/83
		M109/M578	
1	MOOSIE(63H-E5) NORRIS(63W-E2)	2 REPL CYL HEAD	B80/83

Figure 5-1. Training Requirements Summary.

Now organize the training objectives within equipment/task category according to **task relationships.** For example, group training objectives for tasks that are usually performed at the same time. An example of such related tasks is the MOS 63H/W M60 task "replace engines/replace transmissions." In performing one of these tasks, the other must also be performed.

When you have organized the master list according to equipment/task type and task relationships, you are ready to consider the other factors and assign priorities.

Transfer MPS Priorities

If you have an MPS printout, transfer the Table 9 priorities to the training objectives on your master list. The Table 9 priorities take into account the same factors as the NO-GO analysis discussed in the next paragraph. You do not have to perform this analysis if you have an MPS priority for a task. MPS has done it for you. But you do have to conduct the analysis for non-MPS objectives on your master list.

Consider NO-GO Analysis

If you have done the Job Book analysis described in Chapter 4, this step is simple. If you have not done the analysis, you must rely on your opinion. The NO-GO analysis was a simple way to consider two important factors: number of soldiers needing training, and average skill level. The number of NO-GO's rises as number of people needing training increases or as average skill level declines. Obviously, **the more NO-GO's, the more training is needed and the higher should be training objective priority.**

The limiting cases are those extremes when everyone needs training on a task (everyone has NO-GO), and when no one needs training (everyone has GO).

If everyone needs training, then assign the highest priority (1).

If no one needs training, then assign the lowest priority (7).

Assign priorities between 1 and 7 to other tasks, depending upon number of NO-GO's. Now transfer these priorities to the training objectives on your master list.

Consider Subjective Factors

You must now adjust the priorities on the master list based on the subjective factors. The subjective factors mentioned in the introduction include equipment type; task frequency, difficulty, and combat criticality; and various unit-unique factors (described in greater detail below).

Equipment type — Some equipment is more important than others to customer units. The deciding factor governing importance is the effect of lack of equipment on the combat mission of the customer unit. Combat units often place greater stress on the maintenance of their tracked than on their wheeled vehicles, for example. Similar rules often apply to equipment maintained by other MOS's. Take the equipment type factor into account. Look at your master list and decide if some equipments are more important than others. If they are, give higher priorities to training objectives for those equipment types.

Task frequency — Tasks that you frequently perform should have higher priorities than other tasks because they have greater effect on your maintenance operation.

Task difficulty — Give higher priorities to difficult tasks than to easy tasks.

Combat criticality — In general, give higher priorities to tasks that affect the ability of customer units to perform their combat mission than to tasks that do not.

Unit-unique factors — These are factors that have special importance to your unit, but which may not be important to another DSU. Among such factors are whether or not a task must be performed on an upcoming SQT or ARTEP, and the way the task is performed in your unit. For example, a task may have particular training importance because it must be performed by a contact team in which each member of that team must be fully skilled. Similar factors may apply in your unit. Make sure that the factors you consider have real training or mission relevance. Do not, for example, downgrade a training objective's priority because

it would be difficult, inconvenient, or unpleasant to achieve that objective. Those are not legitimate reasons for adjusting priorities. The only legitimate reasons are those that reflect your unit's unique mission or way of operating.

Revise Your Master List

When you complete the analysis, revise your master list. Drop training objectives with low priorities. Get the list down to a manageable number of training objectives. A "manageable" number is a length that you can handle in a period of about six weeks.

At this point it is advisable to transfer the training objectives from the master list to a sheet of paper for posting on a bulletin board. The troops will thus know what they will be expected to learn during the next 6-12 weeks. These training objectives are the tasks that will be given technical training emphasis. Training will be more effective when everyone knows what will be covered in advance. The list of training objectives on the board should remain there for about six weeks. As training takes place, and some requirements are met, cross them off to show that they have been satisfied. This will give your personnel a feeling of accomplishment. Also put a copy of the revised training objectives in Section 2 of your Trainer's Notebook (Training Objectives).

UPDATE TRAINING OBJECTIVES PERIODICALLY

As time goes on, certain training objectives will be met. New ones will arise as new personnel transfer into the unit, as the work requirements of the unit change, and as other factors affect the type of work your unit performs. For this reason, the list of training objectives must be updated regularly. Update the training objectives at least every six weeks. Perform a complete new training objectives analysis from scratch at least quarterly. That is, every three months, go through the process of observing shop work, conferring with first-line supervisors, talking to shop personnel, performing the Job Book NO-GO analysis, and then refining priorities on each of the training objectives. This way you can be sure that your list of training objectives is up to date and that your training is responsive to the unique needs of your unit.

TRAINING CHECKLIST

STEP THREE: SET TRAINING PRIORITIES

This checklist will help trainers and training managers identify the specific tasks they must perform to accomplish this step of the Unit Training Strategy. The trainer is responsible for performing these tasks, unless otherwise indicated. Training managers are responsible for periodically spot-checking to assure that these tasks are being performed adequately. Training managers are also responsible for coordinating with trainers, as indicated below, and for providing the resources trainers will need to take the actions specified.

REVIEW MPS PRIORITIES

- Review MPS priorities:
    1. Identify highest priority (1) tasks.
    2. Identify lower-priority tasks.
    3. Identify special-priority(S) tasks.

REFINE PRIORITIES

- Organize master list into different sections according to equipment type.

- Organize training objectives within equipment/task categories according to task relationships (tasks usually performed at the same time).

- Transfer MPS Table 9 priorities to training objectives on master list

- Consider NO-GO analysis and assign priorities between 1 and 7 to Soldier's Manual tasks on master list.

- Transfer Soldier's Manual task priorities to training objectives on master list.

- Assign subjective priorities to unit-unique tasks based on number of people needing training and average skill level.

- Revise priorities of tasks on master list by taking into account subjective factors:
    1. Equipment type (combat mission importance to customer unit).
    2. Task frequency, difficulty, combat criticality.
    3. Unit-unique factors.
- Revise master list:
    1. Drop training objectives with low priorities.
    2. Reduce list to manageable number of training objectives (can be handled in six weeks).
    3. Have revised master list typed.
    4. Post on bulletin board.
    5. Put copy in section 2 of Trainer's Notebook.

UPDATE TRAINING OBJECTIVES PERIODICALLY

- Update list of training objectives, as described above, every six weeks.

- Perform new training objectives analysis from scratch quarterly.

CHAPTER 6

STEP FOUR: SELECT TRAINING APPROACHES

The primary purpose of this chapter is to help you **select** training approaches. It is not enough to know what the approaches are. You must be able to choose among them. The material that follows is designed to give you the knowledge necessary to make that selection.

GENERAL

The Army offers you many different training resources to improve the skills of your troops. Your biggest problem is deciding which to use. You are not in the training business full time. You have other responsibilities. Yet, to do training in your unit, you must make decisions and take actions that require a fair amount of training expertise. One of the more complex of these training decisions is selecting a training approach. For purposes of this guide, a training approach is defined as a combination of **training resources** and **procedures** that is used to accomplish training objectives.

Given a particular training objective, some training approaches will be effective, some less effective, and others totally ineffective in achieving the training objective. Which approach will be most effective in a given situation is not necessarily obvious, although it may seem to be because of circumstances. For example, it might seem self-evident that training should occur in a certain way because you have a training resource such as a Training Extension Course (TEC) tape. This need not be the case. In fact, you should select a training approach based on a range of factors, including **effectiveness, flexibility, cost, time requirements**, and **demand upon unit resources**. The choice should not be based upon convenience or the fact that you happen to have a training resource that deals with a particular subject that you want to train on.

The trainer is primarily responsible for determining how training will be conducted. However, choice of training approach has significant implications in terms of time and other resources required. For this reason, the trainer cannot

make the determination in a vacuum. Trainer and training manager should meet regularly, at least once every six weeks, to discuss training approaches and to review any previous decisions that have been made. In this meeting, the training manager's primary function is to set policy by defining what training resources and time are available to the trainer. A certain percentage of training should be by on-the-job methods, some by self-study, and some by other approaches. This breakdown should be consciously decided upon, not left to chance. Once policy is set, the trainer can work out the details of how each training objective will be satisfied using specific training approaches. The training manager will also now be aware of the thrust of technical training in case additional resources or time are needed.

This chapter focuses on training approach selection. The training approaches it covers are described in considerable detail in Appendix B of Volume 1 of this guide (Training Approaches). Make sure you are thoroughly familiar with the material in Appendix B before reading the present chapter.

The Trainer's Notebook is important during training approach selection. Use Section 5 (Working Notes) to keep track of training approach policy within your unit (that is, agreements reached between training manager and trainer about the extent to which different training approaches will be used in the unit), training resources available, schedules of on-post training, and other information that may be important in selecting approaches to meet training objectives. As you begin to investigate the various training approaches, and consider their use in your unit, you will find that you have many details to remember. Keep track of them in your notebook.

HOW TO TRAIN

Training Has Two Parts

You can think of training as having two parts. The first part is to familiarize the soldier with job vocabulary, tools, and basic principles. These are the so-called "knowledges" required for job performance. The second part is to apply these knowledges on the job and develop job "skills."

You must develop both knowledges and skills in order to train a soldier. Hands-on experience is obviously good for developing skills. What about knowledges? Hands-on experience is not particularly good for developing knowledges. Explaining principles, vocabulary, and other details is difficult in the middle of a job. It is better to take time beforehand, preferably in a quiet environment and away from the pressures of work, to develop knowledges.

Skill, Knowledge, and Training Approach

Some training approaches are more effective than others for developing skill. Others are more effective for developing knowledge. For example, on-the-job experience (OJE) is a fairly effective approach to develop skill. This is the traditional way of training apprentices in the civilian work force, and is widely used in the Army. Most repairmen recognize that it takes hands-on experience to develop proficiency. This is a basic training principle and consistent with the Army's performance-based training policy. It means that if a soldier is to be trained to remove an engine, then he should physically remove that engine. Lectures on how to remove the engine are not adequate. Reading a book about it is not adequate. Movies may be entertaining, but they are not adequate either. Does this mean that you should skip these approaches and train exclusively on the job? Many training managers and trainers believe that the answer is yes, because they "train" their personnel with on-the-job experience alone.

But the answer is a strong NO. Hands-on experience is obviously better for developing hands-on skills. However, it is not good for developing the underlying knowledges behind those skills. A soldier will develop his proficiency on the job much more rapidly if he receives some instruction first, and then applies his knowledge on the job. This obvious principle is ignored daily in Army shops. New soldiers are assigned to jobs that they do not understand. They stand and watch, or do what they are told to do. They gradually learn by observing, by trial and error, and perhaps by making special efforts on their own to understand what is going on. This is not an efficient way to train. A soldier will learn more rapidly, make fewer mistakes, and become a productive team member sooner, if he first receives some knowledge-oriented instruction. The point of this discussion can be summarized in

the following statement: **develop a soldier's knowledge before you** attempt to **develop his skill.**

Many of the available training approaches, such as Training Extension Courses, are excellent for developing knowledge but not particularly good for developing hands-on skill. Materials such as these should be used before, and/or together with, training in the shop. But do not rely on your new soldiers to learn everything on their own. They have enough problems already.

OVERVIEW OF THE TRAINING APPROACHES

Appendix B of this guide covers 11 training approaches. The approaches are not rigid categories. Each can employ a variety of training resources and procedures. Each training approach has certain unique features, and these are why it is classified as a separate approach. The 11 training approaches are the following:

1. Institutional training (resident service school)
2. Institutional training (on-post school)
3. Institutional training (public institution)
4. Supervised on-the-job training (SOJT)
5. On-the-job experience (OJE)
6. Use of skill performance aids-extension training materials (SPAS ETM)
7. Formal training in unit
8. Use of technical experts
9. Use of training extension course (TEC)
10. Use of Army correspondence course program (ACCP)
11. Use of Technical literature

Your job is not to select the "best" training approach and then use this for everything. The exact opposite is true. You are required to select various combinations of approaches and use them to solve different types of training problems.

Group Instruction Versus Self-Study

Training approaches 1-8 involve group instruction. The trainee works with an instructor or knowledgeable technical expert. This is the case with institutional training, the various on-the-job approaches, formal training in unit, and use of technical experts. The remaining three approaches--TEC, ACCP, and technical literature--are self-study approaches. The soldier works on his own to develop knowledge.

General Guidelines for Selection

You are probably using a number of training approaches now and so some selection has already been done. For example, you are probably using the OJE approach in your shop. This is universal throughout the Army. It is simple and fairly effective, within its limitations. Most of your repairmen have probably received formal resident school training. Occasionally you must recommend a soldier for such training. Such training occurs more or less automatically, and there is very little for you to do about it. Technical experts from the Maintenance Assistance and Instruction Team (MAIT) probably visit you periodically. You may or may not be using them and other technical experts as effectively as you could.

What is left over? Institutional training (on-post school, public institution), SOJT, formal training in unit, and the three self-study approaches. Which of these should be selected and when?

There is no simple answer for everyone. You will have to be familiar with each approach and base a decision on that knowledge. However, there are some general guidelines. **On-post schools** are an excellent way to develop the skills of your personnel at both basic and advanced levels. Costs to the unit are relatively low. Take advantage of these training opportunities every chance you get. **Public educational institutions** may offer training that fills certain training needs exactly; more often, however, training is too general, too "academic," or too expensive to be worth serious consideration.

Formal training in unit is probably the quickest way to train your personnel. (To be truly effective, such training must involve a prepared presentation, hands-on demonstration, and practice by trainees. The more hands-on practice, the better.) If you have serious, widespread skill deficiencies in your company or throughout the battalion that need quick correction, then this is the approach to choose. It is effective and quick, but is also the most expensive training approach in terms of dollar costs and time.

SOJT should be going on in your shop at all times, no matter what other training you are doing. Use **SPAS ETM** materials to support SOJT, if they are available. OJE is no substitute for SOJT. Get an SOJT program on your schedule and cycle through it every six months to a year. Cover both basic and advanced subjects. This is an especially good method for training entry-level personnel or those who are cross-training in a new MOS.

The **self-study** approaches employ many valuable training materials that are effective and cost-free. These materials can be used to support other training approaches as well as for self-study. Self-study is particularly useful for training new soldiers--whether recent arrivals in the unit or those who are cross-training. This is a good way to give new soldiers a quick start or to give more experienced soldiers refresher training.

ADDITIONAL SELECTION FACTORS

Consider Training Objective Groupings

Each training objective represents a task that repairmen need training on. You do not generally train on only one task. You put them together into logical groupings, and attack several at the same time. Your master list groups training objectives by equipment type. It also groups tasks that are often done together. You build your training around these logical groupings. If you have a large number of related training objectives for one item of equipment, then it makes sense to use more elaborate training approaches than if you have only a few. You might use formal training in unit to satisfy a large group of related training objectives, for example. You might use OJE or self-study for only a few.

Consider Group Size

You must take the number of soldiers needing training into account when you consider training approach. The more soldiers you must train, the more serious your problem, and the more quickly you must solve it. Normally, the quickest way to solve the problem is to get everyone together in a group and conduct formal training.

If only one soldier needs training on something, then group instruction does not apply. You must satisfy the training objective, but there is no urgency, since you have other soldiers who can do the job until the new soldier gains experience. In such a case, one of the self-study approaches might be the best way to solve the problem. Or, the man might develop needed skill through OJE.

Some of the training approaches are more group-oriented than others. The self-study approaches are, by and large, suitable for training individual soldiers. The remaining approaches are more suited to group training. Institutional training and formal training in unit are reasonably effective with large groups of men. The on-the-job approaches work best with small groups.

Consider Available Training Resources

The resources for unit training are allocated by command. These resources will be made available to training managers and trainers to the extent that command supports unit training. There are several different types of training resources, including personnel, training materials, equipment, facilities, and time.

Personnel — Personnel are the individuals who conduct training and those who receive it. Among the former are training managers and trainers such as yourself, subject matter experts, and instructors. Subject matter experts are persons with extensive experience and detailed knowledge of a particular technical field. A good example is a maintenance technician. Instructors may be anyone with sufficient knowledge and the ability to conduct training--senior or first-line supervisors, maintenance technicians, or someone else qualified to train your soldiers.

Soldiers who are to receive training may be thought of as training resources as well. It is obvious that training cannot occur without this resource, just as the commercial success of television would not exist without an audience.

Materials — Training materials are all of the written, graphic, audio-visual and other sources of training and technical information that are used to train. Some of these materials are used by instructors to prepare and present lessons. Others are self-study materials used by trainees.

The Army makes many training materials available. Appendix B of Volume 2 of this guide lists training materials that support training on the MPS training objectives. All readers of this guide, whether or not they have the MPS, should become familiar with this appendix, as it will help in the identification of training materials that support training development or self-study. For each training task, Appendix B lists the following applicable training materials:

- Army Regulations
- DA Pamphlets
- Field Manuals (including Soldier's Manuals)
- Technical Manuals
- Training Extension Courses
- SPAS ETM
- Video Tape Recordings
- Visual Aids
- Training Films
- Correspondence Sub-Courses
- DA Posters

If you cannot find what you need in Appendix B, look in the DAPam 310 series of indexes, DAPam 108-1, DAPam 350 series (correspondence courses), the current TEC Status List, and your local Training Aids Support Office (TASO) catalog.

Equipment — The equipment necessary to use training materials and support your presentation is available from your Skill Development Center (SDC) or from your TASO, through your battalion S3. Equipments and probable sources are shown in Table 6-1.

TABLE 6-1

SOURCES OF UNIT TRAINING EQUIPMENT

EQUIPMENT	USED FOR	SOURCE	
		SDC	TASO
BESELER CUE/SEE	TEC, SPAS ETM	X	
VIDEO TAPE PLAYER	TELEVISION	X	X
FILM PROJECTOR	FILMS		X
SLIDE PROJECTOR	SLIDES	X	X
VU-GRAPH	TRANSPARENCIES		X
BLACKBOARD	GRAPHICS		X
VENETIAN BLIND	CHARTS		X
EASEL	GTA		X

Performance-oriented training requires demonstration of proficiency by performance of a task to standard by each soldier. An essential training item is the equipment on which training is being given, or a simulator or model. Task conditions usually require that certain tools, test equipment, and technical publications also be available.

Facilities — A facility is a location where training occurs. For performance-oriented training, the facility should be similar to the normal working environment, not a classroom or auditorium. Since task training should be given using actual equipment, the facility should be the place that work is done--in a shop bay or tent, or in the field.

For self-study, each battalion should have a Skill Development Center where training materials can be used. This, again, need not be anything elaborate. A spare room in a quiet area of the barracks can serve the purpose. For further information, refer to TC 21-5-9 (**Battalion TEC Handbook**).

Time — Time is the most critical resource, and the one in shortest supply. There is never enough time. For training, time is not only the minutes or hours needed to conduct training, but the time to plan and prepare it. Without proper preparation, precious training time is often wasted. To conserve time, training

must be a part of everything your soldiers do. There will never be enough hours in the day to cover all required subjects unless they are taught concurrently. Take every opportunity to combine training on various subjects.

Resources and training — Training resources will affect the types of training you do. You will never have all needed training resources. You will usually be short some of the most important ones, such as training materials and qualified instructors. However, training can occur effectively even with limited resources. If you have competent supervisors, and soldiers who are willing to learn, then all that is really needed is a technical manual, an item of equipment, tools, and time.

Consider Training Constraints

The typical Army unit has many training constraints. Yours is probably no exception. A training constraint is a factor that makes it difficult or, in some cases, impossible to conduct technical training. As a trainer, you must find ways to deal with these constraints and avoid the trap of using them as excuses for not conducting training. Typical training constraints in direct support units are the following:

- Personnel turbulence
- Diversion of personnel to outside activities
- Lack of training resources
- Mission priority

Most direct support units suffer moderate to severe personnel turbulence. New soldiers come in, and experienced soldiers leave. Training is one of the best ways to reduce the effects of turbulence. Training may reduce personnel turnover in the long run, and will reduce the effects of turnover in the short run—a soldier increasing his skill through training will be more inclined to remain in the Army and in his unit.

Work force diversion makes it difficult to schedule and conduct training. Communicate with commanders to schedule the routine and predictable diversions for times that will reduce their interference with training. Try to plan your training in modules so that it can be easily repeated. Schedule training for periods of maximum personnel availability.

There are many types of training resources, and no direct support unit has all that it wants and needs. These resources include not only training materials, but also instructors, equipment, a place to train, and time. But training does not require fancy facilities. Performance-oriented training is best conducted in the working environment. Your instructors do not have to be school-trained to be effective. Anyone with technical skill and the motivation to teach can be an effective instructor. The Army has developed and distributed an extensive array of training materials, and many of these are available in your unit. However, it is up to you to find out what is available. This means visiting the SDC, checking catalogs of training materials, and talking to your S3. If you do not have something that you need, work through your S3 to order it. Time available for training seems to expand or shrink depending upon workload. The busier you are in the shop, the less time you have to train. Moreover, workload has a way of suddenly changing and upsetting the best training schedule. It is important to set up a schedule of training events ahead of time even though you know that certain of those events will probably be disrupted by incoming work or some other uncontrollable factor. Without the schedule, you might never get around to doing training at all. With a schedule, you will get to training sooner or later.

The mission of a direct support unit is maintenance, and this will always be priority number one. Training has a lower priority, but is of high importance to your unit and affects your ability to perform your primary mission. Mission accomplishment will absorb all of your energies on occasion and make it impossible to do training. However, this is not always the case. Those who use the mission priority excuse are simply avoiding their training responsibilities.

Your best defense against these and other training constraints is to plan ahead. Anticipate disruptions in your training. Be flexible in your approach. And always keep the goal of training your soldiers high on your priority list. This is what you want to accomplish, and if you are determined, you will succeed.

MAKE THE TRAINING APPROACH DECISION

You cannot make an intelligent or informed training approach decision without being aware of what training approaches are available. The first step, therefore, is to become thoroughly familiar with the training approaches described in Appendix B of this guide. Not all of these will be suitable for meeting every training objective. Some of the approaches obviously will be wrong for some things and obviously right for others. Some approaches will be unavailable to you because of your geographical location or because certain training materials simply do not exist that cover a subject.

Training approaches are further influenced by command training policy. Trainer and training manager should collaborate and agree on the training policy in the company. Decide in general what percent of training will be by OJT, by TEC, and by other approaches. Training approaches should be selected that are appropriate for the existing training objectives. The training approach decision is further influenced by available training resources and training constraints.

Finally, it simply becomes a matter of weighing the known variables and making the decision. The trainer who has informed himself on available training approaches, training policy, available resources, and constraints is in a good position to make an intelligent decision.

TRAINING CHECKLIST

STEP FOUR: SELECT TRAINING APPROACHES

This checklist will help trainers and training managers identify the specific tasks they must perform to accomplish this step of the Unit Training Strategy. The trainer is responsible for performing these tasks, unless otherwise indicated. Training managers are responsible for periodically spot-checking to assure that these tasks are being performed adequately. Training managers are also responsible for coordinating with trainers, as indicated below, and for providing the resources trainers will need to take the actions specified.

GENERAL GUIDELINES

- Training manager must set policy by defining what training resources and time are available to trainer.

- Meet with training manager at least once every six weeks to discuss training approaches.

- Use hands-on training approaches to develop hands-on skills.

- Precede hands-on training with instruction to develop underlying knowledge.

- Consider training objective groupings--use more elaborate training approaches to satisfy large group of training objectives.

- Consider group size--use more elaborate training for larger groups, less elaborate for smaller groups.

- Consider available training resources--personnel, materials, equipment, facilities, time.

- Consider training constraints--personal turbulence, diversion of personnel, training resources, time, mission priority.

- Follow these general rules:

  1. Use several training approaches, not just one or two.

  2. Do majority of training (50-70 percent) with on-the-job approaches (OJE, SOJT, SPAS ETM).

  3. Do formal training on difficult and critical MOS tasks, and on tasks on which many personnel need to gain proficiency quickly.

  4. Make full use of on-post schools.

  5. Approximately ten percent of personnel should be engaged in correspondence courses.

  6. Assure that all personnel use such self-study materials as Training Extension Courses and technical literature.

- Review Volume 1, Appendix B, for training approach descriptions, decision factors, and general guidelines for use.

CHAPTER 7

STEP FIVE: PLAN AND CONDUCT TRAINING

INTRODUCTION

This chapter will describe in detail some of the factors you must consider in developing your technical training plan.* Training can occur without planning, but not effectively. A plan helps you anticipate resource requirements, schedule training, and keep everything under control.

Everyone in the battalion who is involved in training must plan. Several different training plans will exist. However, this chapter focuses on the planning needed for unit-level **technical training**. That planning is a joint responsibility of training manager and trainer. The training manager must be involved because he is responsible for deciding how unit resources will be allocated to accomplish training. The trainer will be more familiar with day-to-day training details and constraints and must contribute this knowledge to the plan. The training plan should be jointly developed by training manager and trainer, working as a team. They should review the plan at least monthly, and meet informally on at least a weekly basis to review progress in relation to the training plan.

The plan for individual technical training should be recorded and copies maintained by both training manager and trainer. The trainer should keep his copy in Section 3 of the Trainer's Notebook (Training Plan).

WHY PLAN?

The Army demands that its leaders plan. Countless Army documents stress the importance of planning. Commanders have often commented that a "lack of planning" caused some unpleasant turn of events. "Reaction management," which is one symptom of lack of planning, is universally condemned. Despite these and

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*For a detailed discussion of planning related to training, consult FM 25-2, Chapters 5-9; and to the BTMS Training Management Workshop discussions of planning and training.

other indications that the Army takes planning seriously, not every Army leader is motivated to do detailed planning. It takes considerable effort to develop a plan, and there are many convenient excuses for not developing one--lack of time, the situation is too fluid, or something else more important distracts attention.

Consider some of the reasons that planning is important for unit training. From the training perspective, planning permits you to do a number of things. The most important of these are:

1. Allocate resources to accomplish training.
2. Schedule training.
3. Control training.
4. Evaluate training after it has been done.

Training requires you to **allocate resources.** These are not cheap. Without adequate resources, training cannot be effectively accomplished. You must therefore anticipate what will be required in advance. A plan is a vehicle for making your projections.

A plan permits you to **schedule** training into the work day. Since there are countless demands on unit resources, failure to schedule training means that other competing demands on resources will fill the void. In effect, training can be postponed forever if it is not scheduled to occur.

Without a battle plan, you cannot participate effectively in combat. You are liable to send your troops in the wrong direction, endanger them, and fail to gain your military objectives. The same general principle applies in training. Without a training plan, you do not really know what is supposed to be accomplished and you cannot **control** resources in order to accomplish training objectives. You need to have an overall picture of technical training in order to control it effectively.

Pressures would be lessened if no one **evaluated** the products you produce. You may feel this way about training evaluation. But, without evaluation, you can never be sure that you accomplished your goal. Training that is not evaluated is never criticized and will only be changed to make life easier for its perpetrators. Training that is evaluated will evolve toward something more effective. A training plan underlies evaluation. The plan defines what we set out to accomplish. When

we evaluate training, we look closely to see whether or not it accomplished its objectives.

ELEMENTS OF A TRAINING PLAN

General Content

Chapter 6 and Appendix B of this volume cover the various training approaches in some depth. Essentially the task that Chapter 6 defines for you is to identify the perfect combination of training approaches to meet unit training objectives. The "menu" in Chapter 6 lists 11 approaches. In your unit, you will probably pick some combination of these approaches, perhaps all of them, to accomplish training. To help you plan, some of the planning requirements common to all training approaches are outlined briefly below. The discussion will give a general idea of some of the concerns you should have in developing your plan. Fill in the details based on your own knowledge and by reviewing the training approach descriptions in Appendix B. Regardless of training approach, you need to identify:

- Training objectives
- Training approaches
- Personnel who are participating--trainees, instructors, subject matter experts.
- Schedule of events--projected beginning and end dates, and any key events that may occur in between, such as tests.
- Resources required.
- How trainee performance will be evaluated at the conclusion of training.

You have already developed a very important part of your training plan-- training objectives. Training objectives are the blueprint for training. Training approaches are selected and training is conducted to meet those objectives. When training is done, you can review the objectives and assess how well they have been met. If they have been met, then training has been successful. If not, then training has failed or only partially succeeded. It is clear that since training is structured around these objectives, they are an essential element of the training plan.

Training Approaches Affect Planning Requirements

Regardless of the training approach employed, the training plan must cover the points listed above. Emphasis will, of course, vary with training approach. If you are using a resident service school, for example, then training will be out of your hands and these points will be covered by the school. If you are using technical literature to fill some training gaps, then expectations for improved performance are not great. In both of these cases, planning requirements are minimal.

However, fairly detailed planning is required for training with any of the on-the-job approaches or with formal training in unit. You need to know in detail what the training objectives are, who is being trained, and when and how performance is being evaluated.

Emphasis is somewhat different for the self-study approaches that use TEC, ACCP, and technical literature. The soldier, working on his own, succeeds or fails at self-study depending upon his own efforts. Planning emphasis here should focus on identifying personnel who can benefit from self-study, obtaining required training materials, and periodically monitoring progress. Since training is in the soldier's own hands, the training manager/trainer has an important motivational role to play, and less of a direct role as a trainer.

Long-Range Planning Requirements

The primary day-to-day mission of a divisional maintenance battalion is to support the activities of the division and, in particular, its combat units. The long-range plans of the maintenance battalion must relate to the major events scheduled for the division and its various subordinate units. This plan, then, is based on the division and DISCOM long-range planning calendars. The long-range plan for the maintenance battalion must first take into account the major events scheduled for the division as a whole, and for each of its combat and combat support units. A planning calendar should be prepared for training that covers the next 12-18 months, and that lists all the organizational elements in the maintenance battalion. The major training events for the division must then be superimposed on this

calendar to identify periods of major support commitments. Once these commitments are known, the battalion's own training needs can be scheduled to fill the gaps. The time required for training of individuals in common skills and training of units to achieve and maintain tactical proficiency will usually equal or exceed the time available between support commitments. A sample long-range planning calendar for a divisional maintenance battalion is shown in FM 25-2.

Short Range Planning Requirements

A divisional maintenance battalion seldom, if ever, operates under the prime time for training concept; that is, the red/green/amber cycle, the XYZ schedule, or some other variant. Therefore, the short-range planning calendar for the maintenance battalion is similar to the long-range one, except that scheduling is more precisely defined. That is, it is shown on a weekly basis with specific dates for start and end of activities, rather than the more generalized block scheduling by month used in the long-range planning calendar. A sample short-range planning calendar for a divisional maintenance battalion is shown in FM 25-2.

Unfortunately, green or amber training time is not always readily available to the direct support unit. Even during scheduled periods, customer units may continue to make strong maintenance demands. To maximize the effectiveness of such training periods, the maintenance battalion commander may have to negotiate with brigade and division staff to reduce maintenance demands or permit greater flexibility so that the direct support unit can meet its own training needs.

A Philosophy for Scheduling Individual Technical Skill Training

If the available time is taken up by mission support and mandatory training requirements, then what can be done to schedule individual technical skill training? A partial answer to this question is provided by a quote from TC 21-5-7:

> There is no way that a battalion staff can schedule and manage a training program for each man without drowning the unit in paperwork. The answer is to decentralize individual training to the non-commissioned officers.

Planning and Learning Decay

Training is never really completed. Soldiers who do not use skills every day will lose them. This is a phenomenon educators refer to as "learning decay." This is one reason it is important to include refresher training in your planning. Even the skilled soldier can benefit from periodically receiving training on tasks he supposedly already knows. One of the best forms of refresher training for the experienced supervisor is to conduct a class in a subject, rather than wait until skill diminishes. From a planning standpoint, you should cycle through a program of refresher training on a regular basis, and cover not only basic but more advanced technical skills. Cycle through your program at six month or yearly intervals, depending upon the number of personnel and the turnover rate (more rapid cycling will be needed for greater numbers of personnel or greater turnover rate).

TRAINING CHECKLIST

STEP FIVE: PLAN AND CONDUCT TRAINING

This checklist will help trainers and training managers identify the specific tasks they must perform to accomplish this step of the Unit Training Strategy. The trainer is responsible for performing these tasks, unless otherwise indicated. Training managers are responsible for periodically spot-checking to assure that these tasks are being performed adequately. Training managers are also responsible for coordinating with trainers, as indicated below, and for providing the resources trainers will need to take the actions specified.

DEVELOP TRAINING PLAN

- Battalion training managers must establish technical training policy that identifies technical training tasks, establishes priorities, designates personnel responsible for training, and states how the program will be evaluated.

- Develop individual technical training plan every six weeks that identifies:
    1. Training objectives.
    2. Related training approaches.
    3. Personnel participating in training—trainees, instructors, subject-matter experts.
    4. Schedule of training events—projected beginning and end dates, and any key events that may occur in between, such as tests.
    5. Training resources required.
    6. Method of evaluating trainee performance after training.

- Integrate individual technical training plan with battalion long-range plan:
    1. Obtain copy of battalion long-range plan.
    2. Review plan.
    3. Resolve scheduling conflicts.
    4. Schedule individual technical training to fill gaps.

- Develop short-range individual technical training plan at beginning of each week that covers dates and times of training events.

- Conduct training according to plan, if possible, but be flexible and expect departures from plan--then fit training into free time.

- Plan refresher training:

    1. Cover both basic and advanced skills.

    2. Cycle through program every six months to year, depending upon number of personnel and turnover rate.

CHAPTER 8

STEP SIX: EVALUATE TRAINING

INTRODUCTION

This chapter discusses evaluation done by training managers and trainers to help them judge the effectiveness of technical training in their unit. For a more detailed discussion of training evaluation, the reader should refer to FM 25-2, Chapters 2, 3, and 10; and to the BTMS Training Management Workshop discussions of training evaluation.

Everyone in the unit involved in training needs to evaluate his own performance and the performance of those he supervises. This evaluation should be continuous, and should be done routinely, not scheduled for a particular date in the manner of an announced inspection. Scheduled inspections/evaluations follow a familiar pattern. There is usually a frantic effort to prepare. Everything "peaks" shortly before the inspection, and as soon as the inspection is over, things return to "normal." The goal of your training program is to maintain a continuous level of training effectiveness and efficiency. This goal cannot be accomplished by the "yo-yo" effect so commonly associated with regularly scheduled inspections. Your needs are better served by making daily spot checks and correcting deficiencies as soon as they are discovered.

The trainer is at the center of training and should know what is happening at all times. This chapter describes checks he should make daily. He should check two or three of these items daily, without missing a day. The training manager should also make spot checks, checking the same things as the trainer, although he need not make his checks as often. His visits will be given greater emphasis than the trainer's, since the training manager is in a stronger position of authority. The training manager's checks serve a number of related purposes: (1) they show he is interested in the training program and give command emphasis to training, (2) they provide a check on the trainer's performance in controlling the training program, and (3) they highlight training deficiencies.

While evaluation must occur at all rungs of the training ladder, it is of special interest to commanders. The prime training manager for individual technical training will be the company commander. However, the battalion commander is a training manager at the highest level and should occasionally make the same checks as the company commander. This reinforces the training program still further and encourages personnel at all levels. The battalion commander's evaluation function is largely symbolic, but serves the important purpose of showing command emphasis on training at the highest level in the battalion.

WHY EVALUATE?

Evaluation is an essential part of the training process. Without evaluating training program performance, you do not know how effective the program is. Skipping evaluation is like playing baseball without keeping score. You might have an opinion about the best team, but you would have no way of proving that you were correct on any objective basis.

Evaluating performance permits you to determine where weaknesses lie and then correct them. This enables improvement to take place and be measured. This principle applies to unit technical training. Since it is expensive and time-consuming to do training, you want to make sure that you are using your resources effectively.

HOW TO EVALUATE TRAINING

Product Evaluation

Training is not an end in itself. From the viewpoint of training managers and trainers, training must be evaluated in terms of its effect upon maintenance. This is a basic and important point. You cannot judge training effectiveness based simply on the number of hours of classes conducted, test scores, correspondence courses taken, or TEC lessons completed. You must judge your training by its effects upon maintenance performance. If the training program has improved maintenance in the shop, then training has been effective. If not, then it has not been effective. Evaluating training in this way is sometimes referred to as

"product" evaluation. A product evaluation is one that rates the value of training based upon the end products of training—for example, the quality of shop maintenance. If you wanted to do a product evaluation on a doctor, for example, you would not look at his medical school grades, but at his patients' survival rate.

If you apply this same principle in the shop, you can see that product evaluation relies upon objective indicators of maintenance effectiveness. If you have the MPS, then review the information contained on Tables 1 through 5 to see if maintenance effectiveness and efficiency are increasing as a result of training over an extended period of time. Such results are not always obvious, or easy to detect. Without the MPS, you must rely on your judgment of work performance in the shop. Basically, the questions you must ask are the following:

- Are personnel able to perform tasks more quickly?
- Are personnel able to perform tasks more accurately?
- Has the quality of shop work improved?

Make these evaluations based on your observation of everyday work in the shop. Support your judgment by gathering opinions from other leaders who have direct knowledge of shop work—maintenance technicians, first-line supervisors, contacts in customer units.

Process Evaluation

Product evaluation is important, but the training program itself must also be investigated. While a doctor's performance on the job is certainly the most important indicator of his effectiveness, his qualifications are not unimportant. You are interested in the type of training he received and his certifications. These will affect your decision of whether or not to use him. The same principle applies in evaluating training. You can look at different aspects of training and get an idea of whether or not it is working. Evaluating training based on the training process itself is referred to as "process" evaluation. General guidelines for conducting a process evaluation follow.

Maintain records — Step one of the UTS is to maintain records. The UTS depends upon complete and accurate record-keeping. If you do not keep accurate records, then you really have no objective way to generate training objectives. You must depend entirely upon judgment and opinion. This will seriously degrade

your ability to plan and conduct effective individual technical training. Thus, an important part of process evaluation is to examine how well your unit is doing in keeping the records that affect the UTS. These records are described in detail in Chapter 3. One of the most important records is the Job Book. One facet of evaluation, therefore, is how accurately and completely Job Books are being maintained. If you have the MPS, then it is important for MPS forms 2, 4, 5, and 6 to be accurately maintained as well. Assess how well these forms are being maintained, and consider it in your evaluation.

Training objectives — The UTS, as well as almost every other training strategy, is built upon training objectives. In the UTS, training objectives are identified based on a combination of objective factors (an analysis of records), and subjective factors (observation and opinion gathering). The method for identifying training objectives is described in detail in Chapter 4. Since this is the foundation of your training, you must examine how well it is being done in your unit. The following are some factors to take into account.

All trainers should be thoroughly familiar with Soldier's Manual tasks for their subordinates. Unit training managers/trainers should periodically revise their training objectives lists. Minor revisions should be done at least every six weeks. A complete re-analysis to develop a new list should occur at least quarterly. Trainers should record their training-related observations in their Trainer's Notebook to refer to later for developing training objectives.

The list of training objectives developed should be based on a systematic analysis of the factors described in Chapter 4. Training objectives should agree with your common-sense judgment of the areas in which training is needed. Key factors are number of personnel needing training and their average skill level. Training objectives that you attempt to satisfy should be shared by many people, all of whom have similar training needs. Your training objective priorities should be higher for tasks on equipment that your customers need to support their combat mission than for equipment that is less combat critical. Priorities should be higher for tasks that are frequently performed, difficult, and combat critical.

Training approach — There are no hard and fast rules on types of training approaches that should be employed in a unit. There are many different ways to train that are equally effective. However, certain common practices are to be encouraged and others avoided. Use the following general guidelines to assess how effectively the various training approaches are being used.

You should be using several training approaches, not just one or two. The majority of training—perhaps 50 to 70 percent—should be done using some combination of on-the-job approaches. OJE is done routinely, but this is not sufficient. You should also have SOJT in your shop, using SPAS ETM if available. You should be conducting some formal training. This training should include all technical personnel and should cover difficult and critical MOS tasks. You should be making use of on-post schools. At least 10% of your personnel should be engaged in correspondence courses. Your personnel should make habitual use of such self-study materials as training extension courses and technical literature.

Planning — The following are some guidelines that can help you evaluate planning effectiveness.

You should have a short-range training plan that permits you to allocate training resources at least two weeks in advance, determine how training objectives are being satisfied, control training, and evaluate training afterward. You should revise this training plan at least weekly, or more often if necessary.

Testing — Testing is an inseparable part of the learning process. Each of the training approaches has a related testing requirement. Some of these tests are done more formally than others. The SPAS ETM include special written and performance tests. These are quite elaborate. Other training approaches may have less formal tests. If you use technical literature, and give a soldier a reading assignment, for example, then the test might simply consist of asking a few questions related to the topic assigned..

Testing is important to training because it is the way you evaluate trainee performance. Without these tests, you have no way of being sure that learning has occurred. While various types of tests may be used for different training approaches, the results of all must be linked to underlying training objectives.

You build your training program to satisfy training objectives. You test trainees using whatever tests are available or that you make up. You prepare and keep test records. You also record GO's and NO-GO's in Soldier's Manuals. If you have the MPS, then you maintain MPS-5's to keep track of experience, training, and performance testing that occur.

At any point in the training process, you can determine how many of the training objectives you set out to accomplish have been met. This information can be used to evaluate success in meeting training objectives. This is the most important internal indication of training success. The best time to make this comparison is when you periodically update the training objectives lists every six weeks. While updating, you must decide which training objectives have and have not been satisfied. You are then in a good position to decide how successful your training has been in meeting those objectives. Make this comparison and include the results in your training evaluation. If a reasonable number of training objectives (more than 50%) is being satisfied, then training was successful. If not, then training needs improvement.

Trainee scores on written and performance tests are available, and may provide additional evalution information. But keep in mind that training objectives are more important for your purpose. Test scores may rise or fall depending upon test difficulty, how well a test is constructed, and test coverage. Test scores often reflect more of these irrelevant factors than how well training objectives are being satisfied.

MPS Evaluation Factors

The MPS provides two reports that are helpful to the training manager/trainer both for identifying unit training needs and for evaluating training. These reports are Tables 6 and 7. These reports reflect not only areas in which additional training is required, but also how well training is being accomplished. The reports are discussed in the paragraphs that follow.

Table 6 (Skill and Growth Indexes)

Table 6 (Fig. 8-1) lists and graphically shows skill and growth index for each soldier in each MOS category. The Table 6's for MOS's 45K/L, and 63H/W also show average skill and growth indexes for the entire MOS category and for various paygrade subcategories. Low skill indexes indicate lack of skill. Low growth indexes indicate lack of experience and training to develop skills. The skill indexes are calculated so that a score of about 70 represents an adequate skill level for a typical group of soldiers. Experienced personnel will have scores above this. New, inexperienced people—those most in need of training—will have scores below this. Your goal is to get the scores up in the 70 range and higher, if possible. Table 8-1

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'B' CO. 704 MAINT. BN.

TABLE 6 (63H/W):   SKILL AND GROWTH INDEXES

REPORTING PERIOD ENDING:   0284 (10 OCT 80)



                          SKILL GROWTH          SKILL INDEX
NAME    MOS-PAYGRADE      INDEX INDEX  0--------------50-------------100
                                       ↓              ↓               ↓

ALL  E1/2                  42    5.2   --------------+
ALL  E3                    50   12.9   ----------------+
ALL  E4                    55    1.8   -----------------+
ALL  E5                    61    0.0   --------------------
ALL  E1-E5                 49    4.6   ----------------+


MOOSIE(63H-E5)             61    0.0   ----------------‡---
SPIEGELMAN(63H-E4)         57    0.0   ---------------‡--
FULLER(63W-E4)             52    3.6   --------------‡-+
ZIMMERMANN(63H-E3)         50   12.9   -------------‡+
SIMPSON(63H-E1)            50   12.9   -------------‡+
HARPER(63W-E2)             48    2.9   -------------‡
NORRIS(63W-E2)             27    0.0   --------      ‡

+ SKILL GROWTH DURING LAST 6 WEEKS
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Figure 8-1. MPS Table 6

TABLE 8-1

SKILL PROBLEM SERIOUSNESS VERSUS AVERAGE SKILL INDEX

PERCENT SKILL INDEX	SKILL PROBLEM SERIOUSNESS
. Less than 40	Critical
40-60	Serious
60-80	Mild
More than 80	Insignificant

describes skill index scores in subjective terms. For example, average growth index for a group of soldiers should usually be at least three percent in any one time period. Growth index should be higher for inexperienced soldiers than for experienced ones. Soldiers with skill indexes below 50% should have growth indexes near five percent. Soldiers with skill indexes above 50% should have growth indexes near two percent. Table 6 will not help you determine training objectives. It will help you evaluate how serious a training problem your unit has and how effectively that problem is being attacked. The lower the average skill index, the more serious the training problem. The lower the average growth index, the less is being done to solve that problem.

Use Table 6 to evaluate training in your unit by comparing displayed skill and growth indexes with the suggested ranges given above, and by observing whether or not the scores change across time. Consistently low growth indexes indicate that training is not effective. Low skill indexes indicate that you have serious training deficiencies. As training occurs, skill indexes should rise. If they stay the same or change very little, then training is not effective.

Table 7 (Skill Development Summary)

Table 7 (Fig. 8-2) is primarily intended to help commanders evaluate the performance of training managers/trainers in increasing the skill of subordinates.

'E' CO. 704 MAINT. BN.

TABLE 7 :   SKILL DEVELOPMENT SUMMARY

REPORTING PERIOD ENDING: 0354 (19 DEC 80)

MOS	AVERAGE SKILL INDEX	GROWTH INDEX COMPONENTS			TOTAL GROWTH INDEX
		EXPOSURE INDEX	TRAINING INDEX	PERFORMANCE INDEX	
31E	40	1.4	3.5	4.0	8.9
41C	35	4.8	4.4	2.1	11.3
44B	62	1.0	2.0	1.4	4.4
45B	70	1.5	2.0	1.4	4.4
45K/L	56	2.6	1.7	1.6	5.9
52D	36	4.8	4.0	3.0	11.8
63G	68	2.3	1.3	1.4	5.0
63H/W	75	1.2	1.0	2.1	4.3

Figure 8-2. MPS Table 7.

Table 7 summarizes information from Table 6 and also breaks down growth index into its component parts.   Apply the rules given for Table 6 (see above) for interpreting average skill index and total growth index. As noted above, growth index should be in the 2-5% range.

Total growth index is made up of three separate parts: (1) exposure index, which reflects soldier experience on new jobs, (2) training index, which reflects training soldiers have received, and (3) performance index, which reflects skill credits soldiers have gained through demonstrated performance on a test. These are the three methods by which soldiers can increase their skill index.   As a training manager or trainer, you are responsible to see that skill is developed using methods one or two or, if it already exists, is demonstrated using method three.

Exposure and training index should usually be about equal. Performance index will normally be smaller in value than either. There will be exceptions to this general rule, however. If exposure index is low, it means that soldiers are not gaining experience on new jobs. Corrective action should be taken. If training index is low, it means that soldiers are not being trained. Corrective action should be taken. If performance index is low, this is not generally a cause for any corrective action, unless it is combined with other low indexes. Together, these present a pattern of weak training management and poor trainer performance. Table 7 is extremely useful for evaluation. In a few numbers, it tells you whether or not skill is being developed and, if not, where the failure lies.

TRAINING CHECKLIST

STEP SIX: EVALUATE TRAINING

This checklist will help trainers and training managers identify the specific tasks they must perform to accomplish this step of the Unit Training Strategy. The trainer is responsible for performing these tasks, unless otherwise indicated. Training managers are responsible for periodically spot-checking to assure that these tasks are being performed adequately. Training managers are also responsible for coordinating with trainers, as indicated below, and for providing the resources trainers will need to take the actions specified.

PERFORM PRODUCT EVALUATION

- Evaluate work performance in shop:
    1. Are personnel able to perform tasks more quickly?
    2. Are personnel able to perform tasks more accurately?
    3. Has the quality of shop work improved?

- Evaluate work performance based on observation of everyday work in shop and by gathering opinions from maintenance technicians, first-line supervisors, and contacts in customer units.

- Keep track of evaluation notes in Section 7 (Evaluation Notes) of your Trainer's Notebook.

PERFORM PROCESS EVALUATION

- Evaluate record maintenance:
    1. Check accuracy and completeness of Job Books.
    2. For MPS units, check accuracy and completeness of MPS forms 2, 4, 5, and 6.

- Evaluate training objective identification process:
    1. All trainers should be familiar with Soldier's Manual tasks for their subordinates.
    2. Training managers/trainers should revise training objectives lists every six weeks and develop new lists at least quarterly.
    3. Trainers should record training information in their Trainer's Notebooks.
    4. Training objectives should agree with common-sense judgments of areas in which training is needed.

- Evaluate use of various available training approaches:

    1. Several training approaches should be in use, not just one or two.

    2. Majority of training--50-70 percent--should be done with combination of on-the-job approaches such as OJE, SOJT, and SPAS ETM.

    3. Formal training should occur on difficult and critical tasks and on tasks for which skills need rapid improvement.

    4. At least 10 percent of personnel should be engaged in correspondence courses.

    5. Self-study materials such as Training Extension Courses and technical literature should be regularly used.

- Evaluate planning:

    1. Short-range plan should permit allocation of training resources two weeks in advance, determine how training objectives are being satisfied, permit control of training, and training evaluation.

- Evaluate testing:

    1. Some form of test should be associated with each training approach.

    2. Written tests, if provided with training materials, should be used.

    3. Performance tests should be used in preference to written tests, if available.

    4. At least 50 percent of training objectives should be satisfied during each six-week interval.

- If unit has the MPS, then MPS Tables 6 (Skill and Growth Indexes) and 7 (Skill Development Summary) should indicate that training is occurring:

    1. MPS Table 6 should show some of these characteristics:

        —Average skill index about 70 percent.

        —Growth index should range between two and five percent and be higher for inexperienced soldiers than for more experienced ones.

    2. Table 7 factors:

        —Skill and growth indexes should be as noted for Table 6, above.

        —Training index and performance index should be greater than two percent.

- Each soldier should have a copy of his Table 8 (Individual Skill History).

APPENDIX A

SPECIAL DATA INPUT REQUIREMENTS FOR MPS TABLE 9

INTRODUCTION

From the training viewpoint, MPS Table 9 is probably the single most important MPS report. It identifies training objectives, priorities, personnel affected, and permits identification of detailed task and training materials information.

Training managers/trainers are directly responsible for providing the data inputs that generate Table 9. The three inputs they provide are on forms:

- MPS-5 (Training/Performance Demonstration)--used to enter training or performance credits.

- MPS-7 (Special Priority Flag)--used to assign special or null priorities to tasks.

- MPS-9 (Training Requirement Priority Threshold)--used to control the number of training requirements presented on Table 9.

This appendix describes the data inputs that training managers/trainers must provide.

MPS-5 (TRAINING/PERFORMANCE DEMONSTRATION)

General

The MPS-5 is used to assign a soldier skill credits for receiving training, or passing a performance test. Completing this form is similar to making written entries in a soldier's Job Book. The effect is to show that skill has been gained as a result of training or demonstrated on a performance test.

When to Complete MPS-5

Complete an MPS-5 each time a training or testing event occurs, such as after conducting a class, when a soldier meets an MPS training objective, or demonstrates that he can perform an MPS job task to standard and under the conditions given in a Soldier's Manual.

PREVIOUS PAGE
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How to Complete MPS-5

The MPS-5 is shown in Figure A-1. Form entries are described line by line in the paragraphs that follow.

MPS-5 (TRAINING/PERFORMANCE DEMONSTRATION)

1. |___|___|___|___| JULIAN DATE

2. _____ EQUIPMENT/JOB TYPE

3. TASK #: 1 2 3 4 5   6 7 8 9 10   11 12 13 14 15   16 17 18 19 20

NAMES	PERF DEMO	TRNG CREDIT SCALE
4. _____	P	T 1 2 3
5. _____	P	T 1 2 3
6. _____	P	T 1 2 3
7. _____	P	T 1 2 3
8. _____	P	T 1 2 3
9. _____	P	T 1 2 3
10. _____	P	T 1 2 3

Figure A-1. MPS-5 Data Collection Form.

Line 1 (JULIAN DATE) — JULIAN DATE is a four-digit number between 0001 and 9366. The date entered is the date that the training or testing event occurred. Cards should be completed immediately after these events. Do not begin a card and then hold it until all NAME lines are filled. Turn it over to the system operator immediately after the training or testing event.

Line 2 (EQUIPMENT/JOB TYPE) — EQUIPMENT/JOB TYPE codes are given in Table A-1. The shop office also has a copy of these codes. Code numbers range from 1 to 69. Look up code in Table A-1 and enter it on line 2.

Only one EQUIPMENT/JOB TYPE can be marked per MPS-5. Do not enter "OTHER" type job (such as "5. Other Tracked Vehicles") here.

Line 3 (TASK NUMBER) — TASK NUMBERS range from 1 to 20. A combination of an EQUIPMENT/JOB TYPE code and a TASK NUMBER is needed to identify specific tasks. TASK NUMBER codes are given on the MPS task list, which is used for completing the MPS-2 (Job Performance) form. (Tasks are also listed by number on MPS Tables 3 and 8.) Pick the appropriate table for the MOS. Find the Equipment/Job. Then find the task. Use the number beside the task for TASK NUMBER.

Several TASK NUMBERs can be marked on each MPS-5.

Lines 4 through 10 (NAMES, PERF DEMO, TRNG/CREDIT SCALE) — Write the names of soldiers who have participated in the training or testing event on the dashed lines beneath the NAMES heading.

The soldier whose name you list can be assigned either performance demonstration credit (PERF DEMO) or training credit (TRNG). He cannot be assigned both (on the same line).

To be eligible to receive PERF DEMO credit, the soldier must pass a performance test in which he demonstrates his ability to perform the training objective task to standard and under the conditions given in the Soldier's Manual. You must be satisfied that he is fully competent to perform this task--the test is whether or not you would be willing to have him technically supervise the task while it is performed by others. The effect of giving PERF DEMO credit is to tell the computer that the soldier has fully satisfied the training objective. The computer then assigns him seven credits for the task. Give PERF DEMO credit by drawing a line through the "P" beneath the PERF DEMO heading.

A-3

EQUIPMENT/JOB TYPE CODES

MPS CODE	SHOP SECTION AND EQUIPMENT	MPS CODE	SHOP SECTION AND EQUIPMENT
	AUTOMOTIVE (63H, 63W, 63G)		FIRE CONTROL (41C) (Cont.)
	TRACKED VEHICLES (63H)	34.	M1 Collimator
1.	M60 Family - Automotive	35.	M13 Computer
2.	M113 Family	36.	M1 Quadrant
3.	M109/M578 - Automotive	37.	M19 Periscope
4.	M88	38.	M32/36 Periscope
5.	Other Tracked Vehicles	39.	M15 Quadrant
		40.	M145 Telescope Mount
	WHEELED VEHICLES (63W)	41.	M17 Rangefinder
6.	M151 Family	42.	M53 Sight
7.	Gama Goat	43.	M105 Telescope
8.	M880 Family	44.	M118 Telescope
9.	2.5/5 Ton M Series	45.	M117 Telescope
10.	Other Wheeled Vehicles	46.	M10 Ballistic Drive
	FUEL AND ELECTRIC (63G)	47.	Infinity Sight
11.	Brakes	48.	Compass
12.	Carburetors	49.	Other Fire Control
13.	Distributors		ARMAMENT (45K/45L)
14.	Fuel Pumps	50.	M60 Family - Armament
15.	Injector Nozzles	51.	M109 - Armament
16.	Generator/Alternator	52.	Other Armament
17.	Regulators/Controls		SMALL ARMS (45B)
18.	Starters	53.	M16 Rifle
19.	Other F&E	54.	Cal. 45 Pistol
	GENERATOR (52D)	55.	M203 Grenade Launcher
20.	Gasoline Engine Generator (GED)	56.	81mm Mortar
21.	Diesel Engine Generator (DED)	57.	107mm Mortar (4.2 inch)
22.	Other Generator Shop Work	58.	M60 Machinegun
	COMMUNICATIONS/ELECTRONICS (31E)	59.	M2 Machinegun
23.	RT246/524, R442	60.	M85 Machinegun
24.	AN/GRA 39	61.	M240 Machinegun
25.	C-2296/97/98/99	62.	Other Small Arms
26.	AM-1780	JOB CODE	TYPE JOB
27.	PRC-77		
28.	CVC		**SERVICE AND RECOVERY (44B)**
29.	TA312	63.	Oxyacetylene Welding
30.	Other C&E	64.	Arc Welding
	ARMAMENT (41C, 45B, 45K, 45L)	65.	Glass Repair
	FIRE CONTROL (41C)	66.	Fuel Tank Repair
31.	M2 Aiming Circle	67.	Radiator Repair
32.	M17 Series Binoculars	68.	Body Repair
33.	M18 IR Binoculars	69.	Other Metalwork

Training credit should be given for participation in any training event. A training "event" is individual technical training that is received using any of the approaches described in Chapter 6 and Appendix B (except OJE) or any reasonable variations of those methods. You can vary the number of credits you give, but **you should never give more than three credits for any training event.** Table A-2 gives recommended credits for various training approaches. Use this table to determine appropriate training credits, making allowances for the particular situation.

Give training credit by drawing a line through the "T" beneath the TRNG heading and another line through the appropriate number beneath the CREDIT SCALE heading.

TABLE A-2

RECOMMENDED MPS-5 TRAINING CREDITS FOR VARIOUS
TRAINING APPROACHES

	METHOD	CREDITS
1.	Institutional training (resident service school)	1-2
2.	Institutional training (on-post school)	1-3
3.	Institutional training (public institution)	1-2
4.	Supervised on-the-job training (SOJT)*	2
5.	On-the-job experience (OJE)*	0
6.	Use of skill performance aids-extension training materials (SPAS ETM)	1
7.	Formal training in unit	1-3
8.	Use of on-post technical experts	1-3
9.	Use of training extension course (TEC)	1-2
10.	Use of Army correspondence course program (ACCP)	1-2
11.	Use of technical literature	0-1

*The soldier automatically receives one additional **experience** credit for each task performance as a result of the MPS-2 (Job/Task Performance) card completed by his supervisor.

MPS-7 (SPECIAL PRIORITY FLAG)

General

The MPS-7 is used to attach/remove special or null priorities to/from MPS tasks. MPS Table 3 (Figure A-2) doubles as the MPS-7 data input form since it provides equipment and task listings for each MOS in columnar form. The far right column of this table, SPEC. PRIORITY FLAG, displays current special priority and null priority flags by either an N or S opposite the listed tasks. By examining Table 3 you can determine current flag status. By annotating the table, you can identify for the system operator any flag status changes you want to make.

When to Complete

Complete an MPS-7 when you want to (1) change current special/null priority assignments, (2) prevent certain training objectives from appearing on Table 9 (attach null priority), or (3) want certain training objectives to appear on Table 9 under all conditions (attach special priority).

The MPS-7 must be completed and submitted before the next Table 9 is generated.

How to Complete

Determining current priorities -- Determine current priorities by examining Table 3 for the MOS. The far right column of Table 3 is labeled SPEC. PRIORITY FLAG. If a null priority is attached to a task, then an N will appear in this column opposite the task. If a special priority flag is attached, then an S will appear.

Modifying current priorities -- To add, modify, or delete a special or null priority, simply annotate a Table 3. Cross off flags that you want deleted. Write in flags that you want added. Give the annotated Table 3 to the system operator and direct him to adjust the special or null flags as you have indicated.

TABLE 3 (31E): AVERAGE DIRECT MAN-HOURS PER JOB BY EQUIPMENT
AND TASK

REPORTING PERIOD ENDING: 0354* (19 DEC 80)

		MAN-HOURS PER TASK			
EQUIPMENT/TASK	NO. JOBS	AVG. FROM PREV PERIODS	CUR-RENT AVG.	NO. JOBS	SPEC. PRIO-RITY FLAG
RT-246/524, R-442					
1 ALIN DVR & PWR AMP	2	9.0			
2 ALIN SERVO SYS (246)	1	4.0			
3 ALIN IF RCVR A4000	23	7.6	21	6	N
4 ALIN VHF TUNER A1000	5	3.4			
5 ADJ AUDIO SQUELCH A5000	2	14.5			
6 PERF PREALIN CK DVR&PWRAMP	2	9.0	9.2	2	
7 ALIN MAST OSC & BUFR AMP	5	3.4			
8 REPL MODS IN RCVR, R-442	1	1.0			
9 REPL MODS IN RT-246/524	1	5.6			
10 REPL PARTS IN FRNT PNL ASSY	20	12.2			S
11 REPL INTERCNCT MOD CABLES	1	10.0			
AN/GRA 39					
1 REPL BUZZER	20	1.3			
2 REPL BATTERY BOX	3	4.7			
3 REPL CARDS	2	10.5	10.2	1	N
4 REPL MOD	1	1.0			S
5 REPL AUDIO PLUGS	3	1.0			
6 REPR WIRING	9	9.2	9.0	2	
C-2296/7/8/9					
1 REPL AUDIO PLUG	15	1.4			
2 REPL VOLUME CONTR	2	1.0			
3 REPL MOD	5	2.5	2.3	2	
4 REPR WIRING	1	3.0			N

Figure A-2. MPS Table 3/MPS-7 Data Collection Form.

MPS-9 (TRAINING REQUIREMENT PRIORITY THRESHOLD)

General

The MPS-9 sets the threshold used in generating Table 9. Threshold controls the number of training objectives the computer lists on Table 9. If threshold is set at one, then only tasks that soldiers have one or fewer skill credits on will appear on MPS Table 9. If set at two, then only tasks that soldiers have two or fewer skill credits on will appear. And so on—the larger the number chosen, the more training objectives will appear.

When to Complete

Complete an MPS-9 when Table 9 contains too many training objectives for you to handle during the six weeks between consecutive Table 9 reports. Also complete an MPS-9 when Table 9 contains too few training objectives. The MPS-9 must be completed and submitted before the next Table 9 is generated.

How to Complete

The lower the threshold is set (that is, the larger its numerical value), the more training objectives will appear on Table 9. The higher it is set, the more selective the computer will be in listing training objectives. Threshold can be set between one and seven. Normally, it should be set between one and three. Set it where it will cause Table 9 to present a manageable number of training objectives—a number that you can reasonably handle during the six weeks between Table 9 reports.

The MPS-9 data collection form is shown in Figure A-3. Enter JULIAN DATE on the line at the top of the form. Then draw a line through the THRESHOLD value you select opposite the MOS's you supervise.

Sign the form at the bottom and give NAME/RANK identification.

MPS-9 (TRAINING REQUIREMENT PRIORITY THRESHOLD)

JULIAN DATE _____

MOS	THRESHOLD						
31E	1	2	3	4	5	6	7
41C	1	2	3	4	5	6	7
44B	1	2	3	4	5	6	7
45B	1	2	3	4	5	6	7
45K/L	1	2	3	4	5	6	7
52D	1	2	3	4	5	6	7
63G	1	2	3	4	5	6	7
63H	1	2	3	4	5	6	7
63W	1	2	3	4	5	6	7

Certified by (Name/Rank) _____

Figure A-3. MPS-9 Data Collection Form.

APPENDIX B

TRAINING APPROACHES

INTRODUCTION

This appendix covers 11 training approaches. The approaches described in this appendix are not rigid categories. Each approach can employ a variety of training resources and procedures. Each training approach has certain unique features as well, and these are why it is classified as a separate approach. These features will be discussed later in the appendix. The 11 training approaches are the following:

1. Institutional training (resident service school)
2. Institutional training (on-post school)
3. Institutional training (public institution)
4. Supervised on-the-job training (SOJT)
5. On-the-job experience (OJE)
6. Use of skill performance aids-extension training materials (SPAS ETM)
7. Formal training in unit
8. Use of technical experts
9. Use of training extension course (TEC)
10. Use of Army correspondence course program (ACCP)
11. Use of technical literature

Each training approach is discussed in a separate section of this appendix. Each section includes a description of the approach, discussion of advantages and disadvantages of the approach for use at unit level, and discussion of selection considerations. Selection guidelines are given in Chapter 6. Read this appendix carefully before attempting to select a training approach according to the procedures given in Chapter 6.

1. INSTITUTIONAL TRAINING (RESIDENT SERVICE SCHOOL)

Description

The new soldier attends the resident service school for his MOS before being assigned to a unit. During this resident training, he receives formal instruction in some of the critical tasks for his MOS. While attending school, the soldier is able to devote his full attention to learning, without being distracted by the various interruptions and outside duties that exist at unit level. Opportunities for more advanced instruction in resident schools occur as a soldier's career advances. Resident training is primarily designed to provide individual training at Army Service Schools, Army Training Centers, and USAR Schools. Individual training provides soldiers entering the Army with basic skills and functional or career development not available in units. Technical MOS holders usually undergo resident service school training in their MOS's prior to being assigned to a unit. Advanced training is provided in some MOS's as personnel advance in skill level. Such training is not universally available or used, however.

Resident training focuses on job tasks critical to the MOS. It does not focus on single tasks. Trainees must complete an entire training course and are not permitted to take training only on subjects or areas important for fulfilling unit training requirements.

Advantages and Disadvantages

Resident training is formally organized and is based on long experience in classroom instruction. Instructors have time to devote full attention to training development. As time goes on, training materials are revised to keep up with the latest developments. Training methods are tried and revised based on results. Instructors develop substantial proficiency as trainers. There are usually civilian training developers and instructors who stay in assignments for years and are able to give the training establishment continuity. Time is available to develop and validate tests that can be used to judge trainee proficiency and that reflect training effectiveness.

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Resident training clearly has many strengths. However, from the unit perspective, it also has a number of drawbacks. The most obvious is non-availability of personnel in the shop. You must send a soldier to a resident school for him to benefit from it. While gone, he is not available to perform his job.

Resident training focuses on basic MOS skills for skill level one, and on advanced MOS skills and supervisory skills for skill level two. Advanced supervisory and management skills are covered in courses above skill level two. While these training programs are structured and designed to fit into the soldier's career pattern, they do not necessarily satisfy unit training objectives. A resident school has established its own training objectives, which may or may not be the same as the unit's.

The unit training manager/trainer will seldom attempt to satisfy unit training objectives by sending soldiers to resident service schools. Time and costs involved in sending soldiers away are simply prohibitive. On the other hand, attendance at a resident service school is an important part of a soldier's basic and advanced training. This supports his career advancement. The skills and knowledge gained will improve the soldier's technical and leadership skills, and thereby support unit efficiency and effectiveness.

Selection Considerations

The unit training manager/trainer must assure that his personnel receive appropriate basic and advanced resident training. The majority (perhaps all) of your subordinates have undergone resident MOS training. Normally they receive this training following basic training and before being assigned to a unit.

There are exceptions. Perhaps the most common is the soldier who changes MOS. Often such soldiers cross-train in the new MOS and eventually go to work in it. They may obtain a secondary MOS in the new field. For administrative reasons, because of unit needs, or because of the soldier's expressed desire, he may begin working in the new MOS. The most effective way to start him in this MOS is to send him to a resident school for training. There he can receive training in basics and get a better start than you can give him at unit level. If you have soldiers

working in an MOS who have not received resident training, consider the resident school possibility. Talk it over with commanders. Send the soldier to school if you can.

Soldiers in many MOS's can undergo additional resident training at various stages in their careers. Advanced training stresses management and supervision. Many technical MOS holders are promoted because of their technical skill. Possessing technical skill does not mean that a soldier has the supervisory and managerial skills needed for a higher leadership position. That is why it is so important to send him to school as his career progresses. If possible, send such soldiers to resident school to receive additional training.

2. INSTITUTIONAL TRAINING (ON-POST SCHOOLS)

Description

Many Army posts run schools to meet the individual training needs of soldiers. Such schools are commonly operated at brigade or divisional level. Ordinarily, schools are operated with regularly scheduled classes that are designed to meet local training needs. Typically, classes are organized, conducted, and managed by the local command, and the instructors are technical experts from local units. Sometimes the command will contract part of the training function out to civilian contractors. The contractors will respond to a statement of work provided by the command and develop training accordingly. To qualify for and receive a contract to conduct training, the contractor will have to provide a well-qualified staff of instructors, typically former military personnel with extensive technical and training experience. Some such schools may exist where you are. The availability of on-post schools varies considerably from post to post, as well as with time of year at a particular post. For this reason, it is impossible to describe all on-post schools in detail here. General characteristics can be given, however.

The following are some of the typical characteristics of on-post schools:
- Courses are of short duration (usually a few days, to a maximum of about two weeks).
- Subjects covered relate closely to job tasks that must be performed.
- Training is scheduled as local needs dictate.
- Local units influence training content and scheduling.
- School instructors and trainers may be local military personnel or contracted civilians.
- Instructors are usually technical subject matter experts.
- Training is often coordinated with, and influenced by, similar training at resident service schools.

The strongest feature of the on-post school is that it is designed to meet local training needs. This is ideal for the unit training manager/trainer.

Advantages and Disadvantages

The on-post school is one of the best training resources available. It is responsive to the needs of local units, has on its faculty the most technically qualified personnel, and schedules training to fit in with operational requirements. The areas of uncertainty, which may occasionally be drawbacks, are scheduling of classes and subjects covered—the on-post school often stresses training for high-density MOS's such as those in combat units. Training for some of the lower-density and highly technical MOS's in direct support units may be limited or non-existent.

Selection Considerations

If there is an on-post school available, investigate its curriculum and training schedule. Determine if the curriculum covers areas that could help you train your soldiers. The on-post school usually stresses individual training on key skills. Examine your training objectives and determine if the school can satisfy certain of them. If it can, then make up a list of soldiers to send to school. Talk to your commander and schedule soldiers for attendance.

If your on-post school does not provide the type of training that you need, contact school administrators and determine if additional curricula can be provided to suit your specialized needs. No one ever developed an effective training course without a clearly stated need. This rule applies to the on-post school. Take action. If needed training is not presently available, and you can get something started, then you are doing your unit a favor.

Try to make a connection between the on-post school training and the training going on in your unit. If you can use the school, then this takes some of the load off the training you must do at unit level. However, you should reinforce school training where practical by giving hands-on practice or other reinforcement in your unit. Do not simply send your soldiers to school and leave it at that.

Many on-post schools provide NCO leadership training, often in the form of the primary leadership course--the so-called "NCO academy." Assure that your NCO's receive this training. Supervision is as important to your maintenance operation as is technical skill. Leadership training is a specialized area, ideally suited for formal training in an on-post school. Assure that NCO's who are appropriately qualified attend.

3. INSTITUTIONAL TRAINING (PUBLIC EDUCATIONAL INSTITUTIONS)

Description

Direct support units are often located on posts that are close to communities with public educational institutions such as universities, colleges, junior colleges, and trade schools. In some cases, these institutions will offer courses on topics that relate to training objectives. It is fairly common for such institutions to offer technical training in areas such as diesel mechanics, electronics, and various other technical subjects that may relate to the technical MOS's that you supervise. In general, the junior college and the trade school are more likely to provide courses that are suitable than the university or college, although this is not always the case.

Advantages and Disadvantages

Before you can make a decision on the potential usefulness of public educational institutions, you must know what they offer. This means obtaining catalogs from any nearby institutions that may offer courses. Obtain catalogs from universities, junior colleges, and trade schools. Look through course listings. Relate the offerings to the training objectives that must be met by your soldiers.

Time and costs are involved in having soldiers attend school. If you want to send a soldier to a private trade school so that he can learn about diesel mechanics, for example, this will generally mean time away from the unit and lost manpower, not to mention the expenses for tuition and other materials. Some motivated soldiers will be willing to pay these costs themselves, in order to increase their knowledge and skill. However, if you are going to promote attendance for the purpose of improving on-the-job performance in your unit, school costs are more appropriately ones the unit should defray.

Selection Considerations

You may discover that local institutions offer training that is highly relevant to a technical MOS and which can greatly increase the on-the-job efficiency and effectiveness of your soldiers. In these cases, the training may be

ideally suited to your needs. On the other hand, courses may not be sufficiently relevant to your needs to really justify the loss of time and manpower involved in having your soldiers attend during working hours.

In any case, attendance at such institutions is an issue that must be addressed by the training manager and S3. The place for you to start, if you do not know what battalion policy is, is with the S3. Discuss the possibilities with him, and determine battalion policy. If it appears that the battalion encourages such training, then investigate training further, as described above. Then take action, if appropriate.

OVERVIEW OF ON-THE-JOB TRAINING APPROACHES

There are two "on-the-job" training approaches--supervised on-the-job training (SOJT) and on-the-job experience (OJE). There is some confusion about these terms. Every Army training manager/trainer seems to have his own idea of what each means. The terms are not interchangeable. Try to erase any preconceptions you may have about them. Work from now on with the definitions given in this chapter. Let us consider what these approaches have in common, and how they differ.

First, both approaches are used on the job, in the workshop. OJE takes place exclusively in the shop. SOJT takes place primarily in the shop, but usually involves additional, outside training.

Second, both approaches are closely supervised. (The "S" on SOJT does not stand for something unique about the SOJT approach.)

Third, both approaches involve hands-on practice by the trainee, evaluation by the supervisor, and record-keeping.

Fourth, both approaches use the equipment itself for training, and appropriate shop tools, technical manuals, and test equipment.

Fifth, with both approaches, trainers and trainees are consciously aware that training is occurring and act accordingly. This may sound obvious, but it is not. In practice, it means that supervisors take time during jobs to explain what is going on, work with trainees to assure that they understand, and in general treat shop work as a learning experience. Training does not occur when the only thing that anyone is thinking about is completing the job.

Now, the differences. They are basic, but subtle.

SOJT is the more narrowly defined of the training approaches. SOJT involves the use of training materials in a training program designed for use at unit level. Training is conducted according to a plan. The training materials and plan may be locally developed or provided by the Army.

OJE is just that. It does not involve any overall plan, other than what occurs on a job-by-job basis.

These training approaches are discussed in greater detail in the paragraphs that follow.

4. SUPERVISED ON-THE-JOB TRAINING (SOJT)

Description

Supervised on-the-job training is a general name applied to a wide range of different types of training. An SOJT program can employ a variety of different training materials, put together by unit trainers to meet unit needs. The program may be tightly or loosely structured, and cover a wide or very narrow range of training areas. During training, the individual soldier works closely with his supervisor in the shop and also undergoes training assignments on his own. The basic requirements of an SOJT program are that instruction takes place in some formal manner, trainees are designated and recognize that they are undergoing training, records are kept, and trainee performance is evaluated after training. SOJT may additionally include a number of other features, although the above four are fundamental. Any SOJT program that does not include at least these features does not deserve the name.

Advantages and Disadvantages

SOJT is one of the best and most practical ways to train soldiers. It has many advantages: it takes place in the shop, and is therefore not disruptive of normal work flow, it minimizes loss of time and personnel, it involves the first-line supervisor actively in training his soldiers, and it reduces overall training costs. Since it is centered on shop work, the number of persons receiving SOJT may be limited by the equipment (e.g., turret repairs).

Selection Considerations

Design an SOJT program that alternately stresses different technical areas and training needs. Once designed and set in motion, such a program can then be carried on fairly easily. The hard part is getting started. The program should be designed in modules so that training objectives can be met as needed by making use of appropriate modules.

It is important to monitor your SOJT program closely to assure that it is carried out effectively and that training objectives are being satisfied. The

freedom to design an SOJT program to suit unit needs is not the freedom to ignore the basic principles of SOJT: instruction takes place in some formal manner, trainees are designated and recognize that they are undergoing training, records are kept, and trainee performance is evaluated after training. Do not let your SOJT program degenerate into some loose, unstructured form.

The workshop is a good place to train soldiers. However, merely being exposed to jobs is not training. The instructors in an SOJT program are usually first-line supervisors, who are occasionally supported by senior supervisors, maintenance technicians, and outside subject matter experts. These instructors must recognize that they are conducting training, not merely performing a job. They must take time during a job to explain work in progress and answer questions. They must provide new soldiers opportunities to practice new tasks so that skill is developed. They must evaluate performance to assure that soldiers become qualified on each job they do.

An SOJT program cannot depend entirely on work coming through a shop. If it did, training coverage would be limited to commonly performed jobs. This is clearly unsatisfactory. The SOJT program must focus not only on jobs coming through the shop, but upon other jobs as well. Some of these will rarely be performed. This means that instructors must demonstrate these jobs on operational equipment. You may have to obtain the cooperation of commanders in supported units to permit training with their equipment. Use simulators or models, if available. Coordinate training to assure that training occurs in all areas, not just on those targets of opportunity which happen to come through your shop.

The Army makes many different training materials available. While not much is required to conduct SOJT, SOJT can be considerably enhanced by using these materials. It simply takes a little imagination. Training extension courses (TEC) are customarily used on an individual self-study basis, but they can, for example, be used to support SOJT as a way to demonstrate job tasks before performing them in the shop. Select the appropriate TEC lesson and play it in the shop (or field) before performing the job. Other training materials may be

similarly used to support SOJT. Skill Performance Aids-Extension Training Materials (SPAS ETM) are designed to support SOJT and are discussed separately (see training approach 6).

Perhaps the most important single medium to use in doing SOJT is the technical manual. Many experienced repairmen leave these on the bookshelf instead of carrying them out to the equipment where they should be available for reference. Experienced repairmen may not feel that they need a TM to do a job. The TM should, nonetheless, be used to prevent mistakes from occurring and to establish good habits in inexperienced soldiers.

The training manager/trainer should oversee SOJT and assure that quality instruction occurs. The guidelines in this section will help you evaluate SOJT quality. Assure that SOJT occurs according to these guiding principles.

5. ON-THE-JOB EXPERIENCE (OJE)

Description

On-the-job experience is certainly the most common training method used in the average Army shop. Some form of it is used every day in every Army shop. Typically, inexperienced soldiers are supervised by, and work with, experienced soldiers. Learning occurs via observation and hands-on practice.

OJE is not the assignment of an inexperienced trainee to perform a job that he has never done before, without adequate supervision. That practice, though not uncommon, is to be discouraged. For OJE to work, the trainee must have basic technical skills. The point of OJE is to develop those skills. You cannot train a soldier to be a repairman through OJE alone, anymore than you can train him to be a pilot by putting him in an aircraft and hoping for the best.

Advantages and Disadvantages

OJE has several obvious strengths: it is non-disruptive of normal shop work, it requires no special effort in developing training materials, and it is a practical and effective way to develop skill.

Its main drawback is that experience opportunities are limited to jobs that come through the shop. The trainee will have sufficient opportunity to develop skill on routine tasks, but little or no opportunity to develop skill on rarely performed tasks.

OJE is not as effective as SOJT for developing the skills of very inexperienced soldiers. They need more than observation and hands-on experience. They need structure in their training.

Selection Considerations

Keep track of soldier experience. Consider it when you make team assignments. Assign inexperienced soldiers to work with experienced ones. See that your inexperienced soldiers have the opportunity to work on many different jobs, and fully round out their skills.

OJE does not require the supervisor to make the same effort to conduct training as SOJT. He does, however, have responsibilities to assure that trainees understand what is going on, participate in work, and receive feedback on performance. Holding wrenches, getting coffee, and retrieving drain plugs from oil sumps cannot rightly be considered OJE. Assure that supervisors train their soldiers, not merely use them.

6. USE OF SKILL PERFORMANCE AIDS-EXTENSION
TRAINING MATERIALS (SPAS ETM)

Description

SPAS ETM is an Army program that combines the development of new technical manuals and associated extension training materials into an integrated package to operate and maintain a hardware system. The technical manuals provide detailed procedures and highly illustrated instructions. These permit the soldier to perform complex tasks with limited supervision and minimum training. The extension training materials (ETM), when used with the manuals, teach selected skills needed to operate and maintain equipment. ETM is the training package prepared for a specific equipment item. It contains all of the instructions and materials necessary to support a supervised on-the-job training (SOJT) program for a particular MOS and maintenance level for a particular item of equipment. Each package contains two basic documents: a Trainer's Guide, and a Student Guide. The Trainer's Guide provides the trainer with complete instructions to conduct the program. The Student Guide provides general instructions concerning the ETM package and specific lesson applications for the soldier. Each lesson in the package has a pre-test/post-test that is administered by the trainer. ETM's are designed to build on minimum prerequisite skills acquired through formal schooling. ETM's provide sufficient resources for the trainer to train personnel to established standards for operation and maintenance of equipment. SPAS ETM's are being developed for all new systems introduced into the Army inventory and are also being developed for some systems that are already fielded.

Advantages and Disadvantages

SPAS ETM's are an ideal method for conducting SOJT. They provide necessary training materials such as written guides for trainer and trainee, tests, technical manual, and training media.

SPAS ETM's have great potential for use in your shop. Find out what is available by obtaining a current copy of the **ETM Availability List.** Your S3 should have a copy. If not, have the S3 obtain one from the U.S. Army Training Support Center (Fort Eustis, Virginia).

Selection Considerations

SPAS ETM are a part of the family of TEC extension materials. SPAS ETM formats and procedures basically follow those of TEC and use the same audio-visual/audio hardware and cassettes. The majority of SPAS ETM lessons are in printed form. A fairly basic difference between SPAS ETM and TEC is that SPAS ETM is not designed for self-study so much as use in a closely supervised SOJT program. SPAS ETM do not lend themselves readily to self-study away from the job site. They are self-paced to a degree, and continuous supervision is not necessary. However, they do require some supervision and equipment and are intended to support SOJT. In addition, SPAS ETM lessons do not stand alone and must always be used with corresponding technical manuals. SPAS ETM's must be administered by qualified personnel, since the tasks selected for SPAS ETM coverage are the most difficult or require measureable criteria of task efficiency.

Appendix B of Volume 2 of this guide lists relevant SPAS ETM materials for all MPS tasks. If you have the MPS, then refer directly to this appendix to identify the lessons that apply. If you do not have the MPS, relevant lessons are listed in Soldier's Manuals. Given a training objective, you can look up the task in the Soldier's Manual and identify the appropriate lesson.

7. FORMAL TRAINING IN UNIT

Description

Formal training uses the methods and materials of institutional training. Typical features are:

- Well-defined training schedule
- Assigned instructors
- Lectures, demonstrations, and hands-on practice
- Use of both simple and more elaborate training materials and media (handouts, films, closed-circuit television, etc.)
- Formal record-keeping
- Written and performance testing.

Formal training can take many different forms. At its most sophisticated, the unit may appear to be running its own school, with extensive use of classroom time, instructors, lesson plans, tests, and other school-like features. At its most basic, training may have simple lectures, followed by demonstrations in the shop, and forego some of the more elaborate features. If formal training is well designed and properly conducted, it is very effective at unit level.

Formal training differs from the on-the-job training approaches in that it is much less driven by work coming through the shop. An overall training plan is developed without regard to the availability of particular types of equipment in the shop to be used for demonstrating procedures. Training is conducted on the required topics and followed up by demonstrations and hands-on practice, if possible. Demonstration and hands-on practice are important parts of training. However, in cases where equipment is not available, formal training is reasonably effective in conveying basic knowledge of the subject area and is preferable to no training at all.

Advantages and Disadvantages

Properly designed and conducted formal training is as effective as commanders, training managers, and trainers are willing to make it. The more resources they are willing to allocate, the more effective it will be. Its biggest drawback is the amount of time and energy that must be invested. Instructors must be assigned and take their roles seriously. They must develop lessons. They

B-23

must present these as professional instructors would, encouraging trainee response, answering questions, making sure that trainees learn. They must develop tests and test trainees to assure that learning has occurred. The more formally these things are done, the more effective training is, and also the more resources are required.

How much formal training should be done, if any, is a question that often must be answered at command level. While this type of training is effective for training technical personnel, the costs involved are not always practical for training the low-density MOS's in a single forward support company. Other training approaches are often more cost effective. Many units find it cost effective to do formal training for **difficult** and **critical** tasks or for meeting **battalion-wide training objectives.** Formal training becomes more cost effective with larger groups. If the battalion combines training for several companies, for example, then training is less costly than when done for a single company. This requires coordination among training managers for different companies and active cooperation of the S3 and battalion commander. In general, the decision to do formal training should be made at that level.

Selection Considerations

Consider using formal training when many of your soldiers have serious skill deficiencies. When these problems are so serious that they cannot perform their MOS tasks adequately in the shop, on an SQT, or in some other situation, then formal training becomes a practical choice. The more widespread the problems are, the more this type of training is appropriate. If the entire battalion has a similar problem, then formal training is probably the most practical way to solve it. Training resources can then be allocated at battalion level to solve the problem. Formal training is probably the most rapid training method to raise the proficiency levels of many soldiers. If you have serious problems that you want to solve by next week or next month, then formal training is the way to go. OJE and SOJT will take too long. You haven't time to send your people away to school. And self-study is not quick enough.

Coordinate training through the company commander and, if it will be battalion-wide, through the S3 and battalion commander. Assign the most qualified personnel to be instructors. Make up a training schedule, copy it, and distribute it. Have your instructors develop presentations with visual aids, handouts, and whatever other training materials and media they can get. Make sure that they provide adequate time for demonstrations and for hands-on practice by trainees. Direct instructors to collaborate with subject matter experts in developing written and performance tests. If the material requires detailed factual knowledge, have them work with the S3 and training experts to develop written tests.

When training is scheduled to take place, give it the highest priority. Make sure that appointments, details, and the like are taken care of beforehand so that you can maximize attendance. Developing and conducting this type of training is costly. Do not throw resources and energy away by permitting trainees to miss it for trivial reasons. Encourage commanders to attend all training. Their presence underlines the importance they give to it and increases the interest level and motivation of trainees. Give instructors feedback on their performance. Help them improve their instructional techniques. Give them your support and encouragement.

Monitor test results to determine if training is occurring. If trainees do poorly, it means that training is ineffective. Do not jump on the trainees if the instructors are ineffective. This is an instructional problem. Criticizing your troops will lower motivation and reduce training effectiveness. Give trainees positive feedback for good performance. Meet regularly with commanders, training managers, and trainers to review training progress, lessons learned, and other aspects of ongoing training.

8. USE OF TECHNICAL EXPERTS

Description

If your unit is in a permanent location in CONUS, there will generally be a number of technical experts nearby. These experts work with the maintenance assistance and instruction team (MAIT) and the maintenance units that support you—general support, depot, or on-post maintenance operation. Most posts have a MAIT. The type of backup maintenance provided to direct support units varies somewhat, depending upon location. You are in the best position to know what is available. The MAIT has a clearly-defined mission to help you improve the effectiveness of your maintenance operation. Supporting maintenance units have a somewhat different role, but they can be called upon to help. If you have a good relationship with personnel in supporting units, then you can call upon them for help in conducting training.

The main purpose of a MAIT program is to provide responsive assistance and instruction through various types of visits to units in need. This assistance and instruction concerns the what, why, and how of maintenance and maintenance management. The MAIT will provide it in the form of either a team or single technical specialist. This procedure gives flexibility in responsiveness to unit requests for training in specific areas. Personnel selected for assignment to MAIT's are experienced military and civilian specialists who possess high levels of technical skill and knowledge in their specialty area. They are also qualified instructors with considerable training experience. It is a matter of Army policy that the MAIT program is based on mutual trust between the MAIT and visited unit. A confidential relationship is maintained.

Advantages and Disadvantages

The technical experts in supporting maintenance units can be very helpful in your training program. Look upon these personnel as a resource. There is a payoff for them in doing training in your unit, because the more effectively your personnel do their job, the less work will be sent on to higher categories of maintenance. Think of these technical experts when your own personnel lack the expertise to conduct effective training.

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The MAIT is an excellent training resource, on call to units in need of technical assistance and instruction. Technical experts can be provided to the unit on short notice to conduct training. The MAIT is not intended, however, to do a unit's training for it. Rather, it can support technical training in specialized areas in which the unit lacks subject matter experts.

Selection Considerations

Become familiar with your MAIT and other on-post technical experts. Get to know them personally. Identify the areas in which they have particular expertise. Keep these areas in mind as you go through your training objectives. If your personnel need training or assistance in these areas, and your unit lacks subject matter experts, then consider calling on them. Do not attempt to make these experts do your training job. Call on them as a resource for specialized technical areas, or for areas in which your own personnel lack required proficiency. Prepare your personnel for visits by the technical experts. Attempt to have maximum attendance. Emphasize the importance of the visit to your personnel.

The MAIT can be very helpful in solving some unit training problems. One thing MAIT does that is difficult for any unit itself to do is provide an unbiased and reasonably painless critique by an outsider. You may know where your problems are, but much of the time you will not--or even that they exist. The MAIT can help you identify your problems--and keep your problems confidential.

OVERVIEW OF SELF-STUDY TRAINING APPROACHES

The remainder of this chapter focuses on what are rather loosely referred to as the "self-study" training approaches. The self-study label is handy for discussion, and safe so long as you keep in mind that the training materials discussed can be used for group instruction as well. They are primarily intended for training on an individual basis—one soldier at a time, working on his own, learning at his own pace. Still, there is nothing to prevent a trainer from using the materials to train a group. Using a training extension course audio-visual presentation in the shop is one example.

The first two self-study approaches are training extension courses and correspondence courses. Both make use of extension training materials (ETM). Extension training materials are any training materials provided by the Army and intended for use at unit level. There are several other types of ETM as well, which are not covered in this appendix. These include television, films, models, simulators, and various written materials. The Army has centralized control and distribution of all ETM at the U. S. Army Training Support Center (USATSC), at Ft. Eustis, Virginia. This makes it easy to obtain what you need. At a time in the not too distant past, the various Army training materials had to be obtained from a bewildering assortment of schools and commands. Now they are all available from one place.

The last self-study training approach is technical literature. The approach consists of using technical manuals, field manuals, commercial textbooks, and the like to support unit training. This is not a sophisticated method of training, but it is occasionally useful.

Self-study is not limited to the three approaches described in this appendix. Self-study is any training that a soldier engages in on his own. This may be training that is formally recognized by the Army (such as an Army correspondence course) or training that the individual undertakes to satisfy a personal interest (such as participating in a project at a local hobby and craft shop). Any training that develops skills that may help the soldier on the job, even indirectly, should be encouraged.

9. USE OF TRAINING EXTENSION COURSES (TEC)

Description

In recent years, the Army has developed a broad range of Training Extension Courses for use at unit level. These courses come in three formats: audio-visual, audio alone, and written. They are designed to help soldiers develop skills on common tasks and technical tasks for their MOS, in accordance with training objectives contained in Soldier's Manuals. TEC is designed for use in support of the Soldier's Manual. Each Soldier's Manual identifies related TEC materials. Soldier's Manuals and supporting TEC media are still undergoing development. As time goes on, more and more TEC become available. TEC are intended for use at unit level in a learning center or at locations where electrical power can be provided and equipment can be set up. Though most training managers/trainers think of TEC as a self-study approach, TEC and audio-visual presentations can be useful for group presentation.

Advantages and Disadvantages

TEC media are a very effective training resource. The Army has developed TEC at considerable expense, based on analysis of MOS tasks. Procedures presented in lessons have been validated and are accurate. They show the correct way to do tasks. The trainee who uses TEC can learn a great deal in a short time. TEC is not a substitute for hands-on training. However, it is useful as a preview of actual shop work, for refresher training, and for efficient presentation of correct methods to a group. Since TEC does not rely on equipment available in the shop, the only limit to what it can cover is what lessons are available. This is a considerable advantage of this training approach when compared with equipment-dependent approaches such as OJE or SOJT. The major drawback of TEC is lack of lesson availability. This situation will improve as the Army develops more TEC.

Selection Considerations

Appendix B of Volume 2 of this guide lists relevant TEC (and SPAS ETM) lessons for all MPS tasks. If you have the MPS, then refer directly to Appendix B to identify lessons that apply. If you do not have the MPS, relevant lessons are

listed in Soldier's Manuals. Given a training objective, you can look up the task in the Soldier's Manual and identify the appropriate lessons.

Your battalion should have a learning center. Most battalions do. If not, you should talk to commanders and see that one is established. Guidelines for learning center design are contained in TC-21-5-9. The battalion learning center should be located close to the barracks so that troops have ready access to it. It should be kept open during and after normal working hours. If it is possible for the learning center to be close to the shop, so much the better. If not, there is no great loss, because the Beseler Cue-See is portable and rugged. It can be taken to the shop and used there, or even in the field, if necessary.

Your learning center should store and file its TEC lessons in an organized way so that you can locate a lesson by a reference number. Carrels should be built to hold the Beseler equipment, with a writing area for making notes or holding documents, and sufficient space or baffles between carrels to give privacy.

Encourage soldiers to use TEC during off hours to develop their knowledge and skill. Keep a log at the learning center and record names of those who go there. Let people know you care. Give feedback. Training managers, trainers, and first-line supervisors should be thoroughly familiar with TEC materials available in the learning center. There is no substitute for going there and reviewing the materials yourself. One of your key tasks is identifying training objectives and matching these up with TEC lessons that can meet the requirements. When you know that a certain soldier is weak on a particular task, think of the TEC lessons you have reviewed and identify the ones that will help the soldier improve his skills.

Trainers, first-line supervisors, and others who develop and conduct group training should know the TEC lessons well. They may find that a TEC lesson supports a presentation in a classroom or shop. TEC is particularly useful for training on tasks that you seldom perform in the shop. Without the equipment to work on, it is extremely difficult to conduct training. An audio-visual lesson is no substitute for hands-on training, but it is better than verbal descriptions, chalkboard drawings, or reading a technical manual.

If there is no strong emphasis on using TEC from commanders, training managers, and trainers, then it will not be used. Give TEC this emphasis. TEC will have a real payoff for your unit. It is a valuable resource, but worthless if not used.

10. USE OF ARMY CORRESPONDENCE COURSE PROGRAM (ACCP)

Description

The Army Correspondence Course Program (ACCP) offers several types of courses that are useful to the unit training manager/trainer for meeting unit training objectives. The ACCP provides courses for officers, warrant officers, and NCO's, as well as MOS technical courses. MOS technical courses can be used at unit level to support individual technical training. NCO courses, designed to improve the technical and supervisory skills of NCO's, are also available.

MOS technical courses have been designed to develop knowledge and skill and prepare for the Skill Qualification Test (SQT). These courses cover technical subjects for the MOS. When combined with hands-on equipment training, they permit the trainee to become MOS and/or duty-position qualified. Such courses are useful for training both MOS holders and soldiers who are cross-training in the MOS. Most technical courses are divided into two phases. Phase one courses parallel a portion of training given in a resident service school. Phase two courses cover MOS tasks that are not taught in a service school. Trainees who have completed an MOS resident course within the last five years need only enroll in the phase two portion of the correspondence course.

Advantages and Disadvantages

Correspondence courses can be quite useful in developing individual skills, but a soldier has to be motivated to take one. This motivation is seldom automatic. Encouragement by commanders and supervisors is extremely important. Moreover, a correspondence course alone is not sufficient to develop job skills fully. The soldier must also gain hands-on experience. Supervisors must work with the soldier to assure that his shop work relates to his correspondence course.

Selection Considerations

Learn what correspondence courses are available by reviewing the DAPam 351-20 series pamphlets that relate to the MOS's you supervise. Determine what is offered. Consider using correspondence courses to solve some unit training problems.

Encourage new NCO's to take NCO correspondence courses to help them develop the technical and supervisory skills required for first-line supervisor positions. Identify functional area correspondence courses that can help soldiers develop advanced technical skills in specialty areas. Identify soldiers who can benefit from such training and encourage them to participate. Encourage soldiers who lack basic MOS skills to take an MOS and duty-position course. This applies equally to soldiers who have received school training and those who are cross-training in the MOS. Monitor progress of soldiers who are taking correspondence courses. Show interest. Give encouragement. These actions are very important. Without your motivating force, many soldiers will start a course but never complete it.

In the shop, reinforce course material by making work assignments that relate. If you know that a soldier is taking correspondence training on particular MOS tasks, for example, the next time a related job comes through your shop, assure that he gets hands-on experience. This way correspondence course and in-shop work reinforce each other.

11. USE OF TECHNICAL LITERATURE

Description

Technical literature includes all of the various written materials provided by the Army, including Technical Manuals, Field Manuals, Training Circulars, periodicals, and other publications, as well as any commercial (civilian) texts and manuals which cover technical subjects relevant to shop work. Perhaps the most important is the TM, which is used every day in every Army shop as a source of reference information and to determine correct maintenance procedures.

Advantages and Disadvantages

To perform their jobs effectively, soldiers must be able to use TM's. One of the best ways to develop this skill is through practice. Supervisors should therefore give soldiers reading assignments to help develop manual-using skills. There is not really much choice about this. It is a matter of necessity.

There is a choice about giving reading assignments to help soldiers learn how to do their job. Often there are other ways to learn about a technical subject--through a class, SOJT, or with ETM, for example. These other training approaches are clearly preferable to reading a TM, if training on the subject you want to cover is available. When it is not, then you can always rely on the TM. It is faithfully there, and fairly comprehensive. It may not be easy for the soldier to learn from it, but he can learn if he is determined, and he can address his questions to supervisors and technical experts. The Army is revamping its manuals to make them more usable by soldiers in the shop. Illustrations are being improved and readability increased. "New look" manuals are performance-oriented. Each procedure is validated for accuracy and completeness before being written up for the manual. The manual is useful both for performing maintenance and for training. An inexperienced soldier can study such a manual and quickly learn the proper procedures for performing a maintenance task.

Much other training literature beside the TM is also available. The amount and type varies with MOS, and so it is impossible to give full coverage here. Most notable, and perhaps most useful, is **PS Magazine**, with which all repairmen should be familiar. Reading PS is certainly less painful than reading your trusty TM, and

PS always provides the latest information on changes which affect what the repairman does on his job.

FM's, TM's, TC's, commercial texts, and other literature may or may not be helpful to your soldiers. Coverage is not always specific enough to relate directly to the development of technical skills. You will have to use your knowledge of the literature available in your area to determine if any can be useful in training your soldiers in individual technical skills.

TM use is a basic skill that should be developed, aside from any training effect that reading a TM may have. A soldier who cannot properly use a TM should never be given supervisory responsibility for performing a job. Learning to use a TM is like any other skill, and takes practice to develop. The soldier must learn how TM's are organized, how to find information in them, and how to use them on the job. When you assign a soldier to read a portion of a TM, you are helping him develop these skills, as well as to increase his knowledge of the subject area he is reading about.

Selection Considerations

Technical manuals are one of the most important maintenance resources. A shop without them is like a court without laws. The TM's provide the basic reference information necessary to perform maintenance. TM's are not always easy to use. Soldiers often complain that they contain errors, are written in difficult language, or are not conveniently organized. Using them requires determination and skill. The new soldier must learn to use them just as he must learn to perform the technical tasks of his MOS. Supervisors do not always recognize the importance of this training requirement. Yet, the TM is as much a tool of the mechanic's trade as a wrench, and its use must be just as carefully taught. A TM contains maintenance information, and can be used as a training resource itself. It requires effort to learn from a TM, but that is part of the maintenance game. Finally, TM's should be used while performing maintenance. This is a practice best taught by the good example of first-line supervisors.

To summarize, three general requirements relate to TM's: (1) new soldiers must learn how to use them, (2) they contain information that can support training, and (3) their use on the job should be strongly encouraged.

There may be FM's, TC's, commercial texts, and other literature that you will find useful for training. Make these available in the shop area and encourage your personnel to use them. One of the most important items of technical literature is **PS Magazine**. This is designed for use by maintenance managers, supervisors, and repairmen themselves. Too often, PS passes across the desk of senior people and then is filed in a drawer or posted over a maintenance technician's desk where only the bravest or most foolhardy soldier would approach in an attempt to get his greasy hands on it. PS is written in simple language, with extensive illustrations, and has high interest level. Not only that, but it presents the most up-to-date information on maintenance practices. These are important to your soldiers, not just to maintenance managers. Make **PS** available to everyone.