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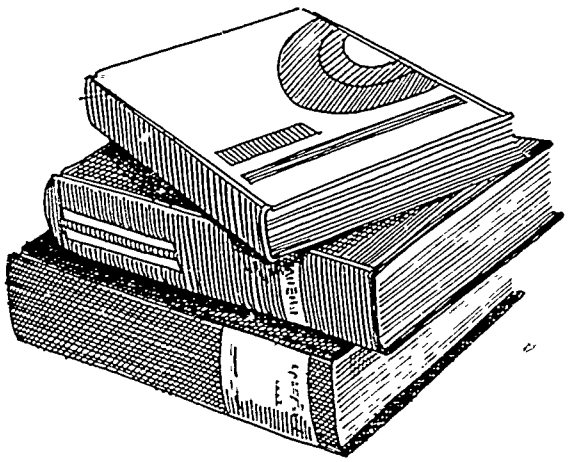
ABSTRACT

Vocational rehabilitation facilities can vary greatly from the standpoints of the client populations they serve and the services they provide. Therefore, to be maximally effective, training manuals for the staff at vocational rehabilitation facilities must be developed at the individual facility at which the staff training is taking place. This guide is intended to serve as a blueprint that will allow facility staff to write training manuals to satisfy the unique needs of their own facility. The following topics are covered in the individual chapters: three critical elements of a training manual (presentation of factual data, knowledge and performance factors, and criteria levels for passing each knowledge and performance area); ways of combining the critical elements in manual form; techniques for describing program content and procedures (research-based and descriptive methods); analysis of program content and procedures (including all critical elements and following standard instructional development strategies); and procedures for reviewing the manual. Appendixes include two sample training manuals--a "services" manual and a manual based on combining knowledge-based data, skill-based data, and presentation description. (MN)

# How to write vocational training manuals



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# HOW TO WRITE VOCATIONAL TRAINING MANUALS

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# Foreword

Some of the ideas found in this publication are based on materials gathered for an in-service training program developed for client supervisors on workshop production lines. The program was designed to provide an overview of the various client training approaches and methods available to client instructors. Leading into the discussion of approaches and methods, the program provided information about instructional skills needed by client supervisors in production settings and the learning capabilities of the clients they are instructing. The discussion that followed led to the conclusion that the following five principles best guide the work of client instructors:

1. Learning is enhanced by practice.
2. Learners need feedback.
3. Feedback must include measures of knowledge and performance.
4. Clients should be "responsible" for their own learning.
5. More-better-faster learning occurs when manuals are used.

The Materials Development Center receives many requests for training manuals every year even though several nationally based curriculum clearinghouses are available to facility personnel. Surveys of facility personnel show that direct service staff need training manuals to better carry out their jobs.

Even though facilities need training manuals, to be clearly useful, the manuals need to be mirrors of the training programs that the facilities are providing. Only facility created manuals will fully address their need. Thus, the intent of this publication is to provide facility staff with a "blueprint" to allow unique training manuals to be written.

Christopher Smith

## Table of Contents

# Introduction

Your job as a rehabilitation professional is to facilitate positive changes in the clients who have placed their futures in your hands. Many different training methods may be used to facilitate change for your clients. This manual will not make you an expert in any change methodology. It will, however, give you a tool to help ensure that intended change occurs and may be replicated by other facility trainers.

You facilitate intended positive change. Your clients will change with or without your intention or assistance. Thus, your job is to assist facility clients as they intentionally make positive changes in their vocational or habilitational behaviors. To ensure that intentional changes are made, it is necessary to follow a plan.

Most facilities use a written program plan to guide the overall development of changes for individual clients. However, written plans to guide the trainer(s) charged with providing services to complete the client's program plan often are not available.

For example, each client at Amerihab, Inc. has in their case files an Individual Program Plan. Facility procedures require that an intake staffing be held after a referral has been made and required intake data obtained. The staffing includes the client (and/or advocate), referring agent, parent or guardian (if appropriate), facility case manager, and appropriate vocational and habilitational rehabilitation supervisors. If the client is accepted for intake, a program plan is drafted specifying (among other things) the training programs to which the client will be assigned. This plan is filed with other case data in the client's master file.

Assume that George Bell has been referred to Amerihab, Inc., the required staffing has been held, and his Individual Program Plan specifies that he is to be provided janitorial training in the vocational department's services program. Training is to begin September 5, 19xx, and last until he demonstrates skills equal to those required of janitorial personnel in the greater Northameritown metropolitan area. A review of his status is scheduled for November 7, 19xx. We know a great deal about the facility's plan

for George. What, however, do we know about the program that will provide his training?

The service program supervisor explains to us that George will be taught janitorial tasks and will then be given a chance to practice the tasks by performing cleaning jobs in the facility. We ask to see the training curriculum. The supervisor provides task analyses of several common janitorial tasks. We ask if the trainer uses a training manual. The supervisor tells us that the janitorial instructor will first explain each janitorial task, model the correct method to completing the task, and then ask George to demonstrate his knowledge of the task. The instructor will keep a record of George's "productivity" while he is doing the assigned jobs. We ask if the trainer uses a standard method to ensure that each client will receive similar training. The supervisor replies that the instructor relies on experience to ensure adequate training occurs.

Thus, this facility is wholly dependent on the knowledge and skill of the janitorial instructor to provide consistent and adequate instruction for the clients in the janitorial program. When the instructor is absent, or leaves the facility, continuity cannot be assured. In fact, consistency cannot be assured from client to client even with the instructor present. The instructor has complete control over the provision of services that lead to positive intended changes in the ability of clients to perform janitorial tasks. Because a standard process is not followed, even positive intended changes cannot be adequately attributed to the provision of facility services.

## Contents

This publication provides a process for creating manuals to document training "plans" for your programs. Because every facility training program will provide instruction in unique ways, the process described in the following chapters will allow you to tailor-make your manual, describing training processes that are unique to your programs.

Chapter One describes the basic elements that should exist in every training manual. Specifically, the elements that are critical to the success of a vocational training manual are described. The roles of knowledge and performance factors discussed, the use of criteria levels for "passing" each knowledge and performance area is examined, and methods for presenting factual data are presented.

The writing process is described in Chapter Two. After the facility commits time and resources to the development of vocational training manuals, a development project is organized. The process of gathering information, drafting the manual, reviewing the draft, and evaluating the

contents is described. Detailed discussion of the principle process activities are included in the remaining chapters.

In Chapter Three, methods for "describing" your training process in written form are discussed. The "description" of your program will be used to create the training manual. Three different descriptive methods will be presented: systems analysis, task analysis, and narration. Special attention will be given to the determination of decision points and criterion levels.

In Chapter Four, a method for analyzing your written description to determine if additions or changes need to be made in your training process are presented. This analysis includes the determination that your program includes all the elements described in Chapter One. Adherence to a standard instructional development strategy will help you assure that your program is sound. Most strategies include the following elements:

1. Needs assessment.
2. Knowledge and performance objectives stated in measurable terms.
3 Prerequisites to program entrance documented.
4. Program content sequenced to maximize learning.
5. Community acknowledged competency-based standards.
6. Flexible instructional methods.
7. Appropriate training aids.

Finally, in Chapter Five, the need to regularly evaluate your training programs and training manuals is discussed. Because the environment in which your training is provided is constantly changing, it is important to assess the training that takes place to ensure that the best possible program is being provided. This chapter examines:

1. The determination of evaluation points.
2. The collection of evaluation data.
3. Using evaluation data.
4. Post program follow-up.
5. Program elements that should be evaluated.

The concluding appendices include samples of two training manuals. Though the completed format of a manual is less important than the appropriate content, an easy to read manual increases the likelihood that trainers will benefit from their existence. Both sample manuals have proven to be easy to use.

# CHAPTER ONE

## The Three Critical Elements of a Training Manual

The training manuals that are developed to guide instruction in your facility should be as individualized to your trainers, sites, and clients as possible. This publication is designed to help you reflect three critical training elements in these individualized training manuals. If you have already developed training manuals in your facility, this publication can be used to help you redesign them to include all essential elements and to individualize them to the greatest extent possible. Even commercially available training manuals may need to be modified for the facility and the trainer using them.

It is important that your manual be "user friendly." No training tool will be used if it is too difficult to understand or too cumbersome to apply. It must function as an "operating manual" for your training program. Thus, (1) it must provide only the information that a trainer needs to know in order to adequately train clients, (2) it must provide that information in a comprehensible step-by-step fashion, (3) and it must be easy to read.

The best client training manuals have been developed using the above three characteristics. They have been successful by incorporating three fundamental elements that lead to a document that provides essential information, is comprehensible, and easy to read. These elements are:

1. A step-by-step description of the materials to be presented and the methods of presentation.

2. Facts and passing criteria levels for the knowledge-based (informational) materials required of the jobs being taught.

3. Facts and passing criteria levels for the skill-based performance required of the jobs being taught.

## The Presentation of Factual Data

Your manual must clearly describe the presentation of factual data to ensure that all of the relevant job skills are learned by the client. The trainer, after using the manual, may wish to vary the presentation to suit his/her instructional style and the learning styles of the clients entered in the training program. Indeed, the more skilled the instructor becomes, the less they will need to rely on the training manual for guidance. The manual, however, to provide any initial guidance, must explicitly express the material that must be presented, the sequence in which the material will be presented, and actions of the instructor which will convey the material to the client.

In the examples of training manuals found in Appendices One and Two, the trainer is given explicit instructions on what to present, when to present it, and how to present it. The flow of the manuals include words such as: Show, Demonstrate, Explain, Model, Say, Describe, and Practice. In these examples (and the examples found later in this chapter) the actual text of the material to be spoken by the trainer is printed in bold. These words also may be underlined, set in quotation marks, or boxed in our manuals; it is only important that the trainer clearly understand the flow of the manual and their role in the training process.

Your training manual will describe the presentation of information and skills that will lead clients to the attainment of skills needed to perform jobs. Your training job requires that you perform at least two other tasks. First, after presenting the instructional material and testing your clients, you must record their progress. The recording task is especially important when the client reaches a competitive performance level (thus, "passing" the skill test), usually after practice over many days or weeks. Second, you must carefully and skillfully schedule and sequence the delivery of knowledge-based information and skill practice sessions to minimize the client's training duration and maximize the number of clients receiving training.

## Knowledge and Performance Factors

Part of the trainer's job is to present information about the job and its needed skills. The information about a job can be classified as either knowledge-based or performance-based. Knowledge-based information provides the client with the "basics" that help them do their jobs well. Performance-based information is the skill or activity in which the client will need to be proficient to obtain and maintain a job.

## Knowledge-Based Instruction

The knowledge-based portion of the instruction is usually provided using lecture, worksheet, discussion, or demonstration methods. It is often provided on an individual basis, but group instruction is possible even with severely disabled populations. It is best to provide this part of the instruction first. The learned material may then provide a basis for the actual performance of the tasks being taught.

For example, the following section (see Figure One) of a janitorial training manual contains some of the knowledge-based information presented to trainees prior to learning how to wet mop. In this section, the material is presented as a lecture, with the objects under discussion (mops) available for inspection.

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**FIGURE ONE**
**A Unit From the Knowledge-based Instructional Material of a Training Manual**

III. Mop Types and Care

A. Mop heads

Show: Have both a cotton mop head and a nylon mop head (dry) available. Show the trainees each mop head. Let them feel the . . .ference in the different types.

Explain: ***There are several different kinds of mop heads. We use cotton mops and nylon mops. They even come in different sizes. The different sizes allow you to use a light or a heavy mop, depending on how strong you are.**

**The cotton mop head is used for wet mopping, damp mopping, and spot mopping.**

**The nylon mop is only used for waxing or sealing floors. Never use a nylon mop for cleaning, because it will get dirty and then it cannot be used for waxing or sealing.**

B. Mop handles

Show: Have at least two different lengths of mop handles. (If you desire, you may also have handles of differing composition, such as plastic coated, wood, metal.)

Explain: **There are two different standard lengths of handles. Most handles are five feet long. Four and one-half foot handles are sometimes used by shorter men and women.**

C. Care of mops and other equipment

Explain: **Mops and other cleaning equipment last longer if they are properly cared for. They also do a better job of cleaning when they are clean themselves.**

1. Mops

Explain: **After wet mopping, damp mopping, or spot mopping, rinse the mop out in warm water. Wring out the mop and hang it up to dry. Never leave it on the floor.**

2. Buckets

Explain: **Buckets should be rinsed out to remove any dirt and/or soap in the bottom. They should be dried (especially if they are made of metal) and stored upside down.**

3. Wringers

Explain: **Wringers should also be rinsed off. They should be stored near the buckets.**

Lubeck (1979)

* Bolded sections are the text materials for the trainer.

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The presentation of knowledge-based information should be in logical task sequence so each step can aid in the learning of the next step. Thus the knowledge-based instruction for one task may be provided after the client is in the process of receiving skill-based instruction for a task in which earlier knowledge-based instruction had been provided. Your clients' abilities and the requirements of the jobs being taught will help you determine the correct sequence of instructional tasks. (Chapter Four includes information on the sequencing of program content to maximize learning.)

### Performance-Based Instruction

The instructional task also requires trainers to gauge their trainee's ability to actually perform the tasks that have been presented in the knowledge-based part of the program. This performance or skill-based instruction uses demonstration, modeling, and practice methods of instruc-

tion to teach the client the performance standards (work pace and quality) required by the job.

Figure Two illustrates how skill-based instruction may be presented in manual format.

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**FIGURE TWO**
**One Unit From the Skill-based Instructional Material of a Training Manual**

B. Operation

Move: Proceed to the mopping area with equipment and trainees.

1. Posture and stance

Show: Demonstrate how to hold the mop, emphasizing the following points:

Explain:
1. ***Put one hand near the top of the mop handle.**
2. **Put one hand on the mop handle about waist high.**
3. **Stand erect keeping your back straight.**
4. **Your feet should be approximately 18" apart.**
5. **Put one foot slightly behind the other.**

Practice: Have each trainee show you how to hold the mop. Assist them until they can show you the proper method.

2. Mop movements

a. Mopping edges and corners

Model: Holding the mop correctly, move it along the outside edges of the floor, along the baseboards.

Explain: **This keeps water from being splashed on the walls. It is alright to get water on the baseboards. They are there to protect the walls.**

b. The figure "8" pattern

Model: Demonstrate the figure "8" movement with the mop. Emphasize the following points:

Explain: 1. **Use tight curves to keep the mop from missing any areas of the floor.**

2. **Make sure that you stand erect. Good posture will keep you from getting a sore back.**
3. **Using the correct hand holds makes the mopping job easier.**
4. **See how I walk backwards to avoid walking on the floor that has just been cleaned.**
5. **Turn mop head over frequently to allow both sides to be exposed to the floor and pick up dirt.**

Practice: Have each trainee show you how to do a figure "8". Assist them until they can show you the proper method.

c. Back and forth movements

Model: Move the mop head as if to remove a spot or stain.

Explain: **The mop head should be rubbed against the floor in a back and forth motion to remove stubborn stains.**

Ask: **What kind of mop motion should you use for stubborn stains?**

(Back and forth motion.)

3. Applying solutions

a. Dust mop

Have one of the trainees prepare the floor surface by dust mopping using the procedures learned earlier in the program.

b. Soaping

Model: Using the following process, show the trainees how to apply the soapy water to the floor:

Explain:
1. **After you have gotten all of your equipment together, added water to the buckets, and put soap solution in one of them, you need to set up the wet floor signs.**
2. **Now, dip your mop into the bucket of soapy water.**
3. **Put the wet mop into the wringer. Do not wring all the water out, just wait until the mop stops dripping.**

4. **Take the mop in your hands the way I showed you, and do the edges of the area that is to be mopped.**
5. **Now, using a figure "8" movement, apply the soapy water to the floor.**
6. **As the mop dries, put it back into the bucket and wringer.**
7. **Only put soapy water on half of the area you want to mop.**

Ask: **Why is it a good idea to mop only half of the floor at a time?**

(So people will have a dry area to walk on if they need to pass by.)

c. Rinsing

Model: Demonstrate the rinsing process using the movements shown earlier. Emphasize the following points:

Explain:
1. **Use a different mop to pick up the soapy water. Do not use the mop that you put the soapy water on the floor with.**
2. **Wet the mop in the clear water.**
3. **Wring as much of the water out of the mop as possible.**
4. **Using the movements as before, use the now damp mop to pick up soapy water.**
5. **When the mop is soaked with soapy water, put it back in the bucket, swish the dirt out, and wring it dry again.**
6. **Change your water whenever it becomes excessively dirty and/or soapy.**
7. **The floor should be rinsed before the soapy water solution dries. Make sure that there is no soap or dirt left on the floor.**
8. **If necessary, rinse the floor more than once.**

Practice: Working in teams, allow the trainees to soap and rinse the floor. Make sure that everyone gets a chance to try the process.

Lubeck (1979)

* Bolded sections are the text materials for the trainer.

Although knowledge-based instruction is normally provided only once (with refreshers if the trainee population is mentally disabled or the training program is lengthy) the practice of performance-based materials is often quite lengthy. In fact, the practice of tasks to bring clients to "competitive" levels is the most time consuming part of most training programs.

### Criteria Levels for "Passing" Each Knowledge and Performance Area

After the entire task has been presented, the trainer must assess the client's retention of both knowledge-based and performance-based instructional materials. The assessment of the client's retention of knowledge-based materials can be accomplished using either a written or an oral test. Performance-based testing must rely on demonstration and observation.

The section of an oral test found in Figure Three shows how a knowledge-based test may be presented in an instructional manual.

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**FIGURE THREE**
**Selected Questions From a Knowledge-Based Oral Test**

22. ***What is a nylon mop head used for?**
(Waxing and sealing.)

23. **What is a cotton mop head used for?**
(Cleaning.)

24. **Why shouldn't you use a nylon mop for cleaning?**
(Because it will get dirty and won't be any good for waxing or sealing.)

25. **How are mops cleaned and stored?**
(They are rinsed in warm water, wrung out, and hung up to dry.)

26. **Why are mop handles made in different sizes?**
(Because people come in different sizes.)

27. **How are buckets cleaned and stored?**
(They are rinsed, dried, and stored upside down.)

Lubeck (1979)

* Bolded sections are the text materials for the trainer.

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Trainees must be able to meet the pass criteria set for the oral or written test before they are given a performance test. In some cases, satisfactory completion of the knowledge-based test may be required even before lengthy performance practice is assigned. For example, if the trainee was unable to "pass" the knowledge-based test for operating a buffer, it could be dangerous to allow the trainee to use the buffer without close supervision.

After passing the knowledge-based test and given a chance to practice the skills taught, the ability of the client to actually complete the tasks that have been presented must be assessed.

Figure Four illustrates how a skill-based test may be presented in an instructional manual.

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**FIGURE FOUR**
**A Skill-Based Performance Test**

1. The trainee must demonstrate the proper posture and stance in mopping.

2. The trainee must assemble all the equipment necessary for wet mopping, and, using the proper technique, wet mop and rinse a minimum of 1000 square feet of unobstructed tile floor in 35 minutes or less. (Use your locally observed standard if higher or lower.) No visible dirt or soap film should remain.

3. The trainee must assemble all the equipment necessary for damp mopping, and, using the proper technique, damp mop 1000 square feet of unobstructed tile floor in 16 minutes or less. (Use your locally observed standard if higher or lower.) Five "planted" soap streaks 2" wide by 24" long must have been fully removed in the damp mopping procedure.

4. The trainee must assemble all the equipment necessary for spot mopping, and, using the proper technique, spot mop a 500 square foot area in which 5 spots of food, mud, etc. have been previously placed at random. Within a 5 minute period, the trainee should spot mop the entire area, and fully remove the dirty spots. (Use your locally observed standard if higher or lower.)

5. The trainee must demonstrate the proper cleaning and storage of cleaning equipment.

Lubeck (1979)

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Performance testing should occur immediately following the initial task performance and practice. If the trainee is able to meet the "pass" criterion at that time, the trainer moves into other instructional areas. Most often, however, the trainees will need further practice to increase the quality or pace of their work. Continuous records of this "practice" that includes adherence to accepted procedures, work pace, and work quality may substitute for an actual testing situation.

Your training manual must use, at least, the standards reported as the minimum acceptable score that the client may receive on a knowledge or performance test and still be said to have exhibited adequate skill and knowledge to perform the job by community standards. A better measure are those standards expected of the "average" worker performing the same job in the community. These standards are usually called "pass criteria," and usually are stated in terms of acceptable quality and work pace. The standards should be measurable and easily determined by the instructor using oral tests and performance records.

# CHAPTER TWO

## Combining the Critical Elements in Manual Form

To be worth the development effort, a manual must be used. Thus, the three elements discussed in Chapter One must be combined in a written document that allows training staff to apply and refer to the elements and convey the elements to other staff.

Later in this publication we will describe the specific elements of the manual development process (fact gathering, analysis, draft writing, and review stages.) First, however, we need to discuss the preliminary planning that allows you to move through each stage quickly.

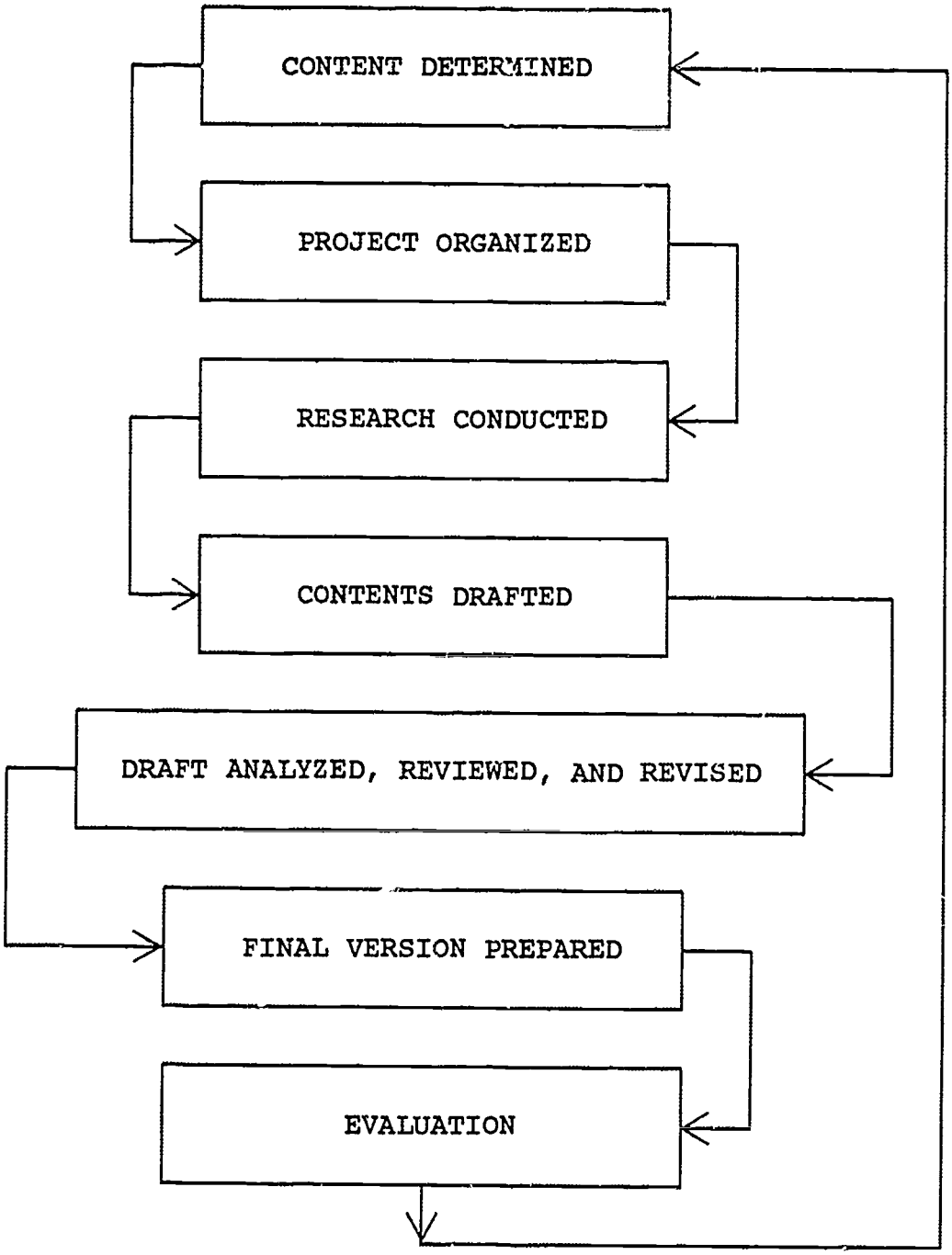
Let's look at the whole manual development process using a flow chart. Figure Five, below, illustrates the process used by writers working on technical manual projects. It was modified from a manual titled Manuals that Work by IA Associates (1986), a good resource for facility manual developers.

### Determine the Content

In Chapter One, three elements (word-for-word descriptions of training activities, knowledge-based passing criteria, and performance-based passing criteria) were described that will allow instructors to effectively use a training manual. All of the information that is written for the manual must fit into one of the three element areas.

To determine what the actual written content will be, the manual developer must make an initial decision on what training task, or group of tasks, will be described by the manual. For example, will the manual provide instructional elements for all the tasks presented in a janitorial training program, or only provide the instructional elements for the tasks of hard floor maintenance, or only for instruction in the wet mopping task? This initial decision is likely to be influenced by the time available to the developer.

**FIGURE FIVE**
**The Manual Development Process**



If only individual tasks will be described, it will be easy to create "modules" that will be intermixed to tailor-make a complete training program for each client. However, "modules" can also be created when groups of programmatic elements and entire programs are described. Thus, a second decision will be the flexibility desired for use within training programs.

These tasks, groupings of tasks, and/or programs should, at minimum, be roughly described. This will allow the developer to get an approximation of what must be included in the finished document and will also provide a benchmark against which an estimate of time-to-completion may be based. The time-to-completion will also have ramifications for the total project cost.

The facility will incur development costs while the manual is being developed. Principally the cost will be encumbered in staff time for planning, research, writing, and evaluating the manual. Thus, unless a manual developer is specifically hired to complete the task, most of the costs are "sunk" costs. (Dollars that are spent even if the project is not begun or completed.) However, some direct costs may be incurred if the manual is printed and disseminated, or if temporary staff must be hired to do the "regular" jobs of those staff developing the manual.

## Organize the Project

Now that the preliminary focus of the manual development project has been determined, the developer needs to organize for a head-on assault.

Each developer (writer) has a unique style of project organization that works best. Thus, no one organizational method can contain all the elements that will most efficiently lead to a finished manual. However, some project organization elements that are basic to training manual development, should be incorporated into your own method.

Initially, you will be gathering factual information (within the three elements of word-for-word descriptions of training activities, knowledge-based passing criteria, and performance-based passing criteria) that will eventually be edited, collated, and expanded to form the text of your manual. Some initial planning for the collection and filing of this information will certainly make your drafting task easier.

Notebooks, computerized text files, file folders, tape recorders, etc. may be employed in the collection and storage tasks. In initial planning, however, the important element is the organizational process. Basically, the planning needs to cover two areas, resource people and collection methods.

### Resource People

Make a list of all the people that can help you identify the tasks that will be described in the manual. These people may be supervisors in the facility or, most ideally, people who do similar jobs in your community.

Your listing should include each person's name, address, and phone number. The list should also include people who may be able to technically review the manual when it is drafted.

### Collection Methods

More information about describing training programs is given below and in Chapter Three. After reading about the various collection methods that are available, you will be able to pre-plan your collection task, using the method that will allow you to quickly obtain accurate descriptive data.

### Determine Style Conventions

An easy to use manual is one that uses a consistent written "style." For example, standard main topic heading locations help the reader of this manual know the main points and sub-points of the presentation. If a standard method were not followed, the reader may "get lost" while reading the manual.

The developer should consider the following conventions: (1) Main and sub-heading style, (2) a standard method to delineate between informational materials and instructional statements and demonstrations, and (3) standard terms and action statements (such as keys, knobs, or switches and push, press, or hit.) Consistently applied style conventions will lead to greater understanding and, thus, more use.

## Conduct Information Gathering Research

All writers need to gather information about their subject matter. They use two information gathering methods: literature review and interviewing. Other methods, such as scientific inquiry, can be employed. However, literature review and interviews are usually adequate when creating training materials.

When conducting a literature review, the manual developer seeks other manuals and publications that describe training processes that are similar to the object of their task. In fact, during this stage the developer may discover the existence of a training manual that, with a little revision, may be very close to the final product. In other cases, the developer may find

materials that indicate that the present training methods should be revised, rather than simply described.

Interviews usually follow literature review, but it is not essential that this order be followed. Some interviews may lead the developer to seek new literature. However, the primary reason that literature reviews precede interviews is to allow the developer to gain as much information about the programs that will be discussed as possible. Because the developer will be asking the subject matter experts to describe their programs, it is essential that they have at least a marginal understanding of the activities that are carried out. In fact, the literature review helps the developer prepare questions that will prompt the subject matter expert to provide quality programmatic descriptions.

The developer will rely on the previously developed contact list as they begin to arrange interviews. This list may be expanded as some interviewees suggest other people who have specific expertise in the areas under investigation. In fact, your interviewees should be "subject matter experts" whenever possible.

As you gather information, your investigation will lead to the accumulation of data. These data may be kept in the form of written or taped notes, flow charts, or job analyses. It is only important that you organize the data as you gather them so that the drafting stage does not become even more difficult. Chapter Three provides an extensive discussion of data gathering and organization.

## Draft the Contents

If you have gathered the information about the training programs you are describing in a carefully planned fashion, the first draft of the manual will be quickly accomplished.

By this time you should have a "vision" of how the completed manual will look. As you construct the first draft, make it resemble the finished product as closely as possible. This will help reviewers as they examine your document. Thus, you will be making notations for the insertion of photos, line drawings, tables and graphs, special headings, and many other details as you write the text.

The "fleshing-out" of the text with the visual and/or illustrative material will aid you as you write the manual. If you create the visuals as you write, you can refer to them within the text. Thus, you will not have to extensively rewrite the draft just to add references to the figures. If you cannot actually add the figures as you draft the text, make sure that you leave an adequate amount of space on the page so they can be added later.

While you are drafting the manual, make sure that you follow the style conventions that were agreed upon earlier. Should you decide to make a style change, you must revise the manual so that all sections follow the new standard. Keep a record of footnotes and other references as they occur so that they may be accurately inserted later.

Your record should also reflect missing materials. As you create the manual, you may encounter questions about the training program that will need to be checked later by the subject matter experts. Inconsistencies that could not be observed within the interview or demonstration may become painfully obvious as the draft is written.

### Analyze, Review, and Revise the Draft

Chapter Four discusses the technical analysis of your draft. The initial analysis consists of an examination of the manual for the incorporation of the three basic elements (word-for-word descriptions of training activities, knowledge-based passing criteria, and performance-based passing criteria).

Chapter Four also discusses a review of the manual in light of state-of-the-art training techniques. It is at this stage that more changes to the actual training activities may be suggested. A side benefit of the manual development process is the unique opportunity to take a close look at how your training program is conducted. This technical review may help you improve the training techniques your instructors use, thus enhancing the quality of the program before further training (using the manual as a guide) begins.

In Chapter Five, the review includes an examination of the manual from the technical point of view provided by subject matter experts. During this review, the developer is seeking expert advice on the technical aspects of the manual. Although editorial comment may also be given, you are primarily interested in learning if the content is (1) technically correct and (2) conveyed in a way that it can be understood.

One way to ensure that the review is productive, is to insist that corrections suggested by the subject matter experts be literal additions or revisions. Ask for exact wording so that the corrected or revised version does not need further review.

### Prepare the Final Version

The exact nature of the final version of your manual will depend on the use for which it is intended.

If only one or two working copies are needed for use only by existing training staff, it may be easiest and cheapest to use a photocopy machine to duplicate your original, typed document.

If, on the other hand, the manual will be used by many trainers in several locations or disseminated to a larger audience, it may be cheaper to use the services of a printer. Nearly every town has a printer close at hand. If you plan to print several hundred copies of the finished manual, it is a good idea to discuss the project with the printer before draft copies are made. The printer may have restrictions that will influence the creation of the draft. The printer may even have time saving tips on the creation of the manual.

## Evaluation

Plan to evaluate your training manual at least yearly and at any point that the training program changes significantly. Chapter Five provides an extensive discussion of the evaluation process. An evaluation is essential to ensure that the best possible training is being provided to the clients in your training programs.

# CHAPTER THREE

## Describing Program Content and Procedures

### "Research" Methods

To accurately communicate the content and process for your training program, it is necessary to put everything in writing. The staff presently teaching clients in the program are logical "subject matter experts" to provide narrative descriptions of the program elements. However, it may also be desirable to have supervisory or peer observation of the program in action and/or videotape records to review when actually writing the program training manual.

### Interviewing and Observing Trainers

The best source of information about an existing training program is the trainer in charge of the program. As a first step, it is important to interview the trainer. The trainer should be asked for any documents that he/she presently uses to describe the program or convey information to clients. Often the program will have a list of tasks that need to be taught; it may also have task analyses for each of the job components.

Your task as a manual developer, is to gather as much factual data from the subject-matter expert as possible. It is important for you to become familiar with the terms and general tasks of the client trainer that you will be interviewing. This will help you (1) understand what the trainer is describing, (2) formulate questions that will guide the course of the interview, and (3) reduce the amount of time that the interview will consume.

It is important that you prepare for the interview. Your preparation should include the development of open-ended questions, clustered by major topic areas. It should also include a trainer (subject-matter expert) briefing about the purpose of the interview and use of the data that is gathered.

Open-ended questions that are clustered around the principle topic areas that you will discuss will help the trainer structure their presentation. By clustering the questions within a topic area, some questions may be answered while the trainer is discussing a prior question. You may easily skip those that have been answered. Clustering also helps keep the discussion on the material at hand.

Trainer briefing is important. It helps you defuse any reservations that the trainer may have regarding the performance of his/her job. It also assures the trainer that the finished product is something that will be worth the time expended on its development. Trainer briefing should occur prior to beginning an interview. However, a few minutes spent developing a "rapport" with the subject matter expert at the start of an interview is usually well spent.

The trainer should be asked to describe the process that he/she follows to provide information (both knowledge and skill based) to clients. Criteria levels and the critical informational points should be described in detail. It may be helpful to put the interview on tape. A transcription will help the writer in the later development stages.

After the trainer describes the program in as much detail as possible, the developer should observe the trainer in "action." The observation step is important. Just as the use of visual aids and demonstration is important in teaching clients, the observation of the teaching activities will provide valuable data to the person who will be writing the training manual.

### Videotape

If observation is not a possibility (for example, the trainer is writing the manual) videotaping may be a viable alternative. Videotape may even be desirable when the writer can observe the trainer. It will provide a record of activities that can be accessed later, when the actual writing task is underway. Videotape systems consist of television cameras, lighting equipment, and videotape machines. Videotape recordings have several characteristics of significance for the writing of training manuals:

1. They communicate sound, sight, and motion.
2. They are ideally suited for showing processes and maneuvers.
3. They can transmit all other audiovisual materials.
4. They provide a record which can be re-examined easily.

Videotapes also provide immediate feedback to the trainers. They can identify the ways that they are actually providing training far better than their memories of the activities will allow. With videotape, everyone has a front-row seat to their own skills. Transcripts can be made from the

videotapes. Using key words like "show," "explain," or "say" to describe the actions, and setting the audio material to correspond with the key words, the videotape transcript may form the first draft of the training manual.

## "Descriptive" Methods

### Systems Analysis

A system is an interactive relationship that exists between units, with the activity of one unit effecting the behavior of all other units. The use of systems analysis to determine present training processes is an attempt to describe the training activities relative to the flow of a client through the activities. A complete discussion of systems analysis is found in Systems Analysis in Rehabilitation Facilities, (Smith, 1986).

### System Processes

Systems analysts look for the presence and dynamics of many processes that may, or may not, be at work in your training program. Three dynamics that are important to the description of the training programs are:

Routing
Trajectory
Valves

#### Routing

In a systems context, routing refers to the establishment of review points. When a review point is reached, the trainer decides which one of several routes the client, data, or materials will flow. Review points, routes, and routing rules may be in the form of documented policies or based on experiential judgments.

Routing decisions tend to develop consistent patterns over time. An examination of routing decisions made while administering a training program may show that consistent decisions are made based on the client's relative functional abilities. Thus, the sequence of the training manual presentation may be altered to adhere to these common routes.

#### Trajectory

The trajectory of a system is the apparent direction of movement for the system's units. Simply stated, the trajectory of the training program is the "flow" of the instructional ele-

ments. After a program is initiated, the clients receiving training have been "put in motion" within the system. They are likely to stay in motion, in the direction projected, unless an effort is made to change client flow direction.

The perceived trajectory as observed by persons that interact with the facility: the general public, potential customers, potential clients, and potential referral sources should always be considered when using systems analysis. This "image" of the program must be considered whenever programmatic changes are made.

Valves

A valve controls unit flow through a system. In facility training programs, valves regulate the movement of clients. They may be located anywhere within the training program.

Some valves restrict the numbers of clients. A program intake valve might restrict the number of clients that are admitted to one facet of the training program. For example, because only one buffer is available, only one client may use it for practice at any one time. Policy statements could also restrict client capacity by simply stating how many clients will be served at any one time.

## Visual Representations of Systems

Systems analysis involves the definition, depiction, and examination of the relationships between units. Thus, the description of a training program using systems analysis will involve the identification of program instructional elements, the diagramming of the instruction sequence (flow), and the manipulation of the flow using models.

Systems analysis data is represented visually. The representational method used is determined by the data available, the resources to be expended, and the results desired.

### Representing System Flow

Because instructional flow is the sequence of providing information, training flow is best described by "boxing" task elements and drawing "arrows" to show the presentation trajectory.

Two types of visual representations are regularly used to

depict instructional systems. They are activity charts and layout charts.

An activity chart depicts the flow of information through processing centers. In fact, activity charts are sometimes called process charts. Each major part of the chart indicates an idea or task that is presented in the training program. Activity charts can be used to compare different training programs when similar symbols are used to denote activities at each program unit.

Layout charts illustrate the actual physical locations of the training unit and the movement of materials and clients within the area. They differ from activity charts only in the fact that they represent actual physical locations rather than abstract "unit" concepts. Actually, layout charts also incorporate elements of the activity chart because system flow is illustrated.

## Flow Analysis

Flow analysis is a relatively simple process that allows trainers to create and examine system models.

### Examining the Flow

After creating a visual depiction of the training program, the training system may be altered to see how different elements will interact. This will allow the trainer to "see" the sequence of training events. Figure Six illustrates a simple training flow chart.

The individual elements that make up each part of the training program may also be described using a systems flow diagram. Figure Seven depicts part of the flow chart that describes the teaching of the wet mopping skill.

**FIGURE SIX**
**Simple Flow Path of a Training Program**

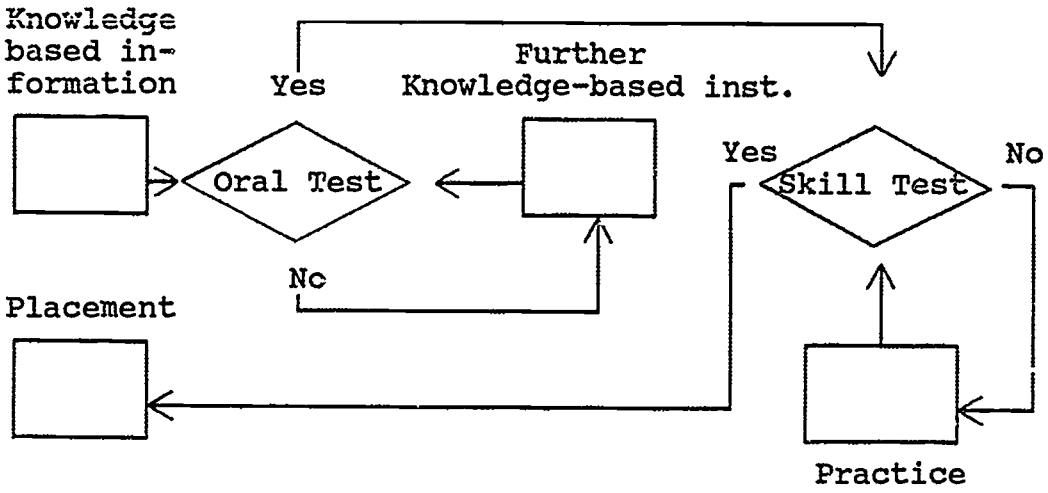
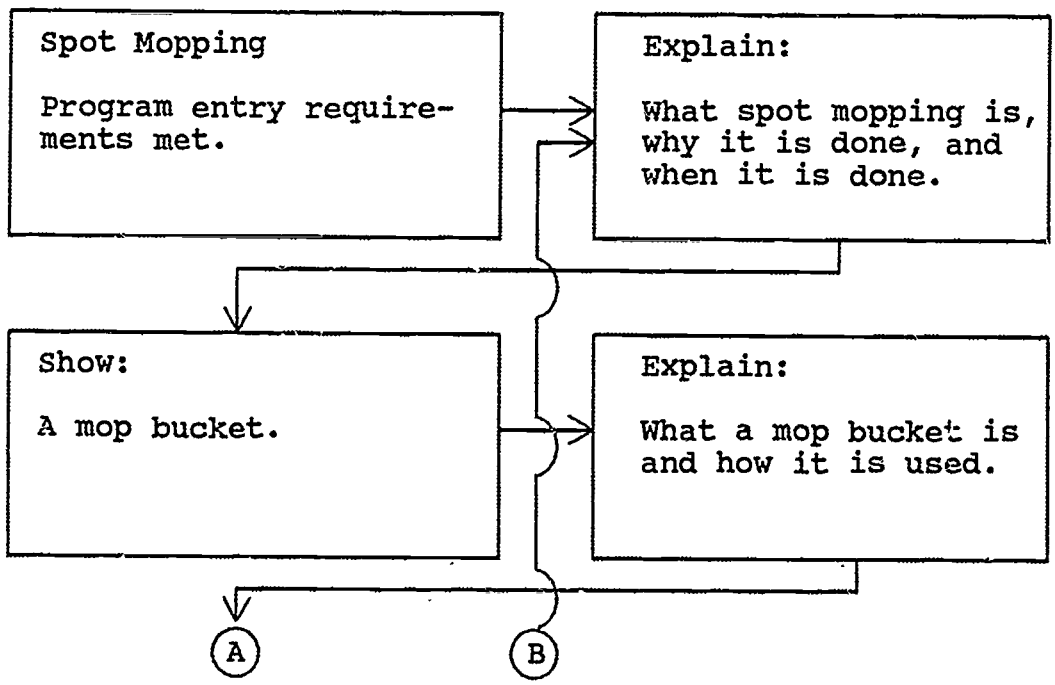
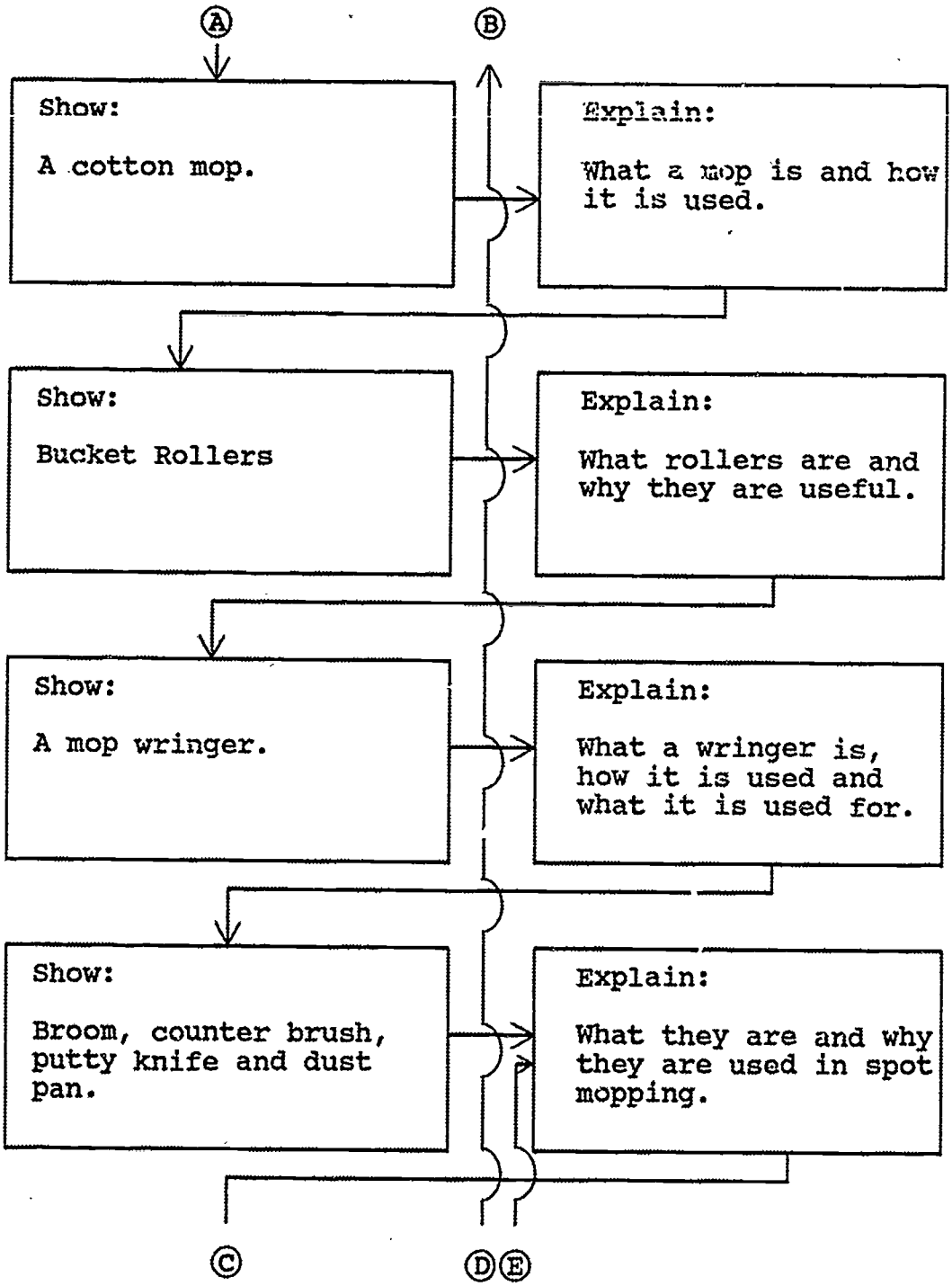
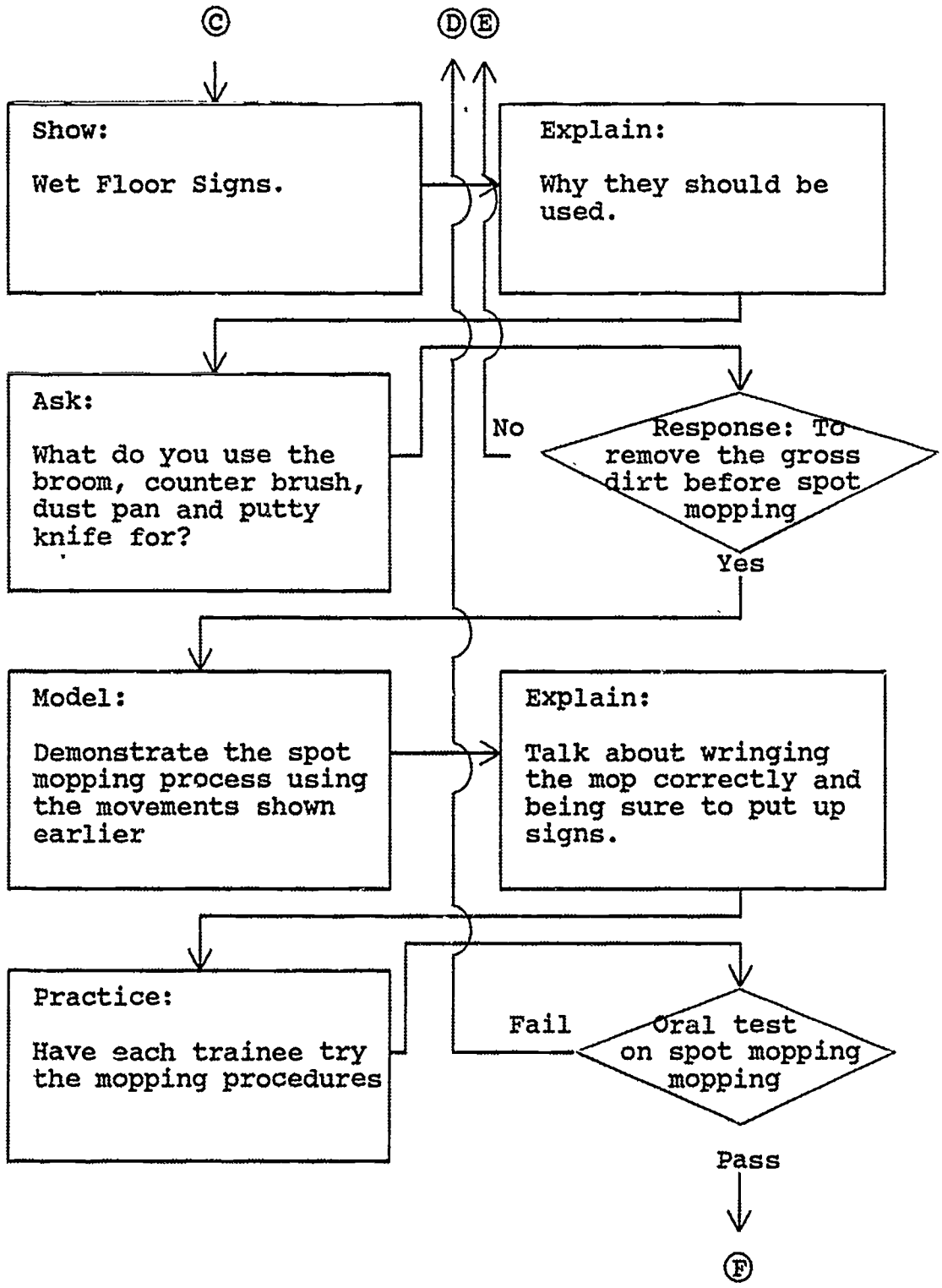


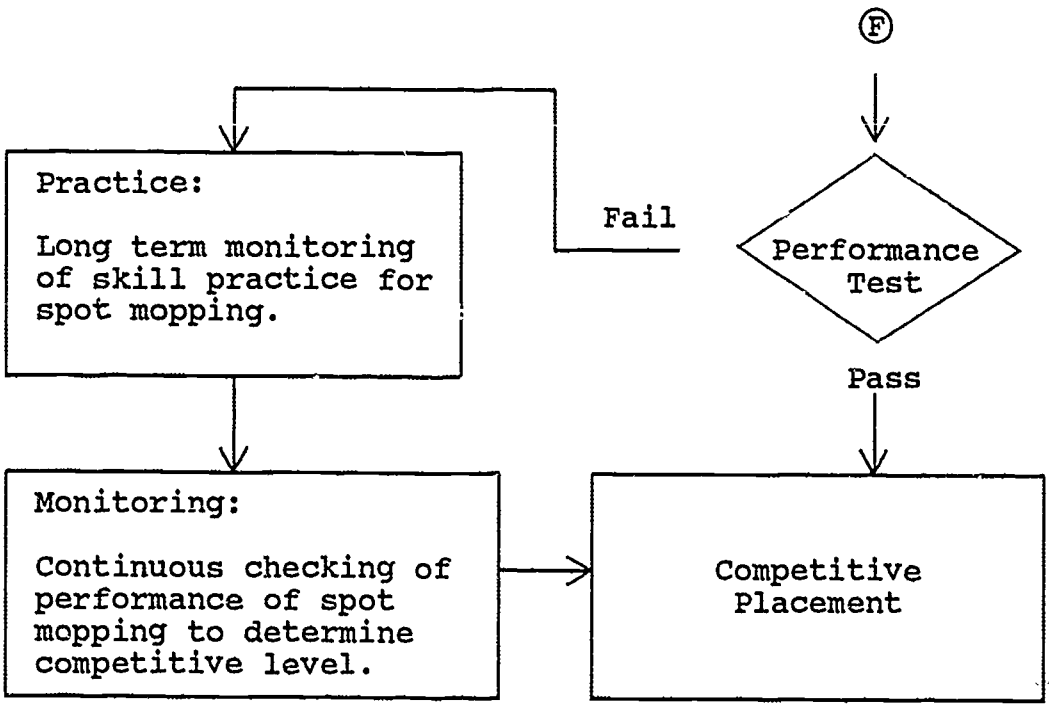

**FIGURE SEVEN**
**Part of the Flow Path Describing Training for Mopping**

Spot Mopping




A
B
Show:
A cotton mop.
Explain:
What a mop is and how it is used.
Show:
Bucket Rollers
Explain:
What rollers are and why they are useful.
Show:
A mop wringer.
Explain:
What a wringer is, how it is used and what it is used for.
Show:
Broom, counter brush, putty knife and dust pan.
Explain:
What they are and why they are used in spot mopping.
C
D
E


Ⓒ
ⒹⒺ
Show:
Wet Floor Signs.
Explain:
Why they should be used.
Ask:
What do you use the broom, counter brush, dust pan and putty knife for?
No
Response: To remove the gross dirt before spot mopping
Yes
Model:
Demonstrate the spot mopping process using the movements shown earlier
Explain:
Talk about wringing the mop correctly and being sure to put up signs.
Practice:
Have each trainee try the mopping procedures
Fail
Oral test on spot mopping mopping
Pass
Ⓕ




## Task Analysis

Another source of information about the training tasks is task and/or job analysis. This may be the principle source of task information for new training programs.

The gathering of analysis data is accomplished in three phases: planning, collecting, and forming task matrices. Preliminary planning will help you determine the best way to collect the data. The performance area to be analyzed must be selected, the staff who will complete the analyses must be chosen, and data collection forms must be developed in the planning phase.

The actual collection of data is often accomplished by interview and observation of workers who are presently doing the task for which you will be providing training. Further information is gathered through interviews with supervisory personnel. During the analysis, data are collected describing the task and/or job, conditions under which they are performed, and standards of acceptable performance. The final consolidation phase incorporates individual analyses into one job/task matrix describing similar and different aspects of many similar jobs. This will allow you to provide training in one job with task overlap for many jobs.

The statements of tasks collected during the analysis must be written in a format that allows them to be used to develop training manuals. Each statement, thus, should describe a work task, the conditions under which the task is performed, and the quality/speed of performance.

Analysis staff should make statements describing what the workers actually do. This is usually an observable action. Statements always begin with an action verb, such as "writes," "evaluates," or "performs." The description should also indicate those factors that directly affect worker performance. After the verb will be a statement that indicates the tools, equipment, supervision, or assistance needed to perform the task. Finally, where acceptable performance can be easily described, the statement of job performance should include a judgment of quality and/or quantity.

# CHAPTER FOUR

## Analyzing Program Content And Procedures

After you have described your training program in written form, it is necessary to assess the content and process that you have documented and compare the elements you presently have, or may wish to modify, with the model manual and standard practices.

### Include all Critical Elements

Basic to the analysis of your written program is adherence to the three elements discussed in Chapter One. Does the material include both knowledge-based information and skill-based information? Does the material include set criteria levels for passing each part of the program that are based on community standards? Does the material describe the presentation of factual materials in a step-by-step manner, including a text for the trainer? If you can answer yes to all of these elements, your manual is nearly complete.

If any of thes elements are missing, or if you are just beginning to develop a new program of instruction, it may be helpful to review standard instructional development strategies. A more detailed investigation of instructional development strategy is found in Smith (1984) Developing Effective In-service Training Programs.

### Follow Standard Instructional Development Strategies

When detailing your training manual, seven areas are of particular value. They are:

1. Use needs assessment and/or job analysis to determine training tasks.

2. State knowledge and performance objectives in measurable terms.

3. Establish prerequisites.

4. Sequence the program content to maximize learning.

5. Construct community acknowledged competency-based standards.

6. Determine the most effective instructional method.

7. Prepare training aids.

## Use Needs Assessment and/or Job Analysis to Determine Training Tasks

Needs assessment for use in the development of a training manual involves the identification and validation of job tasks and the establishment of task training priorities. An assessment can cover the entire training program or be confined to one specific skill area. Whatever the scope of an assessment, there are two steps in determining needs: problem identification and competency modeling.

Problem identification is the determination of skill deficiencies, hopefully traced to causes. Action steps are then formulated to provide needed solutions. The solutions are written as training objectives and incorporated into the training manual.

A competency model is a description of desired performance following training. Post-training performance is compared with the competency model to identify areas where training may be deficient. Without using a competency model, any performance could be considered adequate. Problems exist only when performance is less than that described by the competency model. Needs assessment is, thus, dependent upon discovering gaps (or differences) between the desired level of competent performance and post-test behavior.

Competent performance following training must be described using criteria relevant for the tasks performed in your community. An organized effort to collect competency data may be necessary. McCready (1979) presented a data gathering process that is useful in needs assessment:

1. Conduct a preliminary and brief investigation by making a few telephone calls to gather competency opinions. Evaluate the situation before beginning a major data gathering effort.

2. Decide which data are needed by making a preliminary listing of the competency areas to investigate. Develop clearly written statements reflecting these data needs. Too much

data confuses the issue; insufficient data frustrates the achievement of accurate results.

3. Evaluate available resources. Determine the amount of time, energy, and people that you are willing to expend in the gathering of competency data.

4. Determine a data gathering method by examining what data is to be gathered and the resources that will be expended.

Data gathering for determining competency performance can be accomplished in many ways. Brainstorming sessions with persons knowledgeable in the competency area, published sources of information, such as standards written by accrediting agencies or certification councils and assessments completed by affiliate organizations are useful data gathering sources.

In brainstorming sessions, competency data are gathered through a group exchange of ideas. A group of people knowledgeable in the competency area meet together and use personal knowledge about the area to state their ideas of competency. As each participant presents their ideas, other group members build upon the data presented. The resulting consensus descriptions of competency has benefitted from the insights of many.

Job data may also be obtained from sources such as:

Job Service Offices
The Dictionary of Occupational Titles
Federal and State VR Offices
Colleges and universities
Other rehabilitation facilities
Textbooks

## State Knowledge and Performance Objectives in Measurable Terms

After determining the competencies needed for a particular job or task, training objectives must be set.

### Criterion for Including Objectives

The selection of objectives is based on many criteria. All criteria listed below need not be met; meeting a single criterion may be sufficient justification to include a training objective in the training manual.

### Universal Application

The universal application of a job task emphasizes the development of skills useful to many jobs. For example, the skill to self-check quality is valuable for any employee. To determine if a task meets the criterion of universality, ask the questions:

a. Where is this skill or knowledge used? In what jobs?
b. Does it have wide application?

### Difficult to Learn Independently

Some skills may be simple to learn. Clients may, in fact, acquire the skills without training. Those skills may not need to be included in your training process. Others, however, may be difficult to learn independently. For example, although a client could learn to use a dust mop properly through trial-and-error, it would be easier to gain the skill through a training process. Dangerous tasks or tasks that may lead to equipment damage may also cause a task to meet the criteria of difficulty and, therefore, be included in a training program. The following questions may help identify difficult tasks:

a. Is the skill or concept difficult to acquire?
b. Are clients likely to learn this skill on their own with minimum danger to themselves, equipment, or others?

### Crucial to Acceptable Job Performance

Skills essential to acceptable job performance, even though not performed frequently, are candidates for training under the criterion of cruciality. For example, only one procedure for wet mopping floors is acceptable in areas where food is prepared. Though not all clients will work in kitchen areas, all will need to know the procedure if even a remote possibility exists that they will be placed in food preparation jobs. The critical nature of even infrequently used skills leads to including those objectives in the training manual. Ask the following questions:

a. How important is the skill when it is called for?
b. What is the impact for potential client placement if training for the skill is not provided?

### Frequent Use

Frequently used skills must be included in the training manual. These are the skills clearly identified as important in the

needs assessment process. Frequently used skills can be identified by asking the following questions:

a. How often will the client be required to perform this task?
b. Is it done often enough to warrant training?
c. Is there a "best way" to do it?
d. Should the method of performing the skill be standardized?

Economically Feasible

Objectives must also meet time and dollar capabilities of the program. If the task will only slightly improve the client's placement potential and will be costly and time consuming to provide, it may not be advisable to include the objective in the training manual. Training should always result in a significantly higher level of performance or a measurably greater degree of skill than could be attained in any other way.

Achievable

Training objectives must be achievable within satisfactory time periods. Objectives must be comparable with the abilities and aptitudes of your clients, as well as with the requirements of the job. It is counter-productive to set standards of accomplishment that are unreachable by many of your clients. To aid in determining that the objective is achievable, ask the following questions:

a. Can the majority of your referred clients meet the standard prescribed by the objective?
b. Do your clients have or can they attain the aptitude, intelligence, maturity, motivation, or experience required to attain the desired standard?
c. Can your clients achieve the standard in a reasonable period of time?

Emphasize Average Competence

Training components should be selected that closely define the competencies of average workers. Aiming for training that is at the lowest denominator of the workforce will not allow some of your clients to achieve higher levels of skill attainment. Using the highest denominator will waste time and money preparing clients in skills and characteristics of only outstanding performers. You should ask:

a. Is this skill required?
b. Is this level of proficiency demonstrated by average performers?

Frequently Deficient Skills

Needs assessment identifies those tasks that are frequently mentioned as being deficient. These tasks can be earmarked for inclusion as training objectives. For example, if the ability to use a hand buffer is often cited as a deficiency of entering workers, it may be good to include training in the use of a hand buffer in your training manual. Ask the following questions to help identify frequently deficient skills:

a. What tasks are frequently performed poorly by entry level workers in this field?
b. Which tasks require emphasis due to errors that are consistently made over time even by experienced workers in this field?

Retention of Skill Over Time

The time interval between completion of training and use of the skill on the job must also be considered when choosing objectives. The degree to which a skill degenerates through non-use, and the time over which the deterioration takes place is considered when deciding to provide training. The amount of emphasis, practice, and maintenance training required for retention of the skill at the required level is important.

## Writing Performance Objectives

After selecting t ning objectives, they are written in a form permitting the development o efficient programs. Often objectives worded "to provide staff with a general knowledge of...," or a "working knowledge of...," or an "understanding of..." are open to several interpretations and do not provide the data needed to develop instructional materials or construct competency measures. Objectives describe: (1) the tasks that clients must perform, (2) the conditions under which they must perform, and (3) the standard of acceptable performance. A useful objective states clearly a desired action. The objective is a description of performance which will be interpreted in the same manner by all concerned with planning and conducting training activities. To provide a common base of interpretation for many readers, vague words such as "know" or "appreciate" are avoided in favor of more explicit terms.

Clear objectives require action-framed statements which draw a picture of performance after training. They state what the client will be able to do at the end of a training program. Because the material learned allows for the application of specific knowledge or the demonstration of a skill, clear descriptions identify: (1) what clients will be given to do the job (tools, equipment, job aids, references, materials), (2) what they will be denied (tools, equipment, etc.), (3) what assistance they will have if any, (4) what supervision will be provided, and (5) the physical environment in which they must perform (climate, space, light, etc.).

Clear descriptions also state how well clients must be able to perform. Standards establish the minimum performance requirements for a job. To do this, the objective statement must state the necessary quality of work in terms of accuracy, completeness, clarity, tolerances, etc. In addition, the quantity of work produced (where applicable) and the time allowed to complete the job can also be described.

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**Steps in Writing Performance Objectives**

Identify performance objectives.
State required conditions.
State the criterion of acceptable performance.

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Although it is possible to write a single statement which incorporates the three essential parts of a true performance objective, it is permissible to write clear objectives by physically separating the three parts.

### Establish Prerequisites

After performance objectives have been clearly described, prerequisites should be established. Prerequisites are descriptions of the pre-training knowledge that clients entering the program will be required to possess. Prerequisites are a prediction of the aptitudes, knowledge, skills, and experience required for successful program completion. They may be applicable to all program components or to specific parts of an instructional course. Prerequisites are established to ensure that the clients entering the program have at least a minimum amount of assurance that they will be able to complete the program. The aptitudes, abilities, and experiences of clients entering a program have a direct bearing on the selection of appropriate instructional strategies and the development of instructional materials. To plan adequately the trainer must have accurate information about the characteristics of the typical client.

## Sequence the Program Content to Maximize Learning

The learning of new material relies on previously learned materials. Changes in performance will develop gradually and sequentially. Sequencing is the process of placing program learning experiences in a time reference to produce the most learning in the shortest period of time. Sequencing helps to avoid unnecessary duplication in content. It also helps assure that all skills have been developed before the program is completed.

The sequence of lessons in a program of instruction can be based on job performance order, logical learning steps, or order by ease of learning. Job performance order is the order in which a job is actually performed. Logical learning steps are dictated by the inherent logic of the subject-matter, such as applied first aid. Order by ease of learning provides older learnings as the basis for new learnings and, when possible, staff move from the simple to the complex, the familiar to the unknown, and the concrete to the abstract.

All types of sequencing are used in course development. Sequencing decisions are based on the actual content of the training program and must be completed before anything else is developed.

### Guidelines for Sequencing

1. Place easily learned tasks early in the training program.
2. Introduce broad concepts and technical terms having application throughout the program early in the sequence.
3. Place the application of concepts close to concept introduction.
4. Place requisite skills and knowledges in the sequence prior to the points where they must be combined and applied.
5. Provide for maintenance and review of skills and knowledges which are essential parts of later tasks and duties.
6. Introduce a concept or skill in the task in which it is most likely or most frequently to be used.
7. Don't "overload" any task with difficult-to-learn elements.
8. Provide for redevelopment and practice of required skills and concepts in areas where transfer of identical or related skills is not likely to occur.

9. Place complex or cumulative skills late in the program sequence.

### Steps in Sequencing

1. Examine each performance objective and develop outlines for each skill component. These outlines must include all of the major skills required to achieve the performance specified. The product of this step is a complete outline of all required learnings including all specific concepts, principles, skills, or values required.

2. Arrange the objectives and content outlines in developmental learning order.

   (a) Lay out the outlines.

   (b) Determine whether each item in an outline should be initially presented within the task where it first appears.

   (c) When specific items are obviously interdependent, decide where in the sequence to place the items on the basis of secondary guidelines such as difficulty of acquiring the skill or knowledge, or on the basis of an equitable distribution of difficult learnings among the several tasks.

3. After establishing a tentative sequence, start with the first performance objective and proceed to write a detailed content outline. Each item in the outline is then analyzed and teaching points are developed by making declarative statements about the contents.

4. The final step in sequencing is to examine all of the detailed content outlines and eliminate any unnecessary duplication.

### Construct Community Acknowledged Competency-Based Standards

Using job analysis and/or need assessment data, competency tests are established to measure the completion of training. Training objectives define the tasks which the tests measure, specify the conditions of performance, and identify the degree of proficiency which clients must demonstrate for each task. A competency test is derived directly from the objectives and not from lesson plans.

When using training objectives to develop competency tests, ensure that tests measure each objective in the terms stated by the objectives. To show that they have met the objectives, clients must meet or exceed the level of performance required by each objective. As each objective is essential to performance, unsatisfactory performance on one part of the test cannot be compensated by superior performance on other parts. Relative grades or standings are, therefore, meaningless and standards for competency tests should be set in terms of final grades, scores, or levels of performance that are considered "minimum passing" or "minimum qualifying."

Because the competency test includes only those behaviors that have been determined to be relevant to the job, all clients who complete the program should achieve a perfect test score. Practically, however, a "passing" criterion level of 90 percent, with a range from 80 to 100 percent, might be considered evidence that the objectives of the instruction have been achieved. Use the rule of thumb that if 90 percent of the clients receiving training achieve a score of 90 percent or higher, the instructional system is a good one. Although a competency test helps determine that clients are able to complete a task, a major benefit is the testing of the instructional system by identifying weak elements and providing data upon which to base modifications to the system.

There are several types of competency tests, each with advantages and limitations. The three types most likely to be used are written objective tests, oral objective tests, and performance tests. Knowledge-based criterions are usually tested by written and/or objective tests though performance tests may also be used. Performance-based criterions by definition must be measured by performance tests.

### Written Objective Tests

Written objective tests are printed or duplicated. Clients either mark answers on the test or a separate answer sheet. Questions may all be written, or there may be printed numbers, diagrams, pictures, or other material to accompany test items.

#### Advantages

a. Scoring is objective.
b. Scoring is quick and easy.
c. The tests can be administered to many clients simultaneously.

#### Limitations

a. Written tests cannot validly measure all types of job behavior.

b. Many clients cannot read or write.

### Oral Objective Tests

These tests are similar to written tests in their content and method of administration except that staff administer them verbally and note answers that are conveyed verbally or gesturally.

#### Advantages

a. They are easy to prepare.
b. They are easy to administer.

#### Limitations

a. They must be administered to one client at a time.
b. They are difficult to score unless they are short-answer.

### Performance Tests

Performance tests require clients to demonstrate a sample of the supposedly learned task. Scores may be based on time to complete, accuracy of work, quantity of work, or quality of work. A performance test requires the client to use tools and/or equipment that will be used on the job or simulated tools, equipment, or materials.

#### Advantages

a. The tests can cover the whole job or task.
b. They are job oriented.

#### Limitations

a. They usually cover only a part of a job.
b. They require more time to administer per item than other types of tests.
c. They are usually administered individually.
d. They often require tools, equipment, and materials which add to the problems and expense of administration.
e. They are difficult to design.

## Determine Most Effective Instructional Method

Proper selection of an instructional method promotes efficiency and effectiveness of instruction more than any other measure. Methods are selected by systematic, objective means to promote efficiency and help assure that objectives are attained. No single best method applies to all learning situations or instructional objectives. Trainers must choose the method most compatible with program objectives, training facilities and resources, and abilities of clients.

Many instructional methods exist. Examples are: lecture, demonstration, conference performance, programmed instruction, study assignment, and coaching. The approach considered to be the most effective and efficient for the attainment of instructional objectives is called a primary method. Supporting methods are approaches which are essential complements to the primary method. Supporting methods help assure the attainment of instructional goals. Alternative methods are approaches used as substitutes when circumstances dictate.

Each instructional method has advantages and limitations. Careful consideration given to advantages and limitations helps select the most effective and efficient method.

### The Lecture Method

Lectures are presentations in which the trainer talks about events, facts, concepts, or principles, explores a problem, and/or explains relationships. Clients participate in lectures as listeners. Lectures are a means of "telling" clients information they need to know. This does not mean that all the talking done by the trainer during a class period is a lecture. The term refers to formal discourse used to achieve an instructional objective. The purpose of a lecture is to provide information.

Appropriate uses of lectures in training clients may be:

1. Provide information on policies, rules, procedures, purposes, and resources.
2. Introduce a task, indicate its importance, and present an overview of its scope.
3. Give directions on procedures for learning activities.
4. Present basic material.
5. Set the stage for a demonstration or discussion.
6. Illustrate the application of rules, principles, or concepts.
7. Review, clarify, emphasize, or summarize.

Advantages

Lectures save time because the trainer can present more material quickly than by any other method. Class size is limited by the size of the room that is used and the attention/receptivity skills of the clients. Lectures can be used effectively in any type of training area, requiring only that clients be able to hear the instructor. Skillful trainers modify or adjust material to meet the needs of each program, thereby making it possible to present information differently for varied client groups.

Disadvantages

Lectures are not appropriate for the instruction of (other than to introduce) skills such as equipment operation. As most learning takes place through the visual sense, and the lecture, even if supplemented by training aids, appeals mainly to the auditory sense, results are likely to fall short of the instructional goal, unless the content is interesting and challenging enough to hold the attention of the client. During a lecture, attention is difficult to attract and retain. Outside disturbances and day-dreaming easily distract clients. The success of a lecture depends on the skill of the instructor.

**The Demonstration Method**

In demonstrations the instructor shows clients what to do and how to do it. Through explanations the instructor then brings out why, where, and when the demonstrated task is performed. Sometimes clients are expected to be able to repeat the job or operation after demonstration. Demonstrations are used to show how something is done and to:

1. Teach problem-solving skills.
2. Illustrate why something works.
3. Teach the operation of equipment.
4. Teach clients to work together.
5. Teach safety procedures.

Advantages

Clients learn faster and more permanently with a demonstration because:

a. Demonstrations give meaning to explanations.
b. Demonstrations show relationships between steps of procedures.
c. Demonstrations appeal to several senses.

d. Demonstrations arouse interest and attention.

Equipment can be damaged and people injured by improperly trained clients using unfamiliar equipment and procedures. Injuries can be prevented by the use of demonstrations during instruction. Planned demonstrations take much less instructional time than other methods. They reduce lecture time and help prevent misunderstandings concerning how a procedure is to be implemented or a piece of equipment used. Class size is limited only to the ability of the group to see the demonstration. The use of models or role plays makes it possible to teach many operations to large groups of clients.

Disadvantages

Demonstrations should set performance standards for clients. The procedure shown must be technically correct and performed with competence. The instructor must ensure that equipment is in working order for nothing fails as completely as a demonstration that doesn't work. The demonstration room must be set so that all clients can clearly see the demonstration.

### The Performance Method

Using the performance method clients are required to duplicate the procedure, skill, or movement being taught. Performance is learning by doing. The method has the same applications as the demonstration method and can be used as follow-on instruction to:

1. Teach operations or procedures.
2. Teach the use of equipment.
3. Teach team skills.
4. Teach safety procedures.

Advantages

Given the opportunity to apply knowledge in a realistic situation, clients may develop confidence in their abilities and a positive attitude toward in-service training. Active participation increases interest and attention and thereby increases both the amount and the permanence of learning. Using the performance method, instructors can observe the learning attained by clients, identify clients having difficulty, and determine if there are weak areas in the presentation. Because performance is guided, clients are less likely to make mistakes which damage equipment or injure clients. Guided performance allows emphasis to be given

to the proper method of performance, thereby, preventing accidents.

Disadvantages

Aids and equipment must be available in sufficient quantity for the size of the group. A well-run performance exercise can be time consuming in its requirements for setting up the room and equipment and for performance of the procedures presented. Unless the group is small, several instructors are required to check progress, give assistance when needed, and evaluate the quality of performance.

### Coaching

In the coaching method, instructors work directly with individuals. Coaching is used to teach complex skills or procedures which involve danger to staff or clients.

Advantages

Coaching is the optimum in individualized instruction. Instruction is tailor-made to meet unique individual needs. Coaching allows direct client involvement in the learning process. The ability of the coach to adapt instruction to individual needs and the high degree of client participation makes this method an effective tool for reaching instructional objectives. Close control over the performance of potentially dangerous procedures results in the prevention of injury to staff and clients.

Disadvantages

Coaching is a demanding type of instruction. Close client/instructor contact requires complete mastery of the skill being taught. Coaching is the most expensive method of teaching because instructor preparation and presentation time are essentially the same as they would be for a whole group though only one client receives instruction.

### Selecting the Appropriate Method

Method selection is based on several analyses: instructional objectives, subject-matter, client population to be trained, available instructors, instructional facilities, equipment and materials, time, and costs.

The size of the staff group, the educational level, prior training, aptitudes, maturity, reading and speaking ability, and the teaching location are

considered in selecting a method. The use of some methods need the establishment of maximum and minimum class sizes. Where class sizes exceed or fall short of the established figure, an alternative method is used. The competencies of instructors are probably the most important factors to consider in selecting a method because the likelihood that a client will successfully complete training is closely tied to the abilities of staff to provide training.

Each instructional method requires specific facilities, equipment, and materials. When facilities are not available alternative methods are used. For example, videotape is the most effective media for the presentation of material, but the videotape machine is broken, an alternative approach is required.

The time available for instruction also influences the method selected. Performance methods demand more time than lecture and demonstration methods. If time is extremely limited, an alternative to the most effective method is required.

Cost is also important in training programs. Time, facilities, and materials have price tags. The cost of the method used must be reasonable when measured against effectiveness. If the expected gains in learning effectiveness of a particular method do not offset the costs incurred by the use of that method, a less costly, even less effective method is used. Savings, however, must not jeopardize the instructional intent. Regardless of its cost, the chosen method must provide adequate training with sufficient savings to the facility to justify its use.

### Prepare Training Aids

Instruction is supplemented and reinforced by the use of a variety of training aids. Training aids are essential for increasing training efficiency and effectiveness by reducing the number of words required to communicate ideas. Aids help stimulate interest, increase attention, promote understanding, and provide experiences that cannot be obtained in other ways.

Training aids are anything that assist the trainer. The following are training aids:

Printed or Duplicated Aids. Books, manuals, pamphlets, guidelines, and handouts.

Graphic Aids. Pictures, drawings, illustrations, photographs, chalkboards, bulletin boards, easels, charts, and diagrams.

Three-Dimensional Aids. Models, synthetic trainers, and displays.

Projected Aids. Slides, transparencies, filmstrips, motion pictures, and videotape.

Auditory Aids. Tape recordings and records.

The trainer has the responsibility of selecting or developing training aids which complement his/her basic instructional method. Use the following guidelines to select training aids:

1. Select aids which fit the maturity, interest, and abilities of the client trainees.

2. Select aids which are most appropriate for the particular learning activity.

3. Maintain a balance in the types of aids selected.

4. Select aids which complement, rather than duplicate, other learning activity.

5. Avoid the over-use of aids. Do not use an aid just because it is available.

6. The major criterion of selection is: "Will it advance learning; is it needed?"

7. Check copyright laws; can the materials be used?

# CHAPTER FIVE

## Reviewing the Manual

Trainers and administrators need to know if the training programs they present are effective; effectiveness is difficult to determine from the narrow view of a program in progress. Thus, the manuals that describe the programs may actually contribute to the organization's program evaluation effort.

The determination of effectiveness for a program or manual is dependent on a regularly scheduled time to step back and examine the program and its documentation as a whole. This review process requires that data be collected and analyzed to describe the desired outcomes, the activities that were designed to lead to the outcomes, and the actual outcomes. Detailed information about program evaluation is found in Smith (1987) Program Evaluation: A Self Study Manual.

The effectiveness of a training program is influenced by changes both within the facility and external to the facility. The program's effectiveness can be influenced even if no changes are made in the program itself. Potential environmental changes that could negatively influence the effectiveness of a training program are:

Internal changes

1. All clients become fully trained in the areas covered by the program.

2. Procedural techniques are altered after training has been given.

3. New clients bring to the program an increased or decreased level of entry knowledge.

4. The size and complexity of the program changes.

5. Administration chooses to provide service in new markets.

External changes

1. Legislation passed at local, state, or federal levels changes the tasks that need to be taught in some jobs.

2. Accreditation agencies or funding bodies mandate changes in the types of training offered.

3. Changes in funding levels result in the decrease or increase of referrals, changing the relative need for training.

4. Changes in funding priorities alter the types of programs offered.

5. Contracted work opportunities are lost or added changing the skills needed within the workshop.

6. Technological changes in rehabilitation lead the facility to use different remediation methods.

7. Labor force demographics alter changing the types of programs that facilities offer.

To react to these changes and keep the training program responsive to the needs of clients and funding agencies, the facility must regularly evaluate its training programs. The evaluation data must then be used to quickly alter the training that is offered.

In both areas, training manuals can provide the data and the focal point for an evaluation. The manuals can provide clear documentation of how the program is meeting the needs of clients, community, and funding agencies. If, based on a comparison of the manual to stated needs, any changes need to be made, changes to the manual can be quickly translated into programmatic alterations. Thus, the manual has bridged the documentation gap in a minimum amount of time.

## Determine Review Dates

Most trainers and administrators would agree that, at a minimum, training programs and training manuals should be evaluated once per year. If the program or manual is new, greater frequency is desired. Frequent evaluations, after two or three complete uses of the manual, for example, will allow changes to be made in a timely manner. Evaluations should also be hastened if new tasks are added to the program, technologies change, or client functioning levels are drastically modified.

## Collect Review Data

Many sources of data may be used to provide input into the evaluation of a training program and/or a training manual. They include: oral and written knowledge-based test results, skill-test results, performance ratings, and placement statistics.

## Use Review Data for Program Evaluation

Evaluations serve a variety of purposes. These purposes are: to determine if training is effective in reaching objectives, to improve the training system, and to make administrative changes.

### Determine Effectiveness of Training

Trainers need specific information regarding the quality of their instructional system and its effectiveness in attaining objectives. This is the requirement with the highest priority. The data derived from tests and other sources is primarily used to serve this purpose.

### Improve the Training System

Evaluation data also provide trainers with the data needed to improve the program and its segments. Data may be used to:

1. Motivate clients to learn as much as they can in the shortest possible time.

2. Identify clients that require extra instruction.

3. Assure that minimum standards of performance are achieved.

### Make Administrative Changes

Evaluation data also provide a sound basis for making administrative changes such as:

1. Changing the client's individual program plan

2. Cycling clients into other training or placement programs based on their abilities.

3. The dismissal of disruptive, non-achieving clients.

4. The assignment of staff to training positions based on competence.

The assessment of evaluation results provides an important measure of the effectiveness for a program. Test statistics that include measures of central tendency, measures of tests variation, and measures of reliability should be used to analyze the collected data. Statistical analysis cannot be completed until becoming familiar with statistical techniques. Consult textbooks on statistics for this information.

## Conduct Post Program Follow-up

Training programs are presented to help clients obtain and maintain jobs. Proof of training value is, ultimately, proof that the program "graduates" can and do perform the jobs they were trained for. Thus, part of the determination of the effectiveness of the program, and to provide information for revisions and improvements, on-the-job performance data of clients after they are placed must be collected.

Follow-up evaluators are selected to interview former clients and their supervisors and to observe performance. Interview and observation are the primary means of collecting evaluation data. However, questionnaires may also be used to collect data. Questionnaires may ask former clients and their supervisors to rate their performance on the job.

## Program Elements That Should be Evaluated

Information about the training program gained through testing and follow-up is used to determine the effectiveness of the system and each of its components in operation. Training programs involve client, trainers, content, sequence, time allocations, instructional methods, materials, equipment, and facilities. The end result of the training is affected by each element and effective evaluations should consider all elements.

### Clients

Some program failures can be attributed to clients. If the clients do not possess the prerequisite aptitudes, skills, and knowledge needed prior to receiving instruction, they will not be able to learn the job skills and knowledge the program aims to develop; at least not with the materials provided and within the time frame established. If follow-up data indicates that materials were not learned, and the material was presented, the clients may not possess the prerequisite abilities required by the program. Changes may need to be made in the program contents, to include tasks that were assumed to be prerequisites. Careful evaluation of the first program pre-

sented is vital to assure that the clients enter the program ready and able to learn.

### Trainers

The program trainers must be able to adequately convey the knowledge and skills offered by the program. By observing trainers as they present materials and by gathering information from participants, problems with trainers may surface.

### Content

Duplication of content is avoided in the development of instructional materials. However, duplications and omissions may occur and these weaknesses must be identified. Classroom observation assists in the identification of obvious problems in the implementation of training.

### Sequence and Time Allocations

The only way to determine if the sequence and time allotted to programs is correct is to try them out. Clients may report sequencing errors and improper time allocation when they attempt to learn the material presented. The comments of the clients and the trainers, as well as observation provides the data needed to improve sequencing and time allocations.

### Instructional Method

The best instructional method is deterred by experimental studies in which different methods are compared. Because these are expensive and time consuming, the adequacy of the instructional method selected is usually obtained by observation of the program. Observer judgment is relied upon to determine the method's effectiveness.

### Materials, Equipment, and Facilities

The adequacy of materials, equipment, and instructional facilities is also evaluated by observation of the on-going program. Part of the job of an observer will be to note deficiencies in these areas and make recommendations for improvement.

## Review Planning

Program observation must not be the only method of evaluation. While this type of evaluation may be the best method in some situations, it cannot provide complete data on the effectiveness and efficiency of the program. The observations and evaluation of clients and trainers must also be included to get a rounded view of the program.

Failure to correctly evaluate a program and make useful changes can be attributed to planning, lack of objectivity, and improper interpretation of data. Some of the most common mistakes are:

### Planning

1. Failure to plan data collection instruments, specific procedures to be followed, and the timing of observations, surveys, and interviews.

2. Failure to train evaluators in the principles and techniques of evaluation, including the use of data-gathering instruments.

3. Failure to make clear to all concerned the purposes of evaluation and the uses to be made of evaluations and recommendations.

### Lack of Objectivity

1. Failure to select evaluators who are impartial and capable of making objective judgments.

2. Failure to look at all of the components of the program.

3. Focusing on unimportant details and "nitpicking" trainers.

### Improper Interpretation

1. Assuming that consensus in one group, such as trainers, provides a valid judgment.

2. Concluding that an observation or judgment made by only one observer is inaccurate or invalid.

3. Taking comments at face value, and not considering the nuances of language and the problem of semantics.

4. Failing to take into consideration the perspective of the individual making the observation.

# APPENDIX ONE

## A "Services" Training Manual: An Example

Some elements of the "service" training manual presented below were used as examples as we examined the manual development process. The materials below are the instructions for one task to be taught in a complete custodial training program. The complete manual Custodial Training, Second Edition by Arden Lubeck is available commercially by writing to Columbus Community Center, Salt Lake City, Utah.

# MOPPING

A. Wet Mopping
B. Damp Mopping
C. Spot Mopping

## Objective

To help the trainee achieve and maintain job readiness in the task area of mopping (wet mopping, damp mopping, and spot mopping) as measured by:

Attainment of a score of 90% correct or better on the oral test and

Attainment of a score of 90% or better on the performance test.

## Materials Needed

Two cotton mops
One nylon mop head
One 4 1/2 ft. mop handle
One 5 ft. mop handle
Two buckets with wringers
Two bucket rollers (if separate)
500 ft. unobstructed tile floor
Two wet floor signs
One dust mop
One putty knife

I. Purpose of mopping

Ask: **Why do we bother to mop floors?**
(To remove dirt.)

II. Types of mopping

Explain: **There are three different types of mopping that we will do at different times depending on how dirty the floor is and what we want to clean.**

Write on blackboard:

WET MOPPING
DAMP MOPPING
SPOT MOPPING

III. Mop types and care

A. Mop heads

Show: Have both a cotton mop head and a nylon mop head (dry) available. Show the trainees each mop head. Let them feel the difference in the different types.

Explain: **There are several different kinds of mop heads. We use cotton mops and nylon mops. They even come in different sizes. The different sizes allow you to use a light or a heavy mop, depending on how strong you are.**

**The cotton mop head is used for wet mopping, damp mopping, and spot mopping.**

**The nylon mop is only used for waxing or sealing floors. Never use a nylon mop for cleaning, because it will get dirty and then it cannot be used for waxing or sealing.**

B. Mop handles

Show: Have at least two different lengths of mop handles. (If you desire, you may also have handles of differing composition, such as plastic coated, wood, metal.)

Explain: **There are two different standard lengths of handles. Most handles are five feet long. Four and one half foot handles are sometimes used by shorter men and women.**

C. Care of mops and other equipment

Explain: **Mops and other cleaning equipment last longer if they are properly cared for. They also do a better job of cleaning when they are clean themselves.**

1. Mops

Explain: **After wet mopping, damp mopping, or spot mopping, rinse the mop out in warm water. Wring out the mop and hang it up to dry. Never leave it on the floor.**

2. Buckets

Explain: **Buckets should be rinsed out to remove any dirt and/or soap in the bottom. They should be dried (especially if they are made of metal) and stored upside down.**

3. Wringers

Explain: **Wringers should also be rinsed off. They should be stored near the buckets.**

IV. Wet mopping

A. Equipment

Explain: **We do wet mopping when we have a very dirty floor that needs both a soap solution and a rinse to get it clean.**

Show: Two buckets

Explain: **One bucket is for soapy water and the other bucket is for clear water for rinsing.**

Show: Two cotton mops

Explain: **Each bucket will have its own mop.**

Show: Rollers for the buckets (unless attached to the buckets)

Explain: **Rollers make the buckets easier to move.**

Show: Wringers for each bucket

Explain: **Wringers will help you squeeze the water out of the mops.**

Show: Dustmop

Explain: **You always dustmop the floor before wet mopping to remove all the loose dirt from the surface.**

Show: Putty knife

Explain: **A putty knife is used to remove any gum or tar that is missed by dust mopping.**

Show: Wet floor caution signs

Explain: **You must let others know that the wet floor is slippery.**

B. Operation

Move: Proceed to the mopping area with equipment and trainees.

1. Posture and stance

Show: Demonstrate how to hold the mop, emphasizing the following points:

Explain:
1. **Put one hand near the top of the mop handle.**
2. **Put one hand on the mop handle about waist high.**
3. **Stand erect keeping your back straight.**
4. **Your feet should be approximately 18" apart.**
5. **Put one foot slightly behind the other.**

Practice: Have each trainee show you how to hold the mop. Assist them until they can show you the proper method.

2. Mop movements

a. Mopping edges and corners

Model: Holding the mop correctly, move it along the outside edges of the floor, along the baseboards.

Explain: **This keeps water from being splashed on the walls. It is alright to get water on the baseboards. They are there to protect the walls.**

b. The figure "8" pattern

Model: Demonstrate the figure "8" movement with the mop. Emphasize the following points:

Explain:
1. **Use tight curves to keep the mop from missing any areas of the floor.**
2. **Make sure that you stand erect. Good posture will keep you from getting a sore back.**
3. **Using the correct hand holds makes the mopping job easier.**
4. **See how I walk backwards to avoid walking on the floor that has just been cleaned.**
5. **Turn mop head over frequently to allow both sides to be exposed to the floor and pick up dirt.**

Practice: Have each trainee show you how to do a figure "8". Assist them until they can show you the proper method.

c. Back and forth movements

Model: Move the mophead as if to remove a spot or stain.

Explain: **The mophead should be rubbed against the floor in a back and forth motion to remove stubborn stains.**

Ask: **What kind of mop motion should you use for stubborn stains?**
(Back and Forth motion.)

3. Applying solutions

a. Dust mop

Have one of the trainees prepare the floor surface by dust mopping using the procedures learned earlier in the program.

b. Soaping

Model: Using the following process, show the trainees how to apply the soapy water to the floor:

Explain:
1. After you have gotten all of your equipment together, added water to the buckets, and put soap solution in one of them, you need to set up the wet floor signs.
2. Now, dip your mop into the bucket of soapy water.
3. Put the wet mop into the wringer. Do not wring all the water out, just wait until the mop stops dripping.
4. Take the mop in your hands the way I showed you, and do the edges of the area that is to be mopped.
5. Now, using a figure "8" movement, apply the soapy water to the floor.
6. As the mop dries, put it back into the bucket and wringer.
7. Only put soapy water on half of the area you want to mop.

Ask: Why is it a good idea to mop only half of the floor at a time?
(So people will have a dry area to walk on if they need to pass by.)

c. Rinsing

Model: Demonstrate the rinsing process using the movements shown earlier. Emphasize the following points:

Explain:
1. Use a different mop to pick up the soapy water. Do not use the mop that you put the soapy water on the floor with.
2. Wet the mop in the clear water.
3. Wring as much of the water out of the mop as possible.
4. Using the movements as before, use the now damp mop to pick up soapy water.
5. When the mop is soaked with soapy water, put it back in the bucket, swish the dirt out, and wring it dry again.
6. Change your water whenever it becomes excessively dirty and/or soapy.

7. **The floor should be rinsed before the soapy water solution dries. Make sure that there is no soap or dirt left on the floor.**
8. **If necessary, rinse the floor more than once.**

Practice: Working in teams, allow the trainees to soap and rinse the floor. Make sure that everyone gets a chance to try the process.

V. Damp Mopping

Explain: **We damp mop the floor instead of wet mopping it when it is not very dirty. Damp mopping is the same as rinsing in the wet mopping process. We always use hot water to damp mop. In some places, such as kitchens, hospitals, lavatories, and showers, we may add a disinfectant to the water. We never add soap to the water used for damp mopping.**

A. Equipment

Show: A mop bucket

Explain: **This mop bucket is for clear water. Sometimes we put disinfectant into the water. We never put soap in the wate .**

Show: A cotton mop

Explain: **Never use the damp mop head in soapy water.**

Show: Rollers for the bucket (unless attached to the buckets)

Explain: **Rollers make the bucket easier to move.**

Show: A wringer for the bucket

Explain: **The wringer will help you squeeze the water out of the mops.**

Show: Dustmop

Explain: **You always dustmop the floor before damp mopping to remove all the loose dirt from the surface.**

Show: Putty knife

Explain: **A putty knife is used to remove any gum or tar that is missed by dust mopping.**

Show: Wet floor caution signs

Explain: **You must let others know that the wet floor is slippery.**

B. Operation

Ask: **What do we do with our dust mop?**
(Dust mop the area before we damp mop.)

**Why?**
(To remove loose surface dust and dirt.)

Model: Demonstrate the damp mopping process using the movements shown earlier. Emphasize the following points:

Explain:
1. **First get all the equipment that you will need.**
2. **Set up the wet floor signs.**
3. **Never use a mop that you put in soapy water.**
4. **Wet the mop in the clear water.**
5. **Wring some of the water out of the mop until it is only damp, not dry.**
6. **Using the movements as before, cut the edges of the area to be cleaned.**
7. **Using the figure "8" motion, mop one half of the area.**
8. **When the mop starts to get soiled or dry, put it back in the bucket, swish the dirt out, and wring it until it is damp.**
9. **Change your water whenever it becomes excessively dirty.**

Practice: Allow each trainee to use the damp mop. Make sure that everyone gets a chance to try the process.

Ask: **What should you say if a passerby insists on walking on your wet floor?**
(It is safer if you walk around this area. If you would walk around this area, I would surely appreciate it.)

Explain: **It is a good idea to always be courteous to all people who walk by your work because people will respect you if you "keep your cool." Being courteous**

to others, even though they may be in the wrong, can also help you keep your job.

Remind: Always remember to put out the caution signs, and to only do half of the floor at a time. Then there will always be a safe place for people to walk. Fewer people will walk over your wet surfaces if you take these precautions. Not only will everyone be safer, but you will finish your job faster as well.

VI. Spot Mopping

Explain: Spot mopping is used when someone spills food, vomits, tracks mud, dirt, etc., on a clean floor. Only the spot that is dirty is cleaned in spot mopping.

A. Equipment

Show: A mop bucket

Explain: This mop bucket is for clear water. Sometimes we put disinfectant into the water. In some cases, spot mopping will require that we put soap in the water.

Show: A cotton mop

Explain: Because spot mopping is usually required when the spill or soil is excessive, it may be best to save one mop exclusively for spot mopping.

Show: Rollers for the bucket (unless attached to the buckets)

Explain: Rollers make the bucket easier to move.

Show: A wringer for the bucket

Explain: The wringer will help you squeeze the water out of the mop.

Show: Broom, counter brush, dust pan

Explain: Spot soil usually is picked up using the broom, counter brush, and dust pan that you learned to use earlier in the program.

Show: Putty knife

Explain: **A putty knife is used to remove any really heavy soil.**

Show: Wet floor caution signs

Explain: **You must let others know that the area you are working on is dangerous because it is slippery.**

B. Operation

Ask: **What do we do with our broom, counter brush, and dust pan?**
(Pick up the heavy soil before we spot mop.)

Model: Demonstrate the spot mopping process using the movements shown earlier. Emphasize the following points:

Explain:
1. **First get all the equipment that you will need.**
2. **Set up the wet floor signs.**
3. **Wet the mop in the water or solution.**
4. **Wring some of the water out of the mop until it is only damp, not dry.**
5. **Using the movements as before, cut the edges of the area to be cleaned.**
6. **Using the figure "8" motion, mop the area.**
7. **When the mop starts to get soiled or dry, put it back in the bucket, swish the dirt out, and wring it until it is damp.**
8. **Change your water whenever it becomes excessively dirty.**

VII. Closing

Ask: **Are there any questions about mopping that you would like me to answer?**

Explain: **I will be giving each of you a test. I will ask you questions and you will tell me the answers. If you answer 25 of the 27 questions correctly, I will test your ability to mop by giving you a performance test. In the performance test you will be measured on the speed and quality with which you can mop an assigned area. If you cannot answer 25 of the 27 questions correctly, we will review the material later and give you a chance to try again. You will practice mopping before and after you take the performance test.**

## MOPPING ORAL TEST

1. Why do we mop a floor?
(To remove dirt and stains.)

2. What are three different types of mopping?
(Wet mopping, damp mopping, spot mopping.)

3. When do we wet mop?
(When we have a very dirty floor.)

4. What is wet mopping?
(Wet mopping is when we use both a soap solution and a rinse to clean a floor.)

5. How many mops do you need for wet mopping?
(Two.)

6. Should you use cotton or nylon mops for mopping?
(Cotton.)

7. Should you dustmop before wet mopping? Why or why not?
(Yes. Because it is necessary to remove the loose surface dirt and debris.)

8. What is a putty knife used for in wet mopping?
(To remove gum or tar from the floor.)

9. What are wet floor signs for?
(To caution people that the floor is slippery and dangerous.)

10. When mopping, why should you cut the edges first?
(To avoid splashing on the walls.)

11. What type of motions should you use when mopping?
(Use either a figure "8" motion or side to side. Turn your mop over when it starts to get dirty.)

12. In wet mopping, what do you do after applying the soapy water?
(Rinse.)

13. How many persons do you usually have in a wet mopping operation?
(Two, one to soap and one to rinse so the soap doesn't dry out.)

14 How is damp mopping different from wet mopping?
(You do not use soap.)

15. **Before damp mopping a floor, what should we use to remove loose dirt?**
(A dust mop.)

16. **What temperature of water should you use for damp mopping?**
(Hot.)

17. **Should you have a putty knife when damp mopping?**
(Yes.)

18. **What equipment is needed for damp mopping?**
(A cotton mop, a bucket with rollers, a wringer, at least two wet floor signs, a dust mop, and a putty knife.)

19. **What should you say to a person who ignored your wet floor signs and began walking through your work area?**
(Courteously ask them to walk on the safer, dry area.)

20. **What is spot mopping?**
(Mopping only the dirty spots present on a clean floor.)

21. **When spot mopping, is a figure "8" motion used or is a back and forth motion used for a spot?**
(Back and forth.)

22. **What is a nylon mop head used for?**
(Waxing and sealing.)

23. **What is a cotton mop head used for?**
(Cleaning.)

24. **Why shouldn't you use a nylon mop for cleaning?**
(Because it will get dirty and won't be any good for waxing or sealing.)

25. **How are mops cleaned and stored?**
(They are rinsed in warm water, wrung out, and hung up to dry.)

26. **Why are mop handles made in different sizes?**
(Because people come in different sizes.)

27. **How are buckets cleaned and stored?**
(They are rinsed, dried, and stored upside down.)

## MOPPING PERFORMANCE TEST

1. The trainee must demonstrate the proper posture and stance in mopping.

2. The trainee must assemble all the equipment necessary for wet mopping, and, using the proper technique, wet mop and rinse a minimum of 1000 square feet of unobstructed tile floor in 35 minutes or less. (Use your locally observed standard if higher or lower.) No visible dirt or soap film should remain.

3. The trainee must assemble all the equipment necessary for damp mopping, and, using the proper technique, damp mop 1000 square feet of unobstructed tile floor in 16 minutes or less. (Use your locally observed standard if higher or lower.) Five "planted" soap streaks 2" wide by 24" long must have been fully removed in the damp mopping procedure.

4. The trainee must assemble all the equipment necessary for spot mopping, and, using the proper technique, spot mop a 500 square foot area in which 5 spots of food, mud, etc. have been previously placed at random. Within a 5 minute period, the trainee should spot mop the entire area, and fully remove the dirty spots. (Use your locally observed standard if higher or lower.)

5. The trainee must demonstrate the proper cleaning and storage of cleaning equipment.

# APPENDIX TWO

## A Second Model of a Training Manual

The following model of a training program session also shows how the three elements (knowledge-based data, skill-based data, and presentation description) may be combined to create a training program manual. This manual as well could have been written in many different ways. The format itself is not important; including the basic three elements is, however, very important.

The session was revised from one developed by Allan R. Stanton as a project conducted for completion of his master's degree in vocational rehabilitation at the University of Wisconsin-Stout in 1978. The training manual is not available commercially.

# MAKING SUPERVISORY EVALUATIONS POSITIVE LEARNING EXPERIENCES

This training manual about supervisors focuses on critical supervisory evaluation conferences held in work settings. The settings may be competitive or sheltered. This instructional program introduces the worker-supervisor relationship relative to evaluation conferences which may be held to convey information about the progress the worker is making in his/her job.

The format structuring the conference process is based on a working model. The structure is not rigid; on the other hand, adaptation should not eliminate informational elements without careful consideration.

## Criterion Levels

Following a presentation on worker-supervisor evaluation conferences, participants in the training session will be given a case history including worker background information, production data, and other relevant information. This case material is used in two role play exercises. In addition, a third role play exercise is suggested, in which the participants take the parts of workers and supervisors. Participants will be given an oral test of the knowledge-based sections of the program. To "pass" this module, a minimum of 80% of the questions must be answered correctly. Subsequent assessments of evaluation conferences conducted by workshop supervisors will also be measured. Clients must reach the performance level of 85% to be operating at competitive levels.

The knowledge-based component of this program will take one hour and 45 minutes to complete. This includes a break and all three role play exercises. The program may be presented to as few as two clients. There is no upper limit.

## Prerequisites

Since the target population consists primarily of sheltered workshop clientele, the qualifications required for entry into the workshop are sufficient evidence that participants possess the level of skills needed to successfully complete the program.

## Training Area Conditions

Make sure the arrangement of the area where this training session is held is such that all participants will have a clear view of the actors in the

first two role play exercises; make sure also that the participants will be able to hear what is going on. A relatively quiet, distraction-free setting (such as a conference room if available) is suggested.

## Equipment Needed

The following equipment and materials are required prior to the instructional presentation:

For the trainer:

1. This training package
2. Case History
3. Chair
4. Evaluation Report Form
5. Observation and Evaluation Form
6. Participant Evaluation Form
7. Pencil

For each participant:

1. Chair
2. Evaluation Report Form
3. Observation and Evaluation Form (three copies)
4. Participant Evaluation Form
5. Pencil

For each group of two participants:

1. Evaluation Report Form
2. Observation and Evaluation Form
3. Case History (two copies)

## Session Outline

The session is divided into the following activities with proposed time frames:

1. Introductory presentation by trainer. (5-15 minutes)
2. Role play of a negative evaluation conference, with the following parts: work supervisor and worker. (15 minutes including orientation)
3. Critique of role play by participants and discussion with trainer; trainer presents additional material if appropriate (points not covered during critique). (10 minutes)

4. Second role play, with same roles and actors as before; this time the role play incorporates feedback from the critique and discussion period to portray a positive evaluation conference. (10 minutes)
5. Critique of second role play by participants. (5 minutes)
6. Presentation by trainer of additional concerns that workers and supervisors experience; summary. (5 minutes)
7. Break. (10 minutes)
8. Possible third role play exercise for participants:

    a. Orientation and formation of groups (5 minutes)
    b. Review of case history by participant actors (5 minutes)
    c. Role play (10 minutes)
    d. Observer feedback within groups (5 minutes)
    e. Debriefing (final summary by trainer) (5 minutes)

9. Completion of Participant Evaluation Form by (or for) each participant. (5 minutes) (Orally completed forms: 5 minutes per participant.)

## Pre-training Preparation

In preparation for the training session, the following tasks should be completed:

1. Make up the required number of forms as listed above. Note that each participant in the session is to receive at least one copy of each form; additional copies of two of the forms are also prepared for use in the group role play (third) exercise. These forms may be saved by participants for future reference as guides for preparation of presentations in actual evaluation conferences. Note: The Conference Report Form is the guide for sequencing the presentation of material. This format is suggested as a model for structuring your own evaluation conference process. The Observation and Evaluation Form is used to record behavioral observations on participant role play performance. The Participant Evaluation Forms are handed out to each participant at the end of the training session and are collected and graded by the trainer later.

2. Prepare the required number of copies of the Case History. Two ways of approaching this are possible, depending upon the preference of the trainer. A fictitious Case History may be created to match the types of positions in which clients may be placed. The trainer may also prepare case file

information on an actual client with whom the training participants are familiar. Of course, if this option is chosen, legal and professional ethic requirements pertaining to confidentiality must be met. In general, a fictitious name (care must be exercised to prevent the real name from "slipping out"), and deletion or change of other positive identifying information (such as address and social security number) taken from the case file, should be sufficient. To be complete, case file information should include:

a. Background (general experience and hiring data)
b. Job description covering the tasks that the worker is completing in the course of his/her job
c. Current performance ratings using standard rating instruments

3. Select staff who will play parts in the first two role plays. The trainer should not be one of the actors. Experience has found the dual capacity of trainer/actor to be difficult to manage because it requires the client participants to understand the switching of roles. An actual work supervisor may be ideal for the part. The client role is relatively undemanding; it may be played passively or actively at the direction of the trainer.

4. A final key point in preparation is familiarization with the material in this manual. As in the evaluation conference itself, preparation helps maintain a smooth, structured flow of events.

Rehearsal for the role play is not essential if the role play actors feel pretty secure about the material; however, the trainer and actors should discuss possible ways of handling the role play. One key to a good role play is to be aware of the direction that the other actor is taking. In other words, play it by ear; be imaginative. Mistakes may offer opportunities for learning. Suggested behaviors that will indicate a positive or a negative evaluation session are listed later.

The material may be covered in as much depth as time permits. The overall length of 55 minutes (up to the third role play) is suggested but is not mandatory. If you get some good discussion going, don't cut anyone off. On the other hand, keep in mind that time should be used to provide structure to any meeting. If going beyond an hour is required by the amount of discussion, provide a break at the one-hour point to help avoid fatigue.

## The Presentation

Part One - Introduction (5-15 minutes)

Notice to trainer: the narrative to be delivered to the participants in Part One is arranged in sentence/paragraph format. Statements to be made by the trainer are **bolded.**

I. General Introduction (Material given in parentheses in this section may be selected or deleted at the trainer's discretion.)

A. Ice-breaker

1. **Thank you all for attending this session today** (even if it was required).

2. **I did a dry-run of this material last night at home. I just talked to the walls, who were pretty unresponsive, but they were there, and a captive audience. I discovered my planned five-minute introduction was going to take at least 15 minutes, but I have a lot of material to present that I think will provide a useful background for our activities today.**

B. Importance of material to be covered

1. **Each of us has something to learn about participation in an evaluation conference.**

2. **The enormous amount of literature on the topic indicates we all have a great deal to learn, since all these areas have a bearing on how conferences may be run.**

3. **Have any of you received a performance evaluation? Feedback from participants who have received performance evaluations. I have received and given evaluation conferences and am glad to be able to share with you what I have learned.**

II. Knowledge-based Introduction

A. **There are two forms of evaluation conferences that you are likely to encounter.**

1. **Formal evaluation conferences are usually scheduled and structured. It is scheduled to meet at a certain time and place, and various people are invited to attend. It is struc-**

tured to make the experience valuable to both worker and supervisor.

2. Informal evaluation conferences are unsche[illegible]nstruc-tured. The supervisor and worker meet by [illegible]y design, and discuss performance pro[illegible]ress. The key differences are that the meeting is spontaneous, impromptu (or if held by design, not much preparation or advance timing is usually involved.)

B. Each of the two forms of evaluation conference will fall into one of two general categories, the problem solving category or the problem avoiding category.

1. The problem solving evaluation involves a discussion of an immediate performance observation of the worker by the supervisor. This evaluation conference almost always is the result of negative worker behavior or performance.

2. The problem avoiding evaluation conference generally involves one of three activities:

a. Evaluations of worker strengths, weaknesses, and skills with the intent to make changes in the responsibilities assigned to the worker.

b. Evaluations of worker strengths, weaknesses, and skills with the intent to determine if prerequisites exist for involvement in organizationally sponsored in-service training programs.

c. Regularly scheduled supervisory evaluations that review worker performance for the past period, provide targets for improvement, and (often) determine a basis for incremental wage increases.

III. Summary of Knowledge-based Introduction

A. I have told you about the different types of evaluation conferences that you may experience. Do you have any questions?

B. Because we have a limited amount of time available, we will quickly move on to "show" you, through the use of role plays, positive and negative reactions to evaluation conferences.

Part Two - First Role Play (15 minutes)

I. **The schedule for the rest of the program begins with a role-play of a "negative" evaluation conference. Try to determine how you would act differently in this situation.**

Name and identify the role of each of the role play participants.

**You (the audience) will observe what goes on during the evaluation role play and identify problem areas in how the worker and supervisor interacted. We will discuss the role play when it has been completed.**

Discuss the use of the forms for taking notes (if appropriate.) Ratings need not be assigned; the important feedback is observations, behaviorally stated as much as possible. The report form may be used by the audience as a guide to the sequence of presentation in the role play, if desired.

**After the role play, we will share observations and feedback, and discuss methods of improving the conference. Then we (myself and the actors up here) will do a second role play. This time we will present a "positive" evaluation conference. At least we are going to do our best to <u>try</u> to show you a "positive" conference, so bear with us. We will use your suggestions for improving the first role play. After the second role play, we will again take a few moments to critique the "positive" conference. I will also discuss a few more elements of "positive" worker/supervisor relationships. Then, we will take a break!**

II. Since role plays are dynamic, the course of events can and will vary; the role play may never be duplicated exactly.

A. The following questions are intended to serve as a guide for ways of handling a conference inappropriately.

1. Hesitate and/or bluff through questions.
2. Be fuzzy (not precise) with details.
3. Talk all around the point at hand - don't be concise.
4. Be defensive.
5. Don't establish eye contact and/or maintain it through sweeping; instead, count the tiles in the ceiling, or the tiles on the wall.
6. Make it seem like you are hiding something.
7. Don't give information freely which you know the supervisor will want; make him ask you for it.

8. When hearing recommendations, be "off the wall." Become angry and abusive. React in threats.
9. Be non-committal in recognizing or accepting recommended changes.
10. Act as though you have not heard anything what was said. Talk about: weather, personal activities planned for the weekend, transcendental meditation, politics, the state of the economy - the works.

B. The actor playing the role of supervisor should plan to end the "evaluation" after about 10 minutes. When the role play is finished, the leader should orally thank the actors (at least, smile or nod) for their participation; you want them to come back for the next role play.

Part Three - Critique and Discussion (10 minutes)

What happens in this section depends on the amount and type of feedback you get. All participants including the actors should provide input.

As a guide for appropriate discussion, the ineffective behaviors attempted in the portrayal can be used as starting points. Any inappropriate behaviors portrayed but not noted by the audience should be pointed out. Also, any behavior listed previously as suggestions which were not demonstrated may be included in the discussion.

Part Four - Second Role Play (10 minutes)

I. **Now we will attempt to use all the information you have provided to hold a "positive" evaluation conference. Again, record your observations on the Observation and Evaluation Form (if appropriate). Mark the first sheet that you just filled out "bad" and this new one "good."**

Now the actors, drawing from their experience, including all the information provided through the critique and this manual, should show how a positive evaluation conference should go. Thorough preparation in reviewing case file data, and a disciplined adherence to a logical and efficient structure will be the keys to a role play of a "positive" conference, as well as to actually conducting a "positive" conference.

A. Turn all those inappropriate behaviors (suggested in the section on the first play) into positive ones. For example:

1. Answer questions with little hesitation, even when you don't know the answer. If you don't know, admit it.
2. Be specific; don't make jokes.
3. Be concise and to the point.
4. Be objective and accepting of negative and positive evaluation points.
5. Maintain eye contact through sweeping (keep eyes moving from person to person, focusing on each person for a few moments).
6. Be open and prepared to participate.
7. Volunteer information you know the supervisor will want to know.
8. Be imaginative and reasonable, even when hearing recommendations you may not like.
9. Accept follow-up obligations; specifically state what you will do and when you will do it.
10. Use extraneous chit-chat only as a beginning ice-breaker to session.

B. As before, the "supervisor" should end the role play after about 10 minutes.

Part Five - Critique (5 minutes)

I. What happens in this section depends on what went on in the role play. Again, behaviors you attempted to portray (or did so inadvertently if inappropriate ones) would be identified by you as trainer if the participants fail to identify the important elements.

Part Six - Additional Considerations and Summary (5 minutes)

I. **Some additional considerations pertaining to supervisor/worker relationships are:**

A. **As a worker, you should attempt to <u>know</u> your supervisor. This means knowing what he/she wants you to do, what feelings they are likely to have if you fail to do you job, what they will do if you excel. Build on his/her observed strengths, and play to his/her weaknesses with the objective of doing your job better.**

B. The evaluation conference is an important element of your working life. It provides information to you and to your supervisor on your willingness and ability to complete your assigned jobs.

II. In Summary:

A. We have talked about how evaluation conferences between supervisors and workers can benefit both the worker and the organization.

B. We have seen examples of "positive" and "negative" reactions to evaluations and have gotten an idea of what <u>makes</u> an evaluation conference "good" or "bad."

C. Some of the key points made are:

1. Supervisors and workers have a common goal, to increase worker productivity.
2. The basic foundation of the evaluation is <u>information-sharing</u>; this foundation requires ingredients of thorough and adequate preparation of material and an orderly structure for presenting this material.
3. The foundation of information-sharing (giving and receiving by both participants) supports all other goals of the evaluation.

Part Seven - BREAK (10 minutes)

If the third role play exercise is scheduled to take place at this time, invite the participants to take a 10-minute break for refreshment. If the training session is to conclude at this point, pass out the Participant Evaluation Form and allow time for them to complete it. Collect the forms and thank the participants for their time, attention, and input.

Part Eight - Third Role Play (No time limit)

I. Performance-Based Instruction

A. Instruct the participants to split up into groups. The trainer may be part of a group if desired. Allow 5 minutes for the forming of pairs and the following orientation.

B. Now you will have a chance to practice what you have heard and seen today. Each group will be given a case study, an evaluation report already prepared, and observation forms. One of you will play the role of the supervisor, another the role of the worker. The rest of the people in you group will observe the performances of the actors.

You will be given a few minutes to review the case history. We will help you understand what it means. You will then hold a 10-minute role play in each group. Following the role-play the observers will provide feedback within the group on participant performance. We will then get back together to discuss the role plays and take a brief test.

You will be attempting to portray a good conference; however, don't worry too much about making mistakes, you will anyway, and this is often the best way to learn if you are aware of what you did and how it could have been done better. Good luck!

C. The training leader should now pass out the required forms (Observation and Evaluation Forms to the observers; Evaluation Report Forms to the Supervisor; and, Case History to each member). Allow 5 minutes for review of the case file information, then instruct the groups to begin the role play.

When the allotted time is up, ask the observers in each group to provide feedback to the group members on their performance. Allow 5 minutes for this.

II. Closure on the Performance-based Instruction.

A. We have learned today that worker evaluations by supervisors can be positive experiences. We have gained some "hands-on" experience in making the evaluation conference valuable. May the next evaluation you participate in be a "good" one. The last thing on the agenda today is a quiz on the material presented; please take a few minutes to answer the questions.

B. The trainer should now pass out a Participant Evaluation Form to each participant; allow plenty of time for completion. Thank all ythe participants for their time, attention, and input.

## The Evaluation

### I. Criteria

Scoring consists of simply comparing responses on the Participant Evaluation Form to the responses listed in the Answer Key. A score of 80% correct is considered acceptable mastery of the material. For performance below the 80% level, the trainer may wish to review selected material with the participant and retake the quiz.

### II. The Participant Evaluation Form

### III. The Evaluation Form Answer Key

The following responses are correct:

1. False
2. False
3. False
4. d
5. d
6. b
7. True
8. True
9. False
10. b