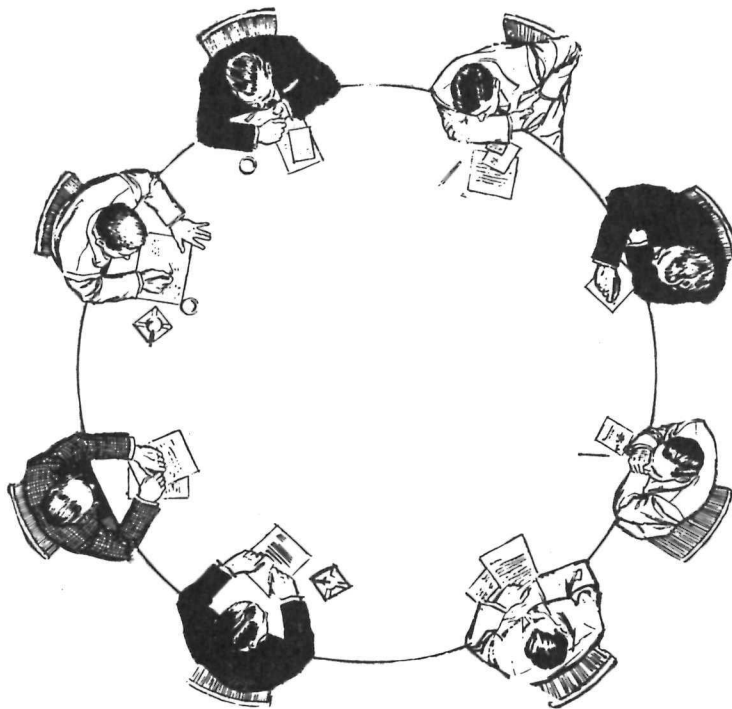NATIONAL PARK SERVICE

TRAINING METHODS

MANUAL

A training guide for supervisors and other
instructors to enable them to increase the
effectiveness of all National Park Service
training activities.

TRAINING METHODS MANUAL

NATIONAL PARK SERVICE

U.S. DEPARTMENT OF INTERIOR

NATIONAL PARK SERVICE MANUAL OF TRAINING METHODS

FOREWORD

The first edition of this Manual was prepared in 1956. Many Service supervisors and training officers have found it to be a useful tool in planning their training programs. It is believed that the revised version of the Manual will aid materially in augmenting the quality of Service training programs.

The current (1967) revision is designed to introduce new material, e.g., on evaluation and group methods of training (case study and in-basket techniques). Revisions have been made in learning principles, the lecture method, meaning and purpose of training aids, bibliographies, and performance review. A number of minor editorial changes have also been accomplished.

INTRODUCTION

The purpose of this National Park Service Manual of Training Methods is three-fold:

(1) To acquaint Service supervisors and instructors with some general and very broad principles of instruction;

(2) To familiarize them with the more common methods of individual and group instruction so that they will use the method most adaptable to the subject matter and to the particular group being trained; and

(3) To offer an understanding of the basic tools of instruction so that they can improve the efficiency and effectiveness of all Service training activities.

For some time there has been an indication of the need in this Service for a handbook or manual which would offer information on sound principles of instruction together with a discussion and evaluation of various training methods and techniques. This manual is an effort to assemble such materials and present them in a format which will be helpful to Service supervisors and other instructors.

Emphasis is given to different methods of individual and group instruction. Too often there is a tendency to use an informal demonstration for individual training and a lecture to meet most group training needs. Other and better techniques are available and should receive increasing use as we become more familiar with them and more proficient in their use.

The supervisor who contemplates the individual training of an employee or group of employees has a challenging experience ahead of him. In addition to the satisfaction he will get from his assistance in the development of the individual, he will realize that at the same time he is improving his own capacities as a supervisor and developing his own techniques as an instructor. Individual training is a relatively simple process as opposed to the many approaches and methods of group instruction, but it takes imagination, foresight, patience, and a high degree of understanding. In many job situations there is no alternative to individual instruction. In any job situation there is some opportunity to use intelligent individual on-the-job training.

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Group training, however, is the training process which probably poses the greatest problem to Service instructors. Frequently, groups of people enter a job or otherwise have need to learn new knowledges or skills at the same time. In these circumstances group training is appropriate. Group training has distinct advantages and disadvantages. Under most circumstances it is an economical method. The per capita cost of group training is generally less than individual instruction, due principally to the economy of the instructor's time. Further, there is a psychological advantage to the group process of training. Not only do trainees learn from the instructor, but they learn from the experiences of other trainees as well. A form of "group dynamics" is at work in such a situation and frequently it contributes as much or more to a training session than do the efforts of the instructor. Motivation of trainees may also be enhanced by participation with their companions.

Group training generally requires much more of the instructor with respect to planning, organizing, and scheduling. The instructional skill is also much more demanding. Further, there is a tendency for individual needs to be overlooked in the interest of providing for group needs. Then too, it is much more difficult to evaluate the accomplishments of each member after the training has been completed.

The limitations on both individual and group instruction can be reduced to a minimum through (a) the intelligent selection of a method of presentation which will prove effective for that particular training situation, and (b) familiarity with how the particular technique can be used to the best possible advantage. It should be recognized, however, that no one method of individual or group training will fit all situations.

You will note, in reading the following pages, that there is some repetition of basic principles in the various sections. These have been retained for the benefit of the instructor who may, from time to time, wish to refer to one or more sections of the manual for specific information on a particular training method or technique. Moreover, since repetition is one of the basic laws of learning, it was thought advisable to practice it here.

FUNDAMENTALS

OF GOOD INSTRUCTION

I. DETERMINING TRAINING NEEDS

In order to plan training that will help promote effective
and economical service, we must know how to recognize a training need
as such. The following equation is often used to define a training
need:

$$\text{TOTAL REQUIREMENTS OF THE JOB} \;(\text{minus})\; \text{EMPLOYEE'S PRESENT QUALIFICATIONS} \;(\text{equals})\; \text{EMPLOYEE'S TRAINING NEEDS}$$

The employee's present qualifications are used rather than
performance. Other factors may influence his performance--such as
poor or inadequate equipment, poor working conditions, etc. Although
these items should be considered in a training program, they would not
be identified as a training need for the individual employee.

Training needs are frequently identified by the realization
that:

a. Employees are not performing up to acceptable standards

b. New techniques must be taught to the employee group

c. Work efforts of employees will improve after a period of
refresher training

d. Certain deficiencies exist in job knowledge

e. Changes will be required in programs, work operations, or
job procedures

f. New work programs will be undertaken

g. Improvement is needed in attitudes, human relationships,
or effectiveness of supervision

h. Certain quantitative indicators such as accident reports,
accident rates, turnover, complaints from the public, high
cost of operation, indicate that some training may be
necessary.

Some methods of identifying and isolating training needs are listed as follows:

a. Supervisor's observations -- The supervisor is closest to the employee. He knows the employee's mental makeup, characteristics, special interests, hobbies,' work habits and accomplishments. By inspecting the employee's work and comparing it to acceptable work standards, deficiencies in quality, quantity and manner of performance can be spotted.

b. Asking the employee -- Discussions with the employee in the normal course of supervision, at performance rating time, and during career counseling may reveal some useful information and should not be overlooked as a possibility. Employees leaving the Service are sometimes able and willing to make helpful suggestions.

c. Analysis of work records -- Progress reports, attendance records, visitor complaints, turnover rates, and related data can be a guide if properly evaluated.

d. Making use of job experience -- The probationary period is considered a part of the examining process for determining an employee's fitness for duty. This period can be used to determine training needs not only of a particular individual but of others to follow in the same line of work. As an employee is given new assignments, special details, and sent on field trips or special missions, his training needs are brought into sharper focus.

e. Use of planned training -- The more this Service substitutes planned training, as a preventive instead of a corrective measure, the better management it can expect. To achieve this end, and to raise the level of efficiency progressively, requires a corresponding improvement in the quality of leadership at all levels. Planned training, such as supervisor training and management development, is therefore a continuous and urgent responsibility.

f. Management improvement studies -- Studies by regional and area management improvement committees, field observers, and the like, often provide a rich source of information concerning present and future training needs.

g. Inspections -- Reports of inspection submitted by Regional and Washington Office staff members, auditors, Civil Service Commission inspectors, and other individuals may point to the need of further training efforts. Inspection reports reflect not only the inspector's findings, but his recommendations are presumably seasoned by his observations in various other field areas.

h. <u>Position descriptions</u> -- Position descriptions reflect the official statement of work to be performed. They are sometimes overlooked as a clue to the type of training that will be required by any incumbent.

i. <u>Tests</u> -- Paper and pencil tests, performance tests, etc., given during and subsequent to training will help establish the need for further training.

Once training needs are identified, the supervisor must make a determination as to how he can best overcome these deficiencies. To make an intelligent determination in this respect he must have some knowledge of the types of training to which he may resort; an understanding of the principles of instruction and the laws of learning; and a knowledge of instructional or staff assistance which he may expect within the organization.

2. GUIDLINES FOR ADULT LEARNING

The training process attempts to influence people to refashion, improve and to frequently change specific aspects of their behavior. To do this, the process of training must create a variety of "conditions" most conducive to accomplishing the very difficult task of gaining trainee interest acceptance and understanding and thus changing behavior.

An insight into the way adults learn can help the trainer to do a better job. Research has exploded the notion that learning capacity dwindles rapidly as a person ages. It shows that adults can learn effectively at all ages. But it also shows that adults learn in their own way and this way differs significantly from the way in which children learn.

Some of the important facts that research has uncovered about the way in which adults learn included the following:

1. Adults Must Want To Learn. Adults strongly resist learning anything merely because someone says they should. They learn effectively only when they have a strong inner motivation to develop a new skill or to acquire a particular type of knowledge. Their desire to learn may be awakened or stimulated by outside influences, but it can never be forced upon them.

2. Adults Will Learn Only What They Feel a Need to Learn. Adults are practical in their approach to learning. They want to know, "How is this going to help me right now?" Sometimes they can be persuaded, through wise counseling, to learn things that will help them in the clearly foreseeable future--as for example, when a promotion is imminent. But they learn best when they expect to get immediate benefits--when the knowledge or skill they are trying to acquire will be directly useful in meeting a present responsibility.

Furthermore, an adult is not satisfied with assurances that he will eventually learn something useful from a course of study. He expects results from the first training session. He has no patience with trainers who insist on giving him a lot of preliminary background, theory and historical review. In short, material which may be meeting the trainer's needs to educate, as opposed to the trainee's needs to learn, will encounter considerable trainee resistance.

If an adult is to be taught something, he must be taught simply and directly. If he decides that the training has no relevance to his personal needs, he will become a dropout--physically, if the training is voluntary; mentally, if his attendance is mandatory. Before trainer (or a supervisor) begins teaching a trainee (or a subordinate) all the things he feels the trainee (or a subordinate) should know, he should first find out what the trainee (or a subordinate) feels a need to learn.

3. Adults Learn by Doing. Studies have shown that adults will forget within a year at least 50 percent of what they learn in a passive way. But retention of new knowledge or skills is much higher if the adult has immediate and repeated opportunities to practice or use what he has learned. It is for this reason that consideration should be given to the use of group-methods of training whenever practicable.

This finding also explains why on-the-job training is often the most effective type. It also underscores the importance of timing in all types of training. If it is possible to schedule a man's learning experiences so they dovetail with his actual operation responsibilities at each stage of his career, he will have a chance to use what he has learned before he forgets it or dismisses it from memory as irrelevent.

4. Adult Learning Centers on Problems and the Problems Must be Realistic. Adults can be taught a general rule or principle, and then be shown by a series of hypothetical illustrations how it applies to specific situations. But studies show that they will learn much faster if you reverse the process. Let them begin with specific problems, drawn from actual experiences, and work out practical solutions from which principles may be deduced.

5. Experience Affects Adult Learning. An adult's mental state is already pretty crowded. His learning must therefore be rational. The new knowledge must be related to, and integrated with, the accumulated results of a lifetime of learning experiences.

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If the new knowledge does not fit in with what he already knows, he is powerfully disposed to reject it. In fact, his past experience may actually prevent him from perceiving accurately, let alone absorbing the meaning of newly presented data.

6. Adults Learn Best in an Informal Environment. Many adults have unpleasant memories of their school days. They will respond to adult training programs in inverse relationship to the degree they are reminded of their childhood experiences. Coffee breaks and smoking in class, for example, give them needed reassurance that there is nothing childish about their present engagement with learning process. Again, group-in-action methods of training (e.g., brainstorming, buzz groups, etc.) can aid in achieving informality.

7. A Variety of Methods Should be used in Instructing Adults. Research has demonstrated that learning proceeds most quickly when information reaches the learner through more than one sensory channel. That is why a movie, film-strip, a flip chart or other visual aids can do so much to heighten the net impact of a lecture or other verbal exposition. The trainer (instructor) who uses a scratch pad and begins drawing a diagram when he tries to explain a complicated subject is displaying an intuitive grasp of this point. Other methods such as in-baskets, simulation (games), role playing, small group work, etc., should also be utilized extensively.

8. Adults Want Guidance, not Grades. Most adults are apprehensive about their learning capacity because they have been a long time out of school, and they have been assured repeatedly that you can not teach an old dog new tricks. If they are confronted with tests, grades and other devices for comparative evaluation of their progress, they will draw back from the whole experience for fear of being publicly humilated.

At the same time, the adult learner wants desperately to know how he is doing. He needs to know whether he is learning correctly, whether he is doing right, whether he has the basic idea straight in his head before he can continue learning.

Adults tend to set exacting goals for themselves; often, they bite off more than they can chew. They are impatient with their own errors and easily become discouraged about their ability to learn; this means that they need as much praise as the trainer can honestly give them.

LAWS OF LEARNING

Successful instruction makes full use of the principles that govern the learning process. These principles have been discovered, tested, and used in practical situations. An instructor will do well to become acquainted with them and make use of them at every opportunity.

a. **The Law of Readiness** (Willingness)

A trainee will learn more effectively when he is ready and willing to learn. To insure this, the competent instructor observes the following:

(1) Introduces subject matter by setting up goals, creating interest, showing value of subject matter, or otherwise shows learner why it is to his advantage to learn.

(2) Provides for continuous mental or physical challenge.

(3) Realizes that all of us tend to do those things which we want to do or for which we have a desire, and we learn most rapidly the things which give us the most pleasure.

b. **The Law of Primacy** (Right way first)

Learning the right way first is easier than learning the wrong way and then attempting to relearn. We learn a new step best when we have already learned the preceding step. In effecting this the instructor should:

(1) Prepare and use a lesson plan

(2) Present subject matter in logical order, step by step

(3) Practice for effective delivery

(4) Know his subject matter thoroughly

(5) Plan instruction so that subject matter is delivered right the first time.

c. **The Law of Effect** (Satisfaction)

Learning accompanied by a pleasant or satisfying feeling
is strengthened. One of the important obligations of the
instructor is to set up the learning situation in such a
manner that each trainee will be able to achieve for him-
self some degree of success. More specifically, the good
instructor will observe the following:

(1) Select and present subject matter on the level of the
class

(2) Recognize that trainees learn best when they can see
evidence of progress

(3) Recognize and commend improvement

(4) Strive to develop accuracy before speed.

(5) Give slow students opportunity to achieve success

(6) Realize that a satisfied learner gets into production
on the job in a shorter time.

d. **The Law of Intensity** (Vividness)

The effectiveness of learning depends upon the vividness
of the learning experience. To insure this the competent
instructor will do the following:

(1) Use training aids and other instructional devices

(2) Emphasize important points of instruction with
gestures, showmanship, and voice.

(3) Make subject matter meaningful

(4) Make full use of the five senses—hearing, sight,
touch, taste, and smell.

e. **The Law of Exercise** (Repetition)

Effectiveness of learning depends upon the amount of
repetition included in the learning process. To insure
this, the good instructor will observe the following:

(1) Repeat important items of subject matter at reasonable
intervals

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(2) Provide for application of subject matter as soon after instruction as is reasonably possible

(3) Use a testing device to secure advantage of repetition

(4) Provides for learner activity--to let him perform the operation is a good way to be sure he knows.

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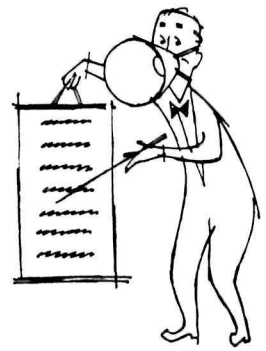
3. PRINCIPLES OF TEACHING

Good instruction is an involved process and should be approached only with adequate preparation and understanding. The application of sound principles will greatly aid one to become a more proficient instructor. Some of the more common principles are listed as follows:

a. **A human being learns through sensations, commonly known as the five senses.**

        Sight--stimulated by light, objects, color, motion, etc.
        Hearing--stimulated by sound, speaking, noises, etc.
        Touch--stimulated by liquid, solids, heat, cold, etc.
        Taste--stimulated by sweet, sour, etc.
        Smell--stimulated by odors (closely related to taste)

It is a generally recognized fact that we retain about:

        10% of what we hear;
        30% of what we read;
        50% of what we see;
        90% of what we do.

b. **A man learns most readily when he is able to associate new ideas with his nearest related experience.** An instructor must determine beforehand what the learning base of the trainee is, or what previous experience the trainee has had, so that he may use this as a foundation on which to build new ideas.

c. **After maturity is reached, learning ability remains practically constant.** Therefore, you **CAN** teach an old dog new tricks! Learning ability, even after maturity, can sometimes be increased if the interest and desire of the trainee is sufficiently stimulated.

d. **Learning requires activity on the part of the learner.** You cannot cram it down his throat if he is not receptive and active. Mental as well as physical activity must be planned

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in advance. Discussion, deliberate thinking, problem
solving, and the opportunity to practice manual skills
are only a few of the many types of activity which can
be programmed in advance.

e. Friendly competition stimulates learning. When possible
to do so, trainee groups should be given the opportunity
to compete in some fashion with each other. This practice
stimulates on-the-job performance and often aids in devel-
oping speed and accuracy in a given operation.

f. Challenging problems stimulate learning. Opportunities
should be created, wherever possible, to provide individual
and group problem solving opportunities. There is no
better way of judging the effectiveness of instruction, nor
of assuring the trainee that he has successfully learned
that which was taught, than to have him demonstrate to him-
self that he can satisfactorily solve related work problems.

g. Knowledge of the purpose, use, and application of things
learned makes learning more effective. If a trainee learns
information, procedures, or skills which he does not know
how or when to use, the instruction job is only half accom-
plished. The learner must have his interest stimulated be-
fore instruction is undertaken by making him aware of how
the subject matter will be useful to him, how and when he
may have occasion to apply it, and how his work will become
more effective because of it.

h. Knowledge of standards required makes learning more effective.
An understanding of standards of quality, quantity, and per-
formance are essential if the learner is expected to meet
such standards in his work operation. Such an understanding
enables the trainee to better visualize how the training re-
ceived will benefit him in his job performance.

i. Recognition and credit provide strong incentives for learning.
It is human nature to react favorably to individual recognition,
and this is an important step in the learning process. The in-
structor will encourage learners by being alert for signs of
progress and making a favorable comment when such is evident.
In the case of the slow learner, the instructor may have to
look a little deeper for creditable accomplishments, but the
recognition is doubly important to prevent the learner from
becoming discouraged.

j. Things should be taught the way they are to be used. It is
frustrating to the learner if he is offered instruction which

he does not comprehend. An instructor must analyze job needs and be sure that his presentation actually fits the work situation.

k. Effective learning is likely to occur when a logical relationship exists between things taught. In many teaching situations the logical order of presentation of instruction is the same as the order in which the job or operation is performed. In other cases it may be different. In any event, the instructor should maintain some logical relationship between instruction previously offered and instruction to follow.

l. People learn more when they are held accountable and made to feel responsible for learning. The learner should be given the understanding that the content of the training activity will, in some definite way, assist him in his job performance. He must also understand that he will be expected to use the knowledge or skill acquired to his best advantage. He will thus feel a responsibility for learning and proper application of the instruction.

m. ENTHUSIASM IS CAUGHT -- NOT TAUGHT!

4. CHARACTERISTICS OF A COMPETENT INSTRUCTOR

There is no single listing of personal qualities or characteristics which will assure competent instruction. However, a supervisor or instructor will do well to be guided by the following list of teaching attributes:

a. Must <u>know</u> the job or subject he is to teach.

b. Be familiar with the best instructional methods and techniques.

c. Have confidence in his ability to instruct.

d. Have an agreeable personality.

e. Be tactful in all difficult instructional situations.

f. Strive to develop proper attitudes.

g. Have enthusiasm for his subject and his work.

h. Be considerate of all questions put to him.

i. Assume the responsibility to get the learner taught.

j. Have the ability to vary the approach to the subject depending upon the teaching situation.

k. Be patient with slow learners.

l. Use grammar, selection of words, and pronunciation of words in accordance with accepted usage.

m. Have a respect for the other fellow's opinion and background.

n. Have a sense of humor.

o. Be honest when he does not know the answer—and be willing to find it.

p. <u>TELLING ISN'T TEACHING ANY MORE THAN LISTENING IS LEARNING!</u>

As we review the above qualities we see that characteristics of a good instructor are essentially the same as those qualities desired for almost any type of supervisory performance.

5. CLASSROOM ATMOSPHERE

Most individual and group training, except that performed on-the-job, is conducted in a classroom or other training center. In the interest of gaining maximum mental or physical participation it is necessary to establish an easy, informal classroom atmosphere. Meetings should not be stilted or bound by formal convention. Trainees should be encouraged to relax and be comfortable. Adequate lighting and ventilation are important. Distracting noises or other disturbances should be subdued.

Unless there is good reason to the contrary, a "coats off" and "smoking permitted" atmosphere should prevail. The training environment should be conducive to active participation on the part of all present. A front office with a rug has a paralyzing effect on what might have been an excellent contribution in a shop atmosphere. A conference table, particularly a round one, will do much to draw individuals into a group discussion.

The duration of training sessions must be carefully scheduled. Provision must be made for periodic breaks and these should be adhered to once scheduled. The old adage of "the mind can absorb only as much as the seat can endure" is as valid today as it was years ago—modern techniques and furniture notwithstanding.

There is a place for humor in training—providing that it is in good taste and not overdone. Laughter relaxes people and can be used occasionally to change the pace of a long narration. The experienced instructor will prospect the possibilities of telling a humorous anecdote about someone present, someone known to the group, or about himself to provide an opportunity for the group to chuckle and relax.

The training session following the lunch hour is the one which may prove the most vexing to the instructor. A movie should NEVER be shown during this period lest all trainees doze through the film and gain little of its message. This hour of the day calls for a lively presentation with all stops drawn.

Where both men and women are present in a training session, it is important that the instructor address the women occasionally

and dwell upon their interest in the subject. In this Service, where women are generally in the minority in training sessions, it is all too easy to develop a "for men only" atmosphere and lose the interest of the few female participants.

Training sessions should start on time and close on time. Trainees will be more receptive to succeeding sessions if they know the agenda will be followed on schedule. Trainees will also show more interest in the activity if they know beforehand just what subjects will be presented and who else will be in attendance. To accomplish this, an agenda and a list of participants should be provided each trainee several days prior to the initial meeting.

6. EVALUATION OF TRAINING

Training has been futile unless the learner uses what he has learned. The future of many training programs depends to a large degree on how well the training is evaluated. There are various techniques for evaluating training and for the purpose of this section evaluation will be considered in terms of four steps: (1) Reaction, (2) Learning, (3) Behavior, and (4) Results.

Step One -- Reaction. Reaction may best be defined as how well the trainee liked a particular program. Evaluating in terms of reaction is the same as measuring the feelings of the trainees. It is important to emphasize that it does not include a measurement of any learning that takes place. Evaluation by reaction is easy to measure and that is why it is used so frequently by trainers and instructors. Listed below are guidelines for evaluating reaction.

1. Determine what you want to find out.

2. Use a written comment sheet covering those items determined in No. 1.

3. Design the form so the reactions can be tabulated and quantified.

4. Obtain honest reactions by making the forms anonymous.

5. Allow the trainees to write additional comments not covered by the questions that were designed to be tabulated and quantified.

The first step in the evaluation process is to measure the reactions to the training. It is important to determine how people feel about the training they attend because if they don't like the training or feel it's a waste of time, the odds are that they will reject the learning. To evaluate effectively, trainers should begin, therefore, by doing a good job of measuring reactions (feelings) of people who participate. It is important to do so in

an organized fashion using written comment sheets that have been designed to obtain the desired results.

When a trainer has effectively measured the reactions of trainees and finds them to be very favorable, he can feel adequately encouraged. However, he should also feel humble because his evaluation measurement has only begun. Even though he has done a masterful job of measuring the reaction of the group, he still has no assurance that any learning has taken place. Neither has he any indication that the behavior of the participants will change because of the training. And still farther away is any indication of the results that can be attributed to the training. Sample reactions are included at the end of this section.

Step 2 -- Learning. There are several definitions of learning. For our purpose, learning is defined in a rather limited way as follows: What principles, facts, and techniques were understood and absorbed by the trainees? In other words, we are not concerned with the on-the-job use of principles, facts and techniques. This application will be covered in Step 3 relating to "Behavior".

Guidelines that should be used in establishing a procedure for measuring the amount of learning, which takes place, are listed below:

1. The learning of each trainee should be measured so that quantitative results can be determined.

2. A before-and-after approach should be used so that any learning can be related to the training.

3. As far as possible, the learning should be on an objective basis.

4. Where possible, a control group (those not receiving the training) should be used to compare with the group that has received the training.

These guidelines indicate that evaluation in terms of learning is much more difficult than evaluation in terms of "reaction" as described in Step 1. A great deal of work is required in planning the evaluation procedure, in analyzing the data that is obtained and interpreting the results. Wherever possible, it is suggested that trainers and instructors devise their own methods and techniques. It is relatively easy to plan classroom presentations to measure learning where the program

is aimed at the teaching of skills. Where principles and facts are the objectives of the training program, it may be advisable to plan exercises and problem solving situations which permit application of what has been learned. In some training programs, it may be possible to use a test, although this is a somewhat questionable procedure in adult education.

Step 3 -- Behavior. If a person is going to change his job behavior, five basic requirements must exist:

1. He must want to improve.

2. He must recognize his own weaknesses.

3. He must work in a permissive climate.

4. He must have help from someone who is interested and skilled.

5. He must have an opportunity to try out new ideas and techniques.

Evaluation of training programs in terms of job behavior is more difficult than the reaction and learning described in Steps 1 and 2. A more scientific approach is needed and many factors must be considered. Several guideposts should be followed in evaluating training in terms of behavioral changes:

1. A systematic appraisal should be made of on-the-job performance on a before-and-after basis.

2. The appraisal of the performance should be made by one or more of the following groups (the more the better):

   a. The person receiving the training

   b. His supervisor or supervisors

   c. His subordinates

   d. His peers or other people thoroughly familiar with his performance.

3. An analysis should be made to compare before and after performance and relate changes to the training program.

4. The post-training appraisal should be made three months or more after the training so the trainees have an opportunity to put into practice what they have learned. Subsequent appraisals may add to the validity of the study.

5. A control group (those not receiving the training) should be used.

For those interested in evaluating training in terms of behavioral changes, it is strongly advised that they seek the assistance and advice of statisticians, research people or consultants for help because it is obvious that very few trainers have the background, skill and time to engage in extensive evaluations.

Step 4 -- Results. The objectives of most training programs can be stated in terms of results. These results could be classified as: reduction of costs, reduction of turnover and absenteeism, reduction of grievances, increase in quality and quantity of work, or improved morale or cooperation which, it is hoped, will lead to some of the previously stated results. From an evaluation standpoint, it would be best to evaluate training directly in terms of results desired. There are, however, so many complicating factors that it is extremely difficult if not impossible to evaluate certain kinds of programs in terms of results. Therefore, it is recommended that trainers begin to evaluate in terms of the three criteria described in the first three steps. First of all, determine the reactions of the trainees, secondly, attempt to measure what learning takes place, and third, try to measure the changes in on-the-job behavior.

Certain kinds of training are relatively easy to evaluate in terms of results. For example, in teaching clerical personnel to do more effective typing, you can measure the number of words per minute on a before and after basis. If you are trying to reduce grievances, you can measure the number of grievances before and after the training. If you are attempting to reduce accidents, a before and after measure can be made.

Difficulties in the evaluation of training are evident at the outset in the problem technically called "the separation of variables"; that is, how much of the improvement is due to training as compared to other factors? This is the problem that makes it very difficult to measure results that can be attributed directly to a specific training program.

One purpose of this section has been to stimulate trainers to take a penetrating look at evaluation. It should be

clear that the future of training programs depend to a large degree on the trainer's ability to evaluate and to use evaluation results.

The second purpose of this section has been to suggest procedures, methods and techniques for evaluating techniques for evaluating training. A trainer should begin by measuring in terms of reaction as described in Step 1. A second step should be to evaluate in terms of learning as described in Step 2. The third step suggests ways and means of evaluating in terms of on-the-job behavior which should also be attempted. An finally Step 4 has covered some of the problems and approaches to measuring training in terms of its objective results. Trainers who read and study these four steps should be oriented on the problems and approaches to evaluate training.

EVALUATION QUESTIONNAIRE

Evaluation questionnaires are used extensively for evaluating training programs. This is one method for evaluating training, however, it is limited primarily to Step one-the Reaction phase of evaluation. On the next several pages are sample questionnaires that have been used in past Service-conducted training programs to obtain the participant's reactions to the training.

FINAL EVALUATION QUESTIONNAIRE

NATIONAL PARK SERVICE

MANAGEMENT DEVELOPMENT SEMINAR

       The purpose of this questionnaire is to help us find out how you feel about the Seminar--its strong points, its weaknesses, and what can be done to make future seminars such as this better.

       We are mainly interested in the responses of the group as a whole; therefore, you need not sign this form.

---

1. How would you characterize the physical facilities and arrangements (consider space, light, seating, acoustics, etc.)?

Not   Very   Only   Very
Sure___ Poor___ Fair___ Satisfactory___ Good___ Outstanding___

I would suggest the following to improve facilities and arrangements:

_____

_____

_____

2. Were Seminar objectives clear?

Not   Not At To Some   Adequately Very
Sure___ All___   Extent___ So___   Clear___ Completely___

Comments:_____

_____

_____

3. Were seminar objectives realized?

Not　　　Not At　To Some　　Adequately　To A High
Sure____　All____　Extent____　So____　　Degree_____　Completely_____

Comments:_____

_____

_____

4. If you were planning a seminar such as this, indicate (a) the extent to which you would use the techniques listed below and (b) rate their effectiveness.

Training Techniques	Re. Extent of Use			Re. Their Effectiveness				
	Decrease	Increase	No Change	Not Sure	Poor	Fair	Satis-factory	Consid-erable
A. Talks								
B. Group Exercises								
C. Skill Sessions (e.g., coaching, brainstorming)								
D. Member-led Seminars								
E. Small-group breakdowns								
F. Films								
G. Article Handouts								
H. Cartoon Handouts								

Comments _____

_____

5. Regarding Agenda Subjects:

    (a) Which subjects on the agenda might well have been <u>eliminated</u>?
          Please explain your answer.

_____

_____

_____

    (b) Which subjects were over-emphasized, time-wise? (please explain
          your answer).

_____

_____

_____

    (c) Which subjects should have been treated <u>more</u> intensively? (please
          explain your answer).

_____

_____

_____

    (d) Which subjects would you have liked to have had <u>added</u> to the
          agenda? (please explain your answer).

_____

_____

_____

6. Please evaluate the films you saw in the Seminar.

(a).

FILM	Value to Seminar					
	Not Sure	Not At All	Minor	Adequate Amt.	Consider-able	A Great Deal
(1) "The Department Manager"						
(2) "How Good Is A Good Guy"						
(3) "Patterns"						
(4) "Eye of the Beholder"						
(5) "The Managerial Grid"						
(6) "Men At Work"						
(7) "12 Angry Men"						

Comment: _____

_____

_____

_____

(b) Did the question sheets help to stimulate thinking and discussion on the films?

| Not Sure____ | Not At All____ | Slightly____ | Adequately____ | Consider-ably____ | A Great Deal____ |

Comments: _____

_____

_____

(c) Did the breakdown into small-groups help to stimulate thinking and discussion on the films?

| Not Sure____ | Not At All____ | Slightly____ | Adequately____ | Consider-ably____ | A Great Deal____ |

Comment: _____

_____

_____

7. (a) In the course of the Seminar were there any new ideas, points of view presented which particularly impressed you?

Not sure____ No____ Yes____ If you answered "Yes", please cite example(s).

_____

_____

_____

(b) If so, do you plan to apply any of them in your own park or office?

Not sure____ No____ Yes____ If you answered "Yes", please cite example(s).

_____

_____

_____

_____

8. To what extent was the Seminar of value to you in these managerial skill areas:

Managerial Skill	Not Sure	Not At All	Minor Degree	Worthwhile Degree	Considerable Degree
Developing Staff					
Problem Solving					
Decision Making					
Delegating					
Communicating					
Listening					
Conducting Conferences					
Conducting Staff Meetings					
Conducting Brain-storming Sessions					
Participating in Conferences & Meetings					
Introducing Change					
Motivating Staff					
Using your time as a Manager					
Human Relations (insight into feelings and motivations of people)					
Counseling					

9. What did you like best about the Seminar?

_____

_____

_____

10. What did you like least about the Seminar?

_____

_____

11. Rate the benefits obtained from the Seminar, in relation to the time you spent away from your job.

Not Sure_____   Waste Of   Only   Consider-   A Great
                Time_____   Minor_____ Adequate_____   able_____   Deal_____

Comment: _____

_____

12. Length of Seminar to achieve its goals.

Not Sure_____ Too Short_____ Too Long _____ About Right_____

Comment: _____

_____

13. Would you urge other Service managers to attend a similar seminar?

Not Sure_____ No _____ Yes _____

Comments: _____

_____

_____

14. Do you have any other suggestions or criticisms to improve the seminar?

_____

_____

_____

PROGRAM EVALUATION

Your constructive criticism of this course is invited through this "incomplete sentence" evaluation method. Complete the following sentences by making each a complete thought. If you feel that a particular sentence does not apply -- skip it!

1. This course was . . .

2. What I liked most was . . .

3. The <u>Manual of Training Methods</u> is . . .

4. Organization of the course was . . .

5. Presentation of subject matter was . . .

6. The attitude of the instructors was . . .

7. Audiovisual aids (films, overhead projectors, etc.) were . . .

8. Assignments were . . .

9. The class discussions were . . .

10. If I were teaching this course I would . . .

11. This course has overlapped a great deal with . . .

12. Compared with other courses I've been in this one was . . .

13. We spent too much time on . . .

14. We didn't spend enough time on . . .

15. The most significant idea I received from this course was . . .

16. Practical applications of concepts were . . .

Other comments: Include on the back side other aspects which you
consider important and which you intend to be help-
ful in planning future courses of this nature.

End of Presentation Evaluation Form

Date_____Topic_____

Resource Person_____

1. Were the objectives of the presentation made clear by the speaker?

    Not at all_____ In part _____ Very clear_____

    Comments_____

    _____

2. If you found the speaker's objectives to be clear to what degree were they met?

    Not at all_____ Partially _____ Completely _____

    Comments_____

    _____

3. Were you interested in this presentation?

    Not at all_____ Partially _____ Very much_____

    Comments_____

    _____

4. Did you acquire any new ideas, concepts or techniques?

    Not sure _____ No_____ Yes _____

    Comments_____

    _____

5. Did you change any of your previous opinions as a result of this presentation?

    Not sure _____ No _____ Yes _____

    Comments_____

    _____

6. Were your previous opinions confirmed or strengthened?

    Not sure _____ No _____ Yes _____

    Comments_____

    _____

7. Did this session prompt you to think in terms of putting a new idea or plan into practice "back home"?

Not sure_____ No _____ Yes _____

Comments _____

_____

8. Do you recommend that the speaker appear before other (future) NPS seminar groups?

Not sure _____ No _____ Yes _____

Comments _____

_____

(Please use the back if you wish to make additional comments. You need not sign this form)

RATING SHEET

Name of Presenter _____

Topic _____

Aspect of Presentation	Check one:			
	Poor	Could be improved considerably	Good	Excellent
Clarity of Presentation				
Selection of Things Covered				
Degree to which held Interest of Audience				
Manner of Delivery				
Coordination with Other Members of Presenting Group				
Evidence of Effort going into Preparation				
Apparent Knowledge of Subject				

METHODS OF INSTRUCTION

Methods of Instruction	Recall 3 hours Later	Recall 3 days Later
A. Telling when used alone	70%	10%
B. Showing when used alone	72%	20%
C. When a blend of telling and showing is used	85%	65%

METHODS OF INSTRUCTION

Before going into a discussion of the methods of individual and group instruction and how, why, and where to use each, we should stop for a moment to consider what it is that we are going to teach. In general, we teach knowledge, skills and attitudes. In presenting knowledge our purpose is to prepare the trainees to perform mental operations--to absorb theory, principles, facts and acquire bits of knowledge from which they are later taught to select the right principle, fact, or bit of knowledge, and apply it to a given situation. Skills are taught with the purpose in mind of having the trainee be able to perform the job or operation by himself when he is on the job or at his duty station.

Although for purposes of explanation we have drawn a line between knowledge and skills, we must recognize that one would rarely teach a skill which has no knowledge attached, or knowledge which is not applicable to performance. This means that knowledge and skills are frequently taught in the same lesson--and attitudes formed at the same time. One or the other may dominate, or there may be more of one but all are often there. Consequently, when selecting a method to use, an instructor generally does not select a method for a complete lesson, but frequently selects methods which will be most effective for the various parts of a lesson. He may have to develop an interest in the subject(attitude) first. Following this may come the basic principles (knowledge) on which the operations (skills) are based. In this kind of situation the instructor may use a number of methods.

There is a tendency on the part of some instructors to use certain methods because they happen to be new or in style, or because they are the only methods in which the instructor is proficient. Sometimes techniques are used without complete understanding of their purpose and the conditions to which they may be appropriate. The critique, for example, is an extraordinarily fine technique, but not for teaching Service policy to first line supervisors. We would not use the Four-Step method of individual instruction to develop proper attitudes. Techniques must be subservient to the aims of the training activity, the nature of the training content, and the character of the audience.

If there is something that requires telling to the trainee-- tell it to him as clearly and as economically as possible. Use a lecture for a group and follow it with a discussion period to insure that

the material has been understood, and to allow answers to questions arising from the presentation. Use charts, visual aids, and handouts.

If it is skills that are to be developed, teach the trainee how to perform the task. Tell him and show him; have him tell and show you; have him do it, insuring that he understands why the task is performed in a certain way; and provide for practice under supervision. This method (the Four-Step Method) is generally used for individual training but can be adapted to the group situation with little difficulty.

If it is attitude modification, or personal growth, or human relations skill that is sought, provide the trainees opportunities to involve themselves in work-related situations through such techniques as role playing, critiques, or problem-centered conferences. Or thrust them into a challenging situation on-the-job, where they will find the answers because they have to find them.

Frequent reference to the following checklist will help the instructor to think of many other things which must be considered before selecting the methods to be used for a given program.

a. The immediate objective of the training

b. The content of material to be presented

c. The number to be trained

d. The previous experience of the employees

e. The previous education and training of the individual or group

f. The nature of the employee's job

g. The kind and amount of equipment available

h. The ability of the supervisor and the instructor

i. The length of time which can be devoted to training

j. The previous training experience of the instructor.

In almost all methods of instruction, group as well as individual, there are four basic steps which must be accomplished in respective order to make learning most effective. The four steps are portrayed graphically on the following page.

LEARNING MADE EASY

HOW TO ACCOMPLISH

1. Have learner perform the job
2. Have learner perform the job over
3. Ask prepared questions
4. Give written tests
5. Give performance tests
6. Develop drills & evolutions
7. Develop discussions
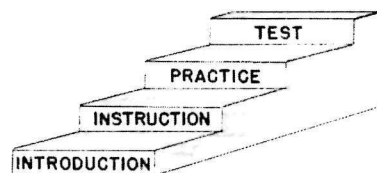8. Have learner teach another learner the same lesson

EXAMINATION

1. To determine if the lesson has been taught
2. To test the instructor and the learner

1. Have learner perform the job
2. Supervise performance closely
3. Check and correct errors
4. Develop correct habits
5. Check key and safety points
6. Have learner repeat operations if necessary

APPLICATION

1. To apply what has been taught in Presentation
2. To practice application by the learner

1. Give demonstrations
2. Explain procedures
3. Use visual aids
4. Develop discussions
5. Follow proper procedures
6. Emphasize key points and safety points

PRESENTATION

1. To present new ideas to learner
2. To give instruction

1. Ask questions
2. Cite examples
3. Cite personal experiences
4. Cite experiences from previous lessons
5. State future needs

PURPOSE

PREPARATION

1. To prepare the mind of the learner
   a. Attract attention
   b. Arouse curiosity
   c. Create interest
   d. Stimulate desire

SOME METHODS OF

INDIVIDUAL INSTRUCTION

AND DEVELOPMENT

I.   THE FOUR-STEP METHOD

INTRODUCTION · INSTRUCTION · PRACTICE · TEST

This method of individual (as well as group) instruction is highly recommended for teaching physical as well as mental skills. It has proven itself over a number of years of concentrated use and has as its principal advantage the assurance that the training job is thorough and not left half done. It is complete from the initial stimulation of the trainees' interest to the final test of their ability to perform. Because of the satisfactory results which are usually obtained, this method of instruction should be used whenever possible.

The Four-Step method requires more of the instructor than is readily apparent. He must not only know his subject thoroughly, but he must be able to separate its component parts. He must himself be proficient in the skills he is to teach, and he must be able to demonstrate this proficiency in a capable and orderly manner. He must be alert to wrong or misapplied effort on the part of the trainee, and he must be able and willing to correct errors. Finally, he must test each trainee and satisfy himself that each individual not only knows how to perform the operation--but has actually mastered the skill involved.

This method (as its title implies) is divided into four separate and distinct parts, i.e., Introduction, Instruction, Practice, and Test.

a.   Introduction (Step I)

The first problem of the instructor is to establish what may be called a foundation for the instruction he intends to "put over" in that particular lesson. This is accomplished by getting the learner to think about some things he already knows which have something to do with the problem or procedure he is to be taught to perform. Through the step of Introduction the instructor, therefore, in some way makes the learner think about certain particular things which will aid him in comprehending the particular new thing which is to be taught in subsequent steps. This may be called a process whereby the learner is led to establish in his own mind "contact points" between what he already knows and the new ideas which the instructor plans to introduce.

The problem of the instructor in this first step is, by the use of some suitable method, to start the learner thinking

about something which he knows and which the instructor can "tie" the lesson to. Even in the simplest form of instruction the need for this step exists and its omission will increase the difficulty of instruction.

In Step I, the instructor takes the initiative. He knows what he wants to get the trainee thinking about, and he so directs the man's thinking that he does think about those things to the exclusion of all others. But the learner cannot be made to think of these things merely by commanding "think about so-and-so." These things must be suggested. This is where the skill comes in this step of the lesson. The individual must be stimulated to think or to recall previous knowledge of experiences and his mental activity directed by a method which makes him unconscious that he is being directed.

Some of the methods which may be used for Step I are as follows:

(1) Suggestive questions: A question so framed as to arouse and direct thinking. One which requires the learner to compare facts and draw conclusions. One which suggests an idea to the learner.

(2) Informational questions: A question which asks for information only. The learner's thinking is not generally stimulated.

(3) Suggestive experience: The learner is required to do something which suggests an idea.

(4) Suggestive demonstration: The instructor does something which suggests an idea to the learner.

(5) Suggestive illustration: The instructor shows graphic material which suggests an idea to the learner.

(6) Relate a true experience.

b. Instruction (Step II)

Having brought the learner to the point where he is thinking about such portion of his previous experience or knowledge as will be of value when instructing the proposed lesson, the next step is to lead him to "get" the new ideas which the instructor desires to "tack on" to what he already knows, and this step is subsequently carried out by the use of some suitable method.

45

If the work of the Introduction has been properly carried out, the trainee now has in his mind certain ideas or pictures which the instructor, in planning the lesson, determinded would serve him best as a base for teaching the subject. The next step, therefore, is to add to the ideas which are in the learner's mind and introduce the new ideas embodied in the subject of the lesson.

This skill of the instructor is put to a test in this all important Step II. He must skillfully build new knowledge on what the trainee already knows. Instruction material must progress from the simple to the more complex. He must provide the trainee with an opportunity to assimilate new ideas as he goes along; unless this provision is made, the trainee very likely will become confused and discouraged. Finally he must select from a choice of methods the ones which best impart the things which the trainee must be able to do and knowledge essential to that particular job.

If the subject is complex the instructor must take care to break the subject matter down into simple steps or divisions. The instruction can then be given in detail for each of these subject divisions. Even for simple subjects it is better to make some division of this nature rather than to attempt to cover the subject as a whole. This procedure will eliminate rambling over various topics and failure to present complete or systematic instruction in any one topic.

After initial presentation of the subject matter in Step II it is often necessary to review the material and to repeat instruction on some points. The practice step should not be started when it is evident that there may be a failure because of the trainee's inability to absorb the instruction in Step II. If the trainee does not grasp the information and consequently fails in the practice step, it may embarrass him and thus seriously hamper future instruction. Rather than allow this to happen, it is better to take more time in Step II in giving detailed instruction. In subjects having more than one sub-topic it is desirable to have the practice step (Step III) take place after instruction has been completed on each point. The practice step should be complete on each point before instruction is given on the next point.

The distinction between Step I and Step II must be clearly understood. As already pointed out, Step I (Introduction) does not aim to add anything to the trainee's knowledge or skill, but merely to get him to thinking exclusively about certain things which the instructor has already determined can be best used for a teaching base. Step II (Instruction), however, has for its aim

the imparting of additional knowledge to the man. At the close of Step I, he knows no more than he did at the beginning of the lesson. At the close of Step II, the subject matter should have been put over.

The following methods, placed in the order of their relative value, may be used for Step II.

(1) Demonstration: The performance of an actual job with real equipment by the instructor. Can be used on the job with either individual or group instruction.

(2) Illustration: A substitute for the real thing--pictures, graphs, drawings, models, etc. The performance of a job simulated with substitute equipment. Difficult for green learner and unsuccessful on complex things. Successful on simple things or with experienced learners.

(3) Lecture: Passing out information--telling. Quite limited in its application to most skills.

c. Practice (Step III)

In carrying out the instructional process, the instructor has laid the teaching base in Step I. He has presented the new material in Step II. So far as he knows he has done a good job of instruction, but in Step III he puts the learner through a trial inspection, under guidance, to permit the trainee to demonstrate to himself that he has mastered the skill. Step III serves two purposes. Since what the trainee has learned is of no value to him unless he can apply it, and since power to apply a thing learned is different from simply knowing it, he must be trained in actually applying or putting into practice what was presented to him in the preceding step of the lesson. Further, and equally important, the instructor needs this opportunity to check upon the degree to which the learner has grasped all the points in the lesson which has been taught, whether processes or ideas.

In Step III the trainee will gain further knowledge by actually doing the job himself. This practice is valuable in that it provides another means by which the trainee may remember the instruction given. It is important that each trainee be given an opportunity to practice in order that all will have equal chances to gain by doing the job themselves.

The methods which can be used to develop Step III are:

(1) Individual practice: The trainee does actual work under the eye of the instructor, using the equipment which was

used in Step II. A check-up on power to do and apply, not power to talk about.

(2) Discussion: A substitute for doing. A "talking about" provoked by stimulating questions and carried on between a trainee and other trainees or the instructor.

The methods used in the practice step will vary according to the subject matter. For example, if the subject is "How to use an axe" there may be a direct application in practicing the job. However, in more academic subjects a direct application may not be possible. In such cases the practice step may have to consist of conference among the trainees or a discussion of pertinent questions on the subject being taught. In any case the practice step should be considered as a means of giving additional training. Should a trainee need assistance in either the practical application type of practice or the discussion type, the instructor should not hesitate to give it. If the trainee is doing the job wrong, the instructor should refer back to the instruction given in Step II and make certain that the mistakes are corrected before the practice step is completed.

d. Test (Step IV)

The purpose of this step is to afford an opportunity for a final tryout or inspection. Each step must be complete before the next step is started. In carrying out the three lesson steps just discussed, any failure on the part of the instructor to complete one step before he takes up the next step results in an accumulation of difficulties. If the men are not properly prepared in Step I, they will not be properly taught in Step II. If they do not come up to Step III, thoroughly taught, the process of application or practice will require too much time and energy. If practice has not been properly carried out the men will fail in final test Step IV. The instructor should, therefore, be as certain as is possible that each step has been thoroughly carried out before he starts the next one.

If the instructional process has been properly carried on, the instructor is ready to take a chance that the learner has been properly taught, and if he is right the teaching job is finished, the learner is instructed, he can do what the instructor intended that he should be able to do, or he knows what the instructor intended that he should know. The instructional unit has been put over and the instruction process is at an end. But, while the instructor may feel sure that this is the case he does not know it because this fact cannot be assumed. During Step III

he may find instances where additional instruction on some parts of the lesson is necessary, and he therefore assists or directs the man, more or less, during that step. Although he carried on this phase of the instruction process until, in his judgment, the man had received the entire lesson that was to be taught, nevertheless, he has been going over it piecemeal, and not as a whole.

He cannot, therefore, assume that, unaided and undirected, the man who is under inspection can apply intelligently the subject of the instructional unit. That unaided, and absolutely on his own feet he can go through the whole process correctly.

Step IV, therefore, may be regarded as fulfilling a function strictly comparable to that of final inspection. The instructor must now stop being an instructor and, becoming an inspector, proceed to inspect the result of his instruction by testing in some suitable way, the ability of the learner to do the entire job alone.

In the final step in the Four-Step method, the trainee is on his own in that no further assistance is given by the instructor. There are two main methods of carrying out the Test step, namely, the skill test and the knowledge test. The first method is useful where some degree of skill is required such as in the use of photographic equipment. The second may be used as a supplement to the skill test where it is desirable to have the trainee explain why or when he would do the particular job. The knowledge test is also useful as a means of checking the trainee's knowledge on the more academic subjects. When Step IV is given the conditions should be changed from those which prevailed in Step III. For example, if in Step III the trainees have been building fire lines in flat country, have them do it in Step IV on a hillside or in a different vegetative type. In this manner a better test is afforded and the trainee gains further knowledge by testing his ability under a new set of conditions. There are times when Step IV may seem to be a repetition of Step III. If such is the case the repetition is nevertheless desirable for it may help to establish correct work habits.

Methods by which Step IV may be effectively accomplished are:

(1) Examination: Asking sample questions and assuming that the trainee knows the entire lesson if he answers correctly. May be either written or oral. Not especially suited to skills training.

(2) Demonstration: Have trainee perform physical skill for the instructor. Should be able to do it in its entirety without assistance. Excellent for skills training.

(3) "On-the-job": Some tests may have to be performed on-the-job to assure the instructor that the trainee has mastered the subject matter. In this case, an on-the-job opportunity should be arranged for and provided as soon after the conclusion of Step III as is possible.

(4) A contrived or new situation which will cause the learner to apply the principles taught in Step III.

2. COACHING METHOD
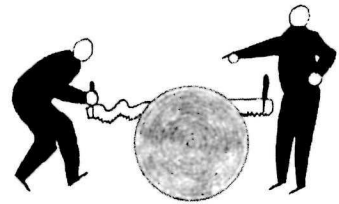
This method of individual "on-the-job" training is based on the premise of interested supervision. It is effective in situations where a supervisor and a subordinate, or an experienced employee and a relatively inexperienced employee, are working together in a given job situation. The supervisor assumes the role of the "coach" and the newer employee that of the "pupil." This personal relationship between two employees often exists without either of them realizing it or attaching any particular significance to it. Yet, it is an ideal training situation and every advantage should be taken of it.

The supervisor, if he is aware of his responsibilities as a supervisor, should recognize the situation as an excellent opportunity in which to train the younger man. The inexperienced employee usually is very receptive to suggestions and guidance of an older employee and, in his interest to do a creditable job, will take advantage of the training which is offered.

However, such an arrangement should not be an informal or catch-as-catch-can process. The "coach" will have to do considerable planning so as to provide a wide variety of training opportunities. If this is not done, the "pupil" may find himself working at routine operations week after week and only learning something new as occasional circumstances may permit.

The effective supervisor, in this case, will go out of his way to create training opportunities to foster job challenge for the newer employee. He will analyze work programs and projects which are coming up and will decide in advance just what training they afford and how it can best be effected. He will arrange to give his subordinate an opportunity to assist in planning and programming so that the subordinate will feel that he has had a voice in such activities and, thus, may reasonably be expected to try a little harder to see that such plans are successfully accomplished. He will recognize the fact that job knowledge acquired at this point in the newer man's career will be associated with other knowledge which will be acquired later. He will also realize that training effort expended at this time and in this manner will do much to increase the effectiveness of the subordinate's work—and indirectly his own.

Another advantage to the coaching situation is the probability that the supervisor is going to exercise care in the way he performs a given job. He will follow accepted procedures in the interest of showing the newer employee the correct way of accomplishing a task. This relieves, to a great extent anyway, the possibility that the newer employee will learn some bad habits from the supervisor along with the good.

Since the coaching situation is present in almost all phases of Service operations, it should be recognized as an excellent developmental opportunity and be given as much thought and encouragement as possible.

CHARTING TRAINING PROGRESS

Every Service supervisor has, at some time or other, faced the problem of trying to recall what specific training an individual employee has received in the past. Too often, employees are retrained only because they happen to be a part of a group which may need retraining, not because they as individuals need retraining. Sometimes this situation cannot be avoided.

Training records on individuals are sometimes incomplete or nonexistent. In the case of an employee recently transferred to an area, it is almost impossible to determine with any degree of assurance just how thoroughly or broadly he has been trained without waiting for job deficiencies to become apparent.

While a checklist indicating training progress of an individual will in no way assure that he is competent in a given field of work, it will be a definite aid to the supervisor in a number of ways. First, it will indicate those basic fields of work in which the employee has or has not received formal training. Second, it may disclose that the training received was several years or more in the past and that the employee needs refresher training in newer techniques. Third, it might prevent a possible misassignment based on the belief that an employee was adequately trained for such an assignment. Fourth, it will assist the supervisor to take a more orderly and systematic approach to training in general.

Such a checklist has been used for a number of years in other Government agencies as well as in private business. It is not a complicated procedure and very little time is required to maintain it. It may take several forms. A single $8" \times 10\frac{1}{2}"$ sheet of notebook or typewriter paper may be made out for each employee with a breakdown for each subject in which he is to be eventually trained. Or, a sheet or card may be used for each training topic and the names of those employees completing the training entered thereon. The former method is generally the more satisfactory inasmuch as the usual need is to see what training an individual employee has received, rather than what individuals have been trained in a particular subject. Such a report of training progress could be transferred along with the official personnel folder in cases of promotion or reassignment.

A sample training progress sheet is shown on the following page.

The sample sheet is not intended to cover all subject matter in which a park ranger should be trained. Each individual area will have some subjects or conditions peculiar to the area in which training will be offered. The supervisor will also want to include mention of various formal courses and programs which the employee may be selected to attend. Training at outside sources should also be mentioned in brief. It should be apparent to all supervisors that such a compilation of training information will disclose strengths and weaknesses in an area training program and will be of valuable assistance in pointing up training needs.

RECORD OF TRAINING PROGRESS

Name: JONES, Wilbur G.   Date EOD in NPS 10/15/58

Positions: Park Ranger GS-5 and 7   10/15/58   Stoney Broke NM

              Supv. Park Ranger, GS-9   3/8/61   Bumpkin Hollow NM

              Supv. Park Ranger, GS-9   5/3/64   Plentiful NM

PHASES OF WORK OPERATIONS	DATES TRAINED
NPS Objectives and Policies	10/18/58
NPS Organization	10/18/58
NPS History	
NPS Legislation	
NPS Regulations	10/18/58
NPS Uniform	10/19/58

Area Preservation
   Forest Fire Protection:

Forest Fire Control Plan	11/23/58: 5/7/60: 5/13/63
Forest Fire Equipment	5/10/59: 5/13/63
Forest Fire Prevention	
Forest Fire Presuppression	
Forest Fire Suppression	5/10/59: 5/7/60: 5/13/63
Cooperation with Other Agencies	5/10/59:
Other (_____)	

   Building Fire Protection:

Fire Hazard Inspections	5/13/59
Building Fire Control Practices	5/13/59
Building Fire Equipment	5/14/59

Plant Diseases and Control	
Plant Insects and Control	
Fish Management	
Grazing	
Soil & Moisture Conservation	
Scientific Investigations	4/13/60
Boundary Patrols	12/5/58
Safeguarding Govt. Property	3/10/59
Prevention of Damage to Park Features	10/20/58: 4/13/60
Wildlife Management	2/18/61

| PHASES OF WORK OPERATIONS	DATES TRAINED
Public Safety	
Hazard Inspections	4/13/60
Sanitation & Public Health	4/13/60: 5/7/62
First Aid	1/15/58: 2/7/60: 2/19/62
Search Activities	
Rescue Activities	11/15/60
Handling Emergencies	
Traffic Safety	
Accident Prevention	
Law Enforcement:	
Mechanics of Arrest	10/23/58: 2/15/62
Collection of Evidence	10/24/58
Preservation of Evidence	10/24/58
Court Procedures	10/25/58
Conducting Investigations	10/25/58: 2/15/62
Handling Prisoners	
Highway Patrol Activities	5/13/59
Law Enforcement Records & Reports	
Firearms	10/28/58: 2/16/62
Cooperation with Other Agencies	
Other (_____)	
Public Use	
Supervision of Public Use Areas	
Issuing and Enforcing Permits	
Entrance Station Operations	5/13/59: 5/15/60
Information Center Operations	5/15/60
Handling Complaints	5/15/60
Handling Special Events	
Administration	
Supervisory Responsibilities	3/10/61: 10/22/62
Public Relations (Visitors)	10/19/58
Public Relations (Neighbors)	
Training Responsibilities	10/22/62
Budgets and Work Plans	
Recruiting & Selecting Personnel	
Private Lands Problems	
Tort Claims	3/10/59: 5/11/61
Care and Use of Equipment	10/23/48
Special Studies (Travel, Use, Etc.)	
Snow, Water, and Other Surveys	
Concessions Operations	
Other	
Area History	10/19/58
Area Policies	10/19/58
Area Regulations	10/19/58
Etc.	
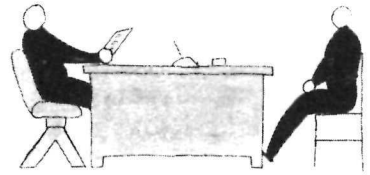
PERFORMANCE REVIEW

The training value of performance review depends upon the supervisor's realization of its worth. We occasionally hear employees say, "I have no idea of how I'm doing in my job. My supervisor never tells me, one way or the other!"

This training situation, different from coaching, is afforded to a supervisor who generally does not work side-by-side with a subordinate. However, he keeps informed of the work of the subordinate through other supervisors, and by other means. From time to time he calls the employee into his office and informally reviews the individual's progress in his job. He may elect to let the employee do most of the talking during the first such meeting. He is interested in learning how the employee thinks he is progressing, how satisfactory the job is to the employee, what on-the-job training has been afforded, what other phases of the job the employee is interested in, and something about his career interests. This basic information enables the supervisor to plan the discussions for subsequent meetings.

On other and later occasions the supervisor may wish to review the job performance of the employee. Creditable ability and performance should be frankly recognized. Job shortcomings should be brought to the employee's attention in a constructive manner which will retain pleasant personal relations between the two individuals, but yet offer some assurance of sound personal development. If the level of job performance is in need of improvement, the supervisor and the employee together should arrive at a plan wherein the employee will receive the training or be exposed to job experience which will relieve the shortcoming. The employee, thus being given a voice in such planning, will react more favorably to the subsequent corrective action. He will not feel that all is hopeless. Obviously, the above is not accomplished without a considerable amount of study and preplanning on the part of the supervisor.

In addition to planning improvement on-the-job, the supervisor will become aware of other training opportunities which may be effective. He may decide that committee assignments, or job rotation, or understudy assignments may further improve the employee's capacities. He may recommend correspondence courses or other scholastic training which may be available. He may decide to plan with subordinate supervisors as to future development of the employee.

Candid performance review does much for both supervisor and subordinate. The supervisor feels secure in the knowledge that he is fulfilling his obligations as a supervisor and can take a considerable amount of satisfaction in the intelligent development of his subordinates through this method. The employee, on the other hand, knows that a friendly and mutually helpful relationship exists between him and the supervisor and will thus be more receptive to future performance review discussions and training.

The dominant consideration in performance review is to make the employee aware of his development needs and, in so far as is possible, to create in him an interest in satisfactorily resolving his shortcomings.

3. CROSS-TRAINING
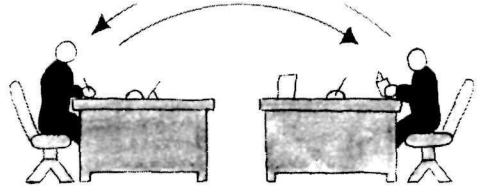
Cross-training is merely a planned program of exposing an employee to job experience which he would not normally receive in his current job assignment. In view of the broad scope of National Park Service operations, and of the somewhat limited opportunities some employees have for broad development in certain work situations, the technique of cross-training is extremely valuable in this Service.

A situation favorable for cross-training has to be created. One interested supervisor is not sufficient. Two or more supervisors must agree that the principle of cross-training is sound, and must realize that the benefits to be derived from such training are worth the effort and time expended. Once this understanding and agreement between supervisors is reached, cross-training can become a recognized procedure within an organization and can be carried on with little difficulty.

Employees so assigned, whether it is a park naturalist in the personnel field, or a park ranger assigned to assist the park engineer, may come to their new duties with a relatively slight degree of skill in that particular field. The development of professional or technical skill is not the objective of cross-training. The real purpose is to develop an understanding of procedures and a realization of the importance and scope of the new field of work. This understanding and realization will do much to foster better cooperation within the organization, in addition to improving the development of the individual employee.

Supervisors must realize, however, that this technique requires interested supervision and they must make such provision. The employee may lack basic knowledges which must be developed before he can perform any useful function in his training assignment. This takes time and attention. The supervisor must be aware of this and must be ready to devote the time necessary to make this type of training effective.

The employees who undergo cross-training not only gain valuable job knowledge, but frequently experience a change in attitude. They find that other occupational categories also must cope with problems. They find that there is a certain validity to viewpoints held by employees in other segments of the organization. They find that there are ways in which they can assist these employees by doing certain things differently in their regular job assignment. They learn that other functions and operations are also important in the over-all job of park management.

Cross-training, if used wisely and effectively, provides benefits to the organization far beyond the development of any single employee. We should use it more often.

4. SPECIAL ASSIGNMENTS
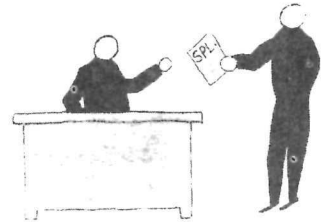
In almost all employment situations there arise occasional special assignments which some supervisor must undertake. These are generally somewhat different from the usual work performed by employees and can be used to good advantage as a training device and opportunity. Unfortunately, the common practice is for the supervisor to detail the same person or persons to such assignments time after time, on the premise that they have satisfactorily completed similar assignments and can thus be expected to handle them again in the same manner. Thus, after a time, the training value of such an assignment is lost.

Supervisors should remain alert to the value of special assignments for training subordinates. They should evaluate the training possibilities of such an assignment and decide in advance which employee is most in need of the experience which this assignment would afford. While it may be true that some other employee may have previous experience along this particular line, he personally would benefit very little from a training viewpoint.

Special assignments may consist of compiling periodic reports, conducting investigations, making analyses of different situations, devising procedures for any number of purposes, conducting surveys of particular operations, or having responsibility for the completion of various work programs. In all of these activities there is a definite training value.

In all such assignments, a certain amount of supervision is necessary. The employee may have to learn certain basic job knowledge before he can begin the assignment. The supervisor must provide this knowledge. The employee may lack the information as to how to proceed with the assignment. The supervisor must decide with the employee as to the procedural steps. The employee may not know where to go to obtain the information required. This, too, must be explained to him.

While it may appear, in this case, that it would be simpler for the supervisor or someone else to complete the assignment, we must not lose sight of the training value of such an experience. It is entirely possible that the employee may take longer to complete such an assignment than would other employees, or that his approach to the situation may be more uncertain. However, the gain in job experience to him and to the organization is worth the additional time spent. Special assignments must be looked upon as training opportunities which offer multiple rewards if planned properly.

5. ACTING ASSIGNMENTS

Acting assignments are a form of pre-supervisory training. They are not used for the new or relatively new employee in most cases. The objective of acting assignments is to expose the individual employee to work situations, generally in some supervisory capacity, so that he will learn "by doing." The possibilities of such assignments arise when regular employees are absent from their jobs in times of illness, for annual leave, when they are temporarily detached from their scheduled duties for other reasons, or when a job vacancy exists before a final placement is made.

The benefits of acting assignments are many-fold. The individual employee gains job experience which is extremely valuable and which will serve him well in his later work. The supervisor benefits because such placements offer him an opportunity to study how well employees perform in acting capacities. Certain strengths and weaknesses come to light which can either be taken advantage of or corrected, as the case may be. The remainder of the organization benefits in the knowledge that other employees will be similarly assigned when suitable occasions arise.

The supervisor will do well, however, to study such assignment possibilities with extreme care. He will not want to assign just any employee to the acting supervisory role and then forget him for the duration of the assignment. Such an employee, particularly if he was not ready for such a detail, might flounder and become frustrated to the point where his work might be affected adversely. The supervisor must keep in constant contact with such an employee and, through means of coaching and counseling, keep him on the right track from day to day. Before such an assignment is made the supervisor will do well to have a talk with the employee and point out (1) why he has been chosen for the temporary detail, (2) how he can expect to develop himself through the experience, (3) the management details of the job or operation, and (4) a word of encouragement to do a good job. The supervisor may wish to have several follow-up meetings with the employee in the interest of giving the employee additional information about the job, assuring himself that the job is being handled satisfactorily, suggesting modifications in the work situation, or merely offering the employee an additional word of encouragement and advice.

In this type of training situation the problem which may prove most vexing to the supervisor is--which employee to assign to the temporary job. He should not base his decisions on seniority alone, although the subordinate oldest from the standpoint of service and experience may often get the job. The supervisor should study his subordinates to see which one can profit most from such an assignment and at the same time perform a creditable job. He may have some subordinates who have in other ways demonstrated their ability for supervision, or who may have already served in acting capacities. He should not always assign the same person to such training opportunities if he has others in need of development.

The success of such an assignment lies principally in the understanding between the supervisor and the employee that this is to be a training experience from which much can be gained. Thus, an acting assignment must be carefully planned, discussed, and observed. It should not be a casual or unplanned job placement.

The employee, in this case, will encounter a number of experiences which should do much to develop him as an individual. He may, for the first time, be responsible for directing the work of other permanent and seasonal employees. He may be in a position to positively influence public and employee relations. He may have to resolve certain human relations or job situations which he would not otherwise encounter. He may be exposed to new phases of the job, either administrative or technical, which will do much to develop his attitudes and viewpoints, as well as mature his job judgment. He will undoubtedly learn that supervisors, too, have problems to face. In addition, he will appreciate the guidance and assistance offered by his supervisor and will be appreciative of this opportunity to demonstrate his ability and acquire experience and job knowledge.

6. UNDERSTUDIES
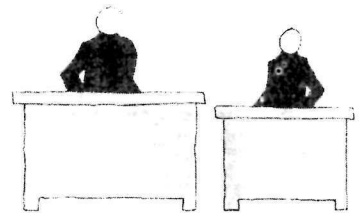
An understudy is an employee who is preparing or being prepared to fill a more responsible position and act for his superior during the latter's absence. In this sense the understudy type of training may be similar to "acting assignments."

Competent understudies prevent job slow-up and forestall serious complications in the event of absence, resignation, promotion or transfer of employees holding positions requiring special training or experience. One of a supervisor's first responsibilities should be to select and train a competent assistant. The presence of understudies in any organization, even a small one, is an indication of good management.

An understudy's relationship to his superior must be intimate and confidential. All the important problems and situations with which the supervisor is faced should be freely discussed with the assistant. The understudy should be given a variety of experience in other employee's jobs since this gives him the opportunity for growth and a broad and basic understanding of all operations within the sphere of the supervisor's jurisdiction. If possible, he should be given a chance to sit in on supervisory and planning meetings, and to act as a working assistant, perhaps helping to break in new or seasonal employees.

Coaching plays a large role in the development of understudies. The supervisor must explain the principles and policies of the Service so that the understudy acquires a firm foundation for his subsequent activities. Procedures must be explained in detail so the understudy will understand job relationships. Personal counseling on the part of the supervisor is necessary with respect to human and employee relations on the job. Special assignments may offer the understudy a valuable experience in problem solving.

To this extent understudy training may be achieved through a number of the individual methods discussed previously. It may be looked upon not so much as a method of individual training as it is a situation for individual training. From either viewpoint, however, it is included in this manual to acquaint supervisors with the value of such assignments in the hope that it will be recognized as a valid medium of employee development.

7. <u>COMMITTEE ASSIGNMENTS</u>
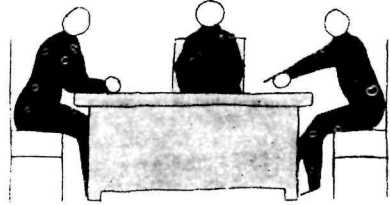
Committee assignments have much to offer in the way of training value. The benefits arise from the opportunity which the individual members have to review certain management or technical problems, and from their efforts to resolve these problems. We all agree that there is no better way to become safety conscious than to serve on a Safety Committee!

Members of committees whose duty is to delve into Service problems cannot help but acquire a broadened knowledge of Service operations and policies. In addition, they develop problem solving ability in various fields. They learn to attach significance to otherwise obscure or seemingly unimportant phases of operations. They learn that a great deal of thinking and planning must go into a satisfactory resolution of some apparently simple situations.

Committees which exist in almost all offices and field areas are Safety Committees, Management Improvement Committees, Incentive Awards Committees, Sign Committees, and other committees which to some extent direct or coordinate various employee, community or civic affairs. Assignments to such activities should be rotated, in so far as is practical, to offer these experiences to as many employees as possible. The Incentive Awards Program, for example, would be better understood and would become more meaningful to the Service, if more supervisors could serve on this Committee. Management improvement could become a more effective tool in Service activities if more supervisors could be taught to think along these lines.

SOME METHODS OF

GROUP INSTRUCTION

I. THE LECTURE
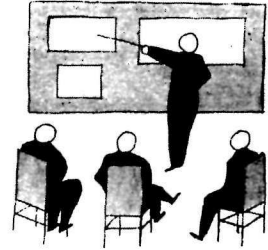
We are all quite familiar with the lecture as a method of instruction. We were brought up on it in this Service and will probably attend many more in the years to come. Lectures are simply talking with people. In the training setting they are planned and prepared oral presentations. They may be given by local supervisors, specialists, administrators, or guest speakers. Usually they are supplemented by a discussion or question-and-answer period.

Lectures have much to recommend them. They are one of the most effective means of instruction if used properly. Lectures are useful to stimulate enthusiasm, to provide opportunity for contacts with experts, and to present introduction to new fields. The lecture method is excellent when the situation calls for telling that which it is intended the listener should know. When supported by adequate visual aids, such as pictures, charts, maps, mockups, and film strips, it is an efficient means of transmitting information of a predetermined sort.

However, lectures are not suitable when participation or shared problem-solving is desired. The principal weakness of the lecture method is the non-participation role of the trainee. Since lectures depend for their effectiveness primarily on rote memory--since the learner does not usually become actively involved mentally--it is important that they be carefully planned for maximum impact; and that they be reinforced, if possible, by demonstrations and visual aids so that the message will reach the learners through several organs of sensory reception.

The lecture method has the reputation of being the poorest instructional method. Probably a good share of the complaints against this method would evaporate if instructors would cultivate the art of effective lecturing. To give oral directions by means of the lecture method the instructor needs to get and hold attention. This is no easy task since the span of attention will seldom follow an hour-long lecture step-by-step to its conclusion.

The instructor should tell the trainees how the material he is presenting ties in with what they already know. He should also point out how the information will be useful in the future. These two items will generally get the trainees interested in what the instructor has to say. Now the problem is to keep that interest sustained. From here on the instructor must make the lecture vivid, colorful, and full of word pictures. He must illustrate, give examples; tell a story which supports his point.

He can give actual cases; report specific incidents of what happened to someone who didn't do the thing he is advising. He should make his point clear by analogies from the job situation whenever possible. He should draw a sketch, measure with his arms, gesture, or do whatever he can to graphically demonstrate the point he is making. Examples are to oral presentations what windows are to a room--they let the light in. Use them freely, abundantly, and appropriately.

A lecture should <u>never</u> be read. There is no surer way of losing the attention of the trainee group. If a speaker is not sufficiently familiar with his subject matter so that he can talk freely from well organized notes--then he is not the man for the speaker's spot. Someone else, less informed possibly, but who can give the topic some meaning and who can sustain interest, should be selected.

To be most effective the lecture should be organized into three parts; the introduction, the instruction part or body of the lecture, and the conclusion or test part.

The introduction is used to stimulate trainee interest and to present a basis for the lesson. The stimulation of interest is very important when using the lecture method. The trainee must be wide awake, he must be in a frame of mind to receive instruction, and his mind must be open to new ideas. The presentation of a basis for the lesson is likewise an important item to accomplish before the actual instruction begins. The instruction or body of the lecture may involve more or less detailed explanations of various topics. If the instructor starts immediately with such a detailed explanation he may discover that the trainees do not understand the fundamental purpose involved.

For example, if we were to try to explain the National Park Service fiscal accounting system by the lecture method, we would not immediately start teaching a learner how to make entries on a ledger sheet. This would mean little to him without an understanding of the fundamental purpose of accounting. Instead, we would introduce the subject by pointing out the need and purpose of an accounting system and would offer a general picture of the budget cycle, programming of funds, the allotment of funds, and define for him the various appropriations and accounts used in this Service. Once he had this foundation, the subsequent detailed operations would become more meaningful.

The body of the lecture (or instruction step) gives the detailed explanation of the particular subject at hand. One of the greatest faults in presenting a lecture is that there is a tendency to ramble over the subject without concentrating on definite points. The subject matter should be divided into definite parts and each of the parts handled in an effective manner. Holding the trainees' interest and making certain that each point being covered is clearly understood are two important problems in the instruction step. These problems may often be solved by

the use of illustrations, including pictures, slides, charts, and drawings. The blackboard is an indispensable aid to most lecturers. The instructor should always deliver the lecture in a manner which allows the trainee to take notes easily. Another excellent device in strengthening the training received from a lecture is to give the trainees a printed summary of the material presented.

It is generally not a good practice to hand out material before or during the lecture session. If the printed material pertains to the subject being presented, it will be normal for some trainees to read part of the material while the lecture is in progress. The fewer distractions offered to the trainee group, the more successful the lecture will be. All handouts should be distributed at the end of the lecture, unless the material is in some way necessary to the conduct of the meeting.

The conclusion of the lecture is important in that it gives the instructor some information on the success of the presentation and allows the trainee group to gain confidence in their knowledge of the subject by answering questions or volunteering ideas. The test step need not be a written examination. Instead, it may be a group discussion or a group solution of a case or problem. The instructor should always consider the test step of the lecture as an additional means of allowing the trainee to gain useful information on the subject.

IMPROVING THE LECTURE METHOD

Understanding the importance of the lecture method is not enough. A training officer or supervisor must know how to plan lecture part of his program, how to select the proper lecturers and to create the kind of situations in which they can give their best. This means having a practical turn of mind and a willingness to attend to details. There are guideposts that the lecturer can follow. The most important of these are indicated herein:

1. Fitting the Lecture to Program Objectives. Every lecture should fit the program of which it is a part. Speakers should be scheduled only if they will contribute directly to objectives.

2. Selecting the Speaker. There are no hard and fast rules to be followed in selecting the speaker. Some speakers have a wealth of information, but have difficulty in presenting it. Some speakers are good small-group speakers; others are better before large audiences.

    Such information can ordinarily be acquired by the training officer without too much difficulty. One of the best ways is to hear the potential speaker before inviting him. Another is to find out about him from persons whose judgment is trusted.

3. <u>Paying the Speaker</u>. The question will often be asked: should the speaker be paid for his services? The answer is ordinarily "yes" if he is from outside the organization.

It is "yes" if you want a superior effort from him. The offer of an honorarium, however small, is an indication to him that his services are really wanted - and he will usually try a little harder to please. Moreover, speaking is as much a commodity of certain professions as the giving of legal advice or the practice of medicine is to others, and should be thought of in this fashion.

4. <u>Planning the Lecture</u>. The guest speaker, whether from inside or outside the organization, wants to know not only what is expected from him, but also the nature of his audience, its size, the level of its development, and what has gone before (if this is a part of a series). It is the responsibility of the training officer to provide him with this information.

5. <u>Announcing the Training</u>. The private torture that all program chairman suffer is that no one will come to the training sessions. Such concern need not be felt, however, if proper attention is given to the mechanics of the training announcement and publicity.

The first announcement of the training should be made at least two to three weeks in advance. It should again be brought to the attention of the potential audience a few days before it is to take place. This can be done by means of oral announcements, memos to the office most likely to be interested, and the like. A useful device is the single-purpose, "what's scheduled" bulletin board.

6. <u>Making Administrative Arrangements</u>. No lecture will be better than the preparations that are made for it. These include the room where it will be held, the speakers platform, and the availability of visual aids and other props.

7. <u>Introducing the Speaker</u>. The purpose of the "introductory remarks" is to identify the speaker, to welcome him to the group, and to state the subject of his talk. Information concerning the discussion period, if there is to be **one,** should also be included.

The introduction is not a second speech. It should take not over five minutes, save in exceptional instances, and should certainly not detract from what the speaker has to say. It should be friendly and courteous; it need be neither funny nor anecdotal.

8. <u>Asking Questions</u>. A high percentage of all lectures where the announcement is made that "the speaker will be glad to answer your questions" are followed either by embarrassing silence, or by transparently obvious, manufactured ones. In either case, the effect is the same. The chairman usually apologizes with some trite observation ("I see you have already answered all their questions") and so, the meeting ends.

One way to avoid silence is to have questions worked out in advance (from study of the general area of discussion) by selected members of the group, working as a panel. Another way is to turn the audience into buzz groups with instructions to bring up points of disagreement, or even, if they feel inclined, to ask questions. This can be done easily, and is usually well received because it involves participation. Also, questions can be prepared by the audience on 3"x5" slips of paper and forwarded to the lecturer for his response.

9. <u>Evaluating the Lecture</u>. Evaluating the lecture may be an even more important part of the learning process than listening to it. This will give the members a chance to participate, and in doing so, they will have the benefit not only of their own reflection about what has been said, but also the views of the trainer.

The evaluation session should take place as soon as possible after the lecture. It should concern itself primarily with lecture content as well as the method of presentation.

2. THE DEMONSTRATION
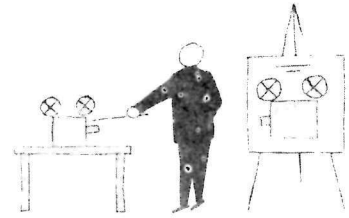
Demonstrations are a necessary and expedient part of the teaching process. Imitation of an act as performed well by someone else is one of the very best ways of learning. Demonstrations are staged showings or illustrations, usually of a process, task, or piece of equipment. They may serve as auxiliary devices in connection with other forms of training, or they may be used as a method in themselves. They are most widely used in first aid, safety training, fire control training, use of equipment, and similar activities. For best results, the learners should have opportunity to repeat, under guidance, that which has been demonstrated.

Demonstrating has the advantage that what the instructor does with his hands is easily copied by the trainee, who does it with his hands in much the same way. But what the instructor says in words, valuable and true and correct as it may be, has to be translated by the trainee from the words which are uttered to the acts which he has to perform. Some instructors are not good with words. Their vocabulary is limited and their powers of description may not be too great. The trainee, on the other hand, may not be too good with words either. He may not understand the words used. It is also possible that the trainee will get the wrong picture because he puts the wrong interpretation on the words used. It takes a great many words to describe some very simple things.

Demonstrations have another great advantage. When an instructor tells a group of trainees that he is about to show them a certain process, he places himself in a position where he is committed to do that very thing. Demonstrating a job process holds the instructor on the functional track and keeps him from sliding back into older habits or passing out unapplied information. The key idea regarding the use of the demonstration method of presenting directions is the idea of imitation.

Good demonstration technique requires observance of the basic rules of common sense in order to be of greatest value. Be sure the tools, apparatus, or materials are in good working order and are not likely to malfunction as you use them. Arrange for a decent chance to be seen. Don't get between observers and the thing they are to see. Solve the "mirror image" problem by some appropriate method. You may have to let the trainees look over your shoulder instead of face you. Talk as you demonstrate—but don't talk idly. Center attention on the essentials so the eye doesn't dwell on irrelevant but dramatic byproducts and miss the main essence of the operation.

Give the trainees a chance to see the whole act or operation as a unified whole, if possible, and then repeat it with more emphasis on the parts. Separate the parts by pauses, by verbal markers, or by other signals so that the trainees can analyze the act. Otherwise so many detailed steps or operations may run by in an unbroken series that there is no chance to grasp or assimilate them. A demonstration should yield insight, and this can better be given by featuring the key movements or steps so that there are high points, priorities, or special focusses of attention on what is of major importance. Just as a written outline uses indentation, underlining, numbering, and lettering to express relative importance of written ideas, so the instructor needs to use movements, pauses, pointing with the finger, and verbal devices to emphasize and to subordinate the various parts of an act he is demonstrating.

Another good technique in conducting a demonstration is to ask questions of the group periodically to see if specific points are understood. If for any reason the wrong way of doing something is shown, be sure to follow it with the correct method so the trainee understands the right way. (Be cautious in the use of "wrong way" demonstrations. Some individuals will remember them instead of the right way.) A demonstration with any degree of complexity should be thoroughly rehearsed before the presentation. Such rehearsal should include all assistants and others participating. A practice run permits a check of accuracy, clarity, and timing.

The principal advantages of the demonstration method are that it provides an understanding of a process and at the same time provides an interesting activity. It appeals to the eye and it shows correct methods of doing the job. It brings the learner closer to the work and it substitutes practical illustration of the subject for subsequent group discussion.

The main limitations of a demonstration are the subject itself; time; equipment; and the availability of qualified demonstration personnel. Often these can be overcome by using training film or other projected aids.

3. THE STAFF MEETING
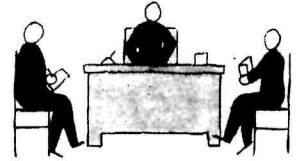
The subject of staff meetings is highly important to Service supervisors because, if used properly, they can be one of the most effective methods of staff development. Unfortunately, staff meetings are sometimes held only for the sake of adhering to a schedule or complying with some requirement of the organization. Too often they are sterile gatherings of employees with little thought given to employee development.

Staff meetings are more successful when the supervisor keeps his purpose clearly in mind. The two major purposes are:

(1) To give instruction or give and exchange information, and

(2) To permit the group to consider common problems.

Staff meetings should be used for both these purposes. They are less effective when the supervisor uses them for one purpose to the exclusion of the other.

In using the staff meeting for giving information, the supervisor saves time by explaining to a group, rather than individually, what they need to know about actions, decisions, changes in policy, and so on. He may give work instructions when all members of the group need the same instructions, or assign a complex project, giving different phases of it to different people. He may bring in someone outside the unit to give specialized information.

The staff meeting, however, should not be a one-way street. The supervisor may ask each member of the group for information and ideas that are significant to other members. Each may be called upon to describe developments in his own work which other members need to know about. An important advantage of giving information or instructions in a staff meeting is that there is opportunity for discussion. Any confusion can be clarified and the group may reach a common understanding of the significance of the information and its application to their work.

It is equally important, though more difficult, to use staff meetings to discuss and solve common problems. This purpose grows out of the facts that the supervisor cannot solve all the problems of the

unit single-handedly and that several heads are often better than one. The supervisor, faced with the necessity of making decisions or plans, gets the benefit of the thinking of his staff. On occasion, a member of the group may seek the advice of other members in solving a problem in his work.

The supervisor who plans to hold a staff meeting will do well to give some thought to the planning of such a meeting. A staff meeting should not be held simply for the sake of asking "Do any of you have anything you wish to bring up?" <u>Each meeting should have a specific purpose or dominant topic, an agenda, some problems to pose to the staff group, and a period devoted to staff questions.</u> Each meeting should be informative and only as lengthy as is absolutely necessary. Obviously, such a meeting will require some advance preparation.

Emphasis throughout should be on problem solving and getting the staff to think and to participate. If the supervisor finds that he is doing all the talking--then the staff meeting very probably leaves much to be desired.
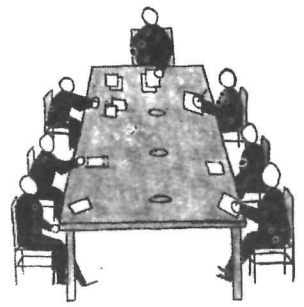
4. THE CONFERENCE

The conference method of instruction refers to a meeting under the supervision of a conference leader in which all members of the group volunteer and exchange ideas on a predetermined subject. The fundamental principle of the conference is that, through this exchange of ideas, all members of the group will pool their ideas and arrive at a decision of some sort regarding the problem at hand. Thus, all members will receive information which has definite training value.

The conference is of real value only when the problems or questions are very clearly and closely associated with the experience of the people participating. When a person actually thinks a problem through, and arrives at an intelligent conclusion as a result of his own thinking, he feels that the conclusion or decision is his own and that the procedure indicated is dictated by his own, rather than some other person's intelligence.

It is from this drawing out of experiences and opinions and thinking which such a process stimulates that the conference gets its value. Employees are called on daily to make decisions on many and varied problems and we depend on them to make right decisions and to pass sound judgement. If they are to do this, they must think through the problems that come to their attention, and any procedure we can establish which will assist them in their thinking and help them organize their experience will make them more capable employees. Training of this type in conferences is not something that is only important to do; it is something that we can ill afford not to do.

Possibly one of the greatest benefits to be derived from the conference method is the development of the ability to analyze a situation and a questioning attitude. Many inexperienced and untrained supervisors lack this questioning attitude because their ability to analyze situations and conditions is based upon snap judgement or emotions rather than good sound reasoning. If a supervisor will develop the habit of carefully analyzing every problem that confronts him, his decisions are apt to be sound.

In the conference, every problem is carefully analyzed; facts are assembled and studied; pros and cons considered; advantages and disadvantages discussed; and only then are attempts made to arrive at conclusions. This type of training demonstrated at every conference over a period of time is bound to have a beneficial effect on every conferee or supervisor in attendance.

Current thinking and research on the conference method indicates that it is most effective when the leader is permissive, democratic, and group centered. On the other hand, if the leader is authoritarian, knows all the answers in advance, is very conscious of his status, and is only concerned with achieving his own goals, then group participation and group satisfaction will be at a minimum.

Unfortunately, not everyone is a born conference leader. We can, however, learn conference leadership by reading on the subject and by practicing in conference situations. Any individual who is capable of clear, impartial thinking, and who has the ability to exercise skillful control of men, can learn successful conference leadership--but it takes some initiative.

One great advantage of the conference method is that it offers the ideas and opinions of a group rather than just one man. There is also an advantage in having all of the group enter into the discussion in that it adds to their interest in the subject if they can contribute something rather than merely receiving the ideas of another person. Each man feels that he is taking part even though he may only ask a question or express an opinion. He listens attentively and thinks the subject through. Conferences help men to understand. The man who talks about a subject is organizing his knowledge of the subject. The expression of ideas by others in the class allows him to see the subject from many sides.

There are also some disadvantages to the conference method. It requires more time than other methods. It may involve lengthy discussions and arguments. Unless the group is trained in how to participate in a group situation, there is a likelihood of straying from the subject. The use of the conference method is limited to the experience of the group in the particular subject at hand. For experienced men it is a good method for job analysis training, discussion of work problems, etc. The conference method should not be used when the group is inexperienced in a subject. It should not be used for subjects upon which definite rules, regulations, and methods have been already determined and have become fixed practice.

Conferences occur both in the work situation and as a training medium. The former are thought of as administrative conferences and are held to plan work activities or resolve work problems; the latter are training conferences. Training conferences are the most widely accepted of the systematic methods of supervisory training.

The usual and probably the most usable type of training conference is the "guided" conference. The guided conference is built around topics chosen on the basis of established training needs. Each session has its specific objectives, plan of instruction, and body of content material. The conference leader guides the trainee group by the

proper phrasing of questions and remarks, and moves the group in the
direction of the agreed upon topic by encouraging discussion. The
conference leader may supply subject matter information during the
session, or arrange for a presentation of factual information at the
start of the meeting. What he does <u>not</u> do is control the free flow of
ideas and opinions--so long as they <u>may</u> be generally pertinent to the
discussion. The leader does not have a stock answer, nor is common
agreement on a solution to a problem necessarily anticipated. Empha-
sis is given to the emergence of ideas from among the participants,
and the pooling of group judgement and experience in the solution of
problems.

The value of the conference lies in the participation of
the members. They get out of it what they put into it. But "opening-
up" and sharing ideas is not easy for all people. So we have some
techniques to help them do this. Among the best are buzz groups,
brainstorming, and role playing, which are discussed in following pages.
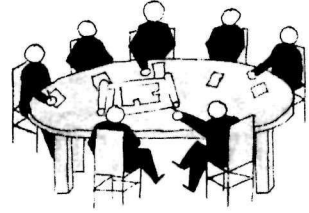
5. THE CRITIQUE

The critique, or problem review session, is closely related
to a conference case study. Whereas the case study is generally con-
fined to a real or imaginary human relations or job situation, the cri-
tique is aimed at reviewing an actual management operation with which
the participants are familiar. The critique is best known in this Serv-
ice for its use in forest fire review, although there are many other
situations in which it would prove equally effective.

The principal aim of the critique, from the training viewpoint,
is to disclose to the trainee group the possible sources of action which
were open and available during various stages of the operation. It is
possible that the critique may disclose mistakes, errors in judgement,
or the overlooking of more effective techniques, but these disclosures
in themselves have some training value. A critique should never be held
for the sole purpose of finding fault or pinning the blame for ineffi-
cient operations on any one individual or any one group of employees.
If this measure is necessary, it can be more aptly named an investigation.

A critique should be a constructive experience for all concerned.
The conference chairman should review the problem, step by step, from the
initial action taken to the final conclusion of the incident. He should
furnish basic information at the beginning of the critique so that all
members present may have the same factual information with which to con-
sider subsequent actions taken.

The critique serves as an excellent springboard for group
discussion. There will be some members of the group, however, who may
at first express confusion and frustration. They will resist having to
think for themselves. They want to be told; they want to have their de-
cisions made for them. But the cold fact is that out on the job they
have to make their own decisions, so there is considerable sense in
having them practice doing this in a training session. Usually, as the
critique progresses, and the trainees get the hang of what is going on,
this resistance wears off.

In the review of a problem by means of the critique, the
group goes through several steps: (1) what are the available facts;
(2) what are the problems evidenced by the situation under review;

(3) what were the possible courses of action; and (4) what might have been the best course of action. Frequently, no pre-determined answer is possible, and unanimity of response is not expected.

Again, the leader or chairman is all important in the success of a critique. He should be highly permissive and non-autocratic. He should raise questions now and then about action taken and question the group as to its validity. But he should not provide answers, pass judgment on behavior, or criticise observations and solutions of group members. The value of the critique is to get the trainee group thinking about different aspects of the problem or operation, and the leader can stifle this voluntary participation if he has too many pat answers or is critical of trainee contributions.

6. BUZZ GROUPS
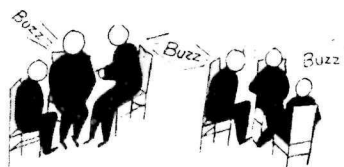
This is another device of group training in which a great deal of employee participation is obtained. Such a device is used when a training group is large and individual participation is limited for one reason or another. It permits the participation of many people by breaking the large group into small sub-groups of four or five people each. Each buzz group thus formed discusses a particular problem, develops a point of view, or prepares a question. The results of these sub-group discussions are reported to the full group by representatives of each buzz group.

This technique is frequently used to supplement the conference method and various discussion methods. It serves to break the monotony for a brief period and can be used to good advantage as a time saver. It is particularly effective when the subject matter being discussed is of a nature which can be further developed by a series of probing questions, or one in which there may be divergent views which need to be drawn together.

The leader may have prepared in advance five or six pertinent, thought provoking questions which pertain to the general subject. Rather than throw these, one at a time, to the entire group for discussion, he may elect to assign one question to each buzz group and then permit a group spokesman to report the group's decision to the entire conference body.

It is very helpful as a device to warm up participants. Some of us, of course, are shy in a large group. Experience indicates that group discussion proceeds more readily after members have had a chance to participate in a buzz group.

For best results, the conference leader should explain the purpose of the buzz group, permit the buzz groups to select their own chairman, make clear what they are to discuss, and not specify rigid time limits. (A decline in buzzing indicates that the buzz groups are ready to reassemble.) Generally, however, 15 to 20 minutes is adequate for buzzing.

This technique may also be used after presentations by film, film strips, and lectures. Another variation is to let buzz group chairmen serve as a panel to present views, solutions, etc., and to be quizzed by the rest of the group.

7. BRAINSTORMING

"Brainstorming" is an idea-producing group training technique which has the advantage of maximum free participation on the part of all members. The process is started simply by outlining a problem for which a solution is needed. The problem should be narrowed as much as possible to avoid broad or general solutions. Representative group members are selected from all branches and divisions of the organization and all are provided with as much information as is available on the problem. If possible, this information should be placed in their hands several days in advance of the meeting so they will have ample time to digest the information and to think of possible solutions.

The brainstorming session begins with the panel chairman explaining the problem verbally to the group and seeing that everyone in the group has the same understanding of the problem. An example of a Service problem which would lend itself to a brainstorming session might be the question, "What other measures can we take in this area to combat the litterbug?"

Once the introduction is accomplished the leader solicits suggestions as to the solution from the group members. A secretary records the suggestions as they are offered from the group, one idea at a time. No idea is rejected. Everyone's thinking is welcome. Quality of a suggestion is unimportant—quantity is what the leader is after. The brainstorming technique is based on the premise that quantity breeds quality. Possibly out of 100 solutions proposed, only two or three will receive final consideration; but those two or three might never have been thought of had it not been for some of the remaining 97 sparking the ideas. The greater number of ideas, the more the likelihood of good ones. Even a farfetched proposal might result in planting a thought in some other person's mind which might occasion a worthwhile proposal.

Judicial judgement is ruled out. Criticism of ideas must be withheld until later. "Free-wheeling" is welcomed: the wilder the ideas the better. It is easier to tame down than to think up. Combination and improvement are sought. In addition to contributing ideas of their own, group members should suggest how ideas by others could be turned into better ideas; or how two or more ideas could be combined into a still better idea.

After the group has exhausted its solutions to the problem, it is dismissed from the meeting. Then the chairman and a selected group (smaller in number this time) go over the list within a few days in a screening process. The original list of ideas is like the gold ore in a placer mine. The gold is there, but it has to be screened carefully and thoughtfully. First, the group chairman and the group must go through the list and cross out any ideas which are absolutely contrary to Service policy or regulations. Second, the remaining ideas should be put into their proper classifications. Even though the session has been aimed at solving one particular problem, ideas come up on other subjects. In some cases, suggested solutions can be divided into several classifications.

After the list has had the preliminary screening, it should be given a careful reading. The possibilities of each idea should be considered. Those which seem to offer the best possibilities should be checked. This should result in a listing of preferred ideas. But as in placer mining, these final screened ideas are just raw gold. To be worth their value, they have to be refined and developed. The more the idea is spelled out, documented, or visualized, the better the chance that the person responsible for handling the problem will use it.

The success of the brainstorming session depends to a major degree upon the ability of the group chairman. He must have the ability to draw out individuals of the group. He must be watchful for the individual who is timid about offering his thinking before the group. He must be careful that each idea proposed is developed sufficiently so that the suggestion will be meaningful at a later date.

Meetings of this type should be kept as informal as possible. To conduct them otherwise will make it difficult for people to propose ideas which they have not thought through completely. For this same reason the group should not be too large. Fifteen to twenty people should be a maximum number for such a group. If more are available to offer ideas, two sessions should be scheduled with half the group in each.

When the panel chairman has finished with the ultimate selection of the most workable solutions proposed by the group, he should make some kind of a report to the group (either written or oral) so that the members of the original group will have the feeling that their suggestions in some way contributed to the final and successful solution of the problem.

8. ROLE PLAYING
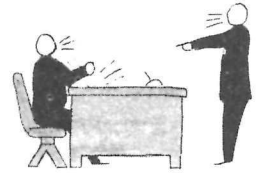
Role playing is not a new technique, but has become increasingly popular in recent years. It is particularly adaptable to problems in pre-supervisory and supervisory development, problems of human and employee relations, as well as in other aspects of Service work. The principle of role playing is demonstrated by an individual giving a speech before a group and then having the group criticize the speech and its delivery. The member has put himself into the role of a public speaker and acts out the part as he imagines it should be done. The value of the exercise is in the group reaction to the way the situation was presented and developed. The war games of the Army and Navy are the most complicated examples of role playing. Mock courts or mock trials are familiar to all of us and have been used effectively in training law enforcement officers in presenting testimony.

Two people generally act together in the skit or role playing situation. One may assume the part of an employee who is involved in a work problem, and the other is the supervisor who has the responsibility for handling the situation. Each plays his role without rehearsal and plays it the way he imagines it should be played. Each says and does the things he imagines he would say and do in a real life situation of that nature.

It is the responsibility of the leader to see that the skit is presented as clearly as possible. He must give plenty of opportunity for all questions. Some criteria to keep in mind concerning any skit are:

a. The group should be vitally concerned with the skit. It should be about the same problem they have been discussing and attempting to solve.

b. The skit should be set up after taking into account the maturity of the group.

c. Not only must the skit be clear, but it must not be too complex. The best skit is one which is short and to the point.

d. The group should be able to role-play the problem without too much difficulty.

The members who are not acting should be asked to make observations. There are many reasons for this.

a. If the group members have been hard at work observing during the skit, they tend to have more interest in their observations and therefore tend to defend them more strongly during the evaluation.

b. Much of the value of role playing depends upon the discussion after the skit. Naturally this, in turn, depends upon the observations that the audience makes.

c. The leader can use the observations to show the members the differences in people's observations of an identical situation.

d. The group realizes, through practice, the difficulty of observing human behaviour and recording the same in a simple situation.

e. The actor tends to do a better job if he sees that the audience is also working hard. Furthermore, it makes the actors feel that they are doing something important and not being "kids" who are making believe.

The evaluation stage is one of the most important in the entire role-playing method. It is at this stage that the group tries to analyze and understand what occurred during the skit. The leader can bring the skit back into focus by asking questions of the group members as to how certain phases of the over-all situation were handled. He can offer alternatives and compare them with methods demonstrated in the skit. He can ask further as to why the role players acted as they did. The leader should be careful to guide the group toward a discussion and analysis of the human reactions of the role playing. Also, he should insist that, while discussing the roles, the members use the fictitious names used in the skit. This tends to pin attention on the role-playing and not on the individual actor. Talking about a "role" is less personal.
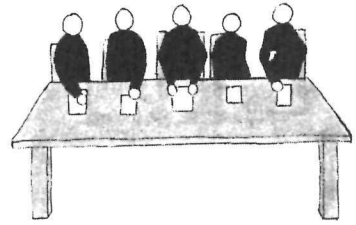
9. THE PANEL DISCUSSION

This type of discussion is adaptable to groups of varying sizes. The panel generally consists of a panel chairman and from three to six panel members. The members of the panel are chosen due to their familiarity with some phase of the subject matter to be presented and generally assume the role of "guest experts" for the duration of the meeting.

The panel chairman should start the meeting by offering the trainee group an explanation of the subject to be covered. In general the audience is familiar with the over-all subject but may lack knowledge of the details to be covered in this particular discussion period. The chairman terminates his introduction of the subject by posing a leading question to one of the panel members. One question follows another until each panel member has had at least two opportunities to present his thinking, or until the chairman terminates the questioning for other reasons. At this point the panel is thrown open to questions from the audience.

Meanwhile, the audience has been following the presentation by the panel members and jotting down points which are not thoroughly understood, or which they want developed further. When the discussion is opened to the audience, the questions are asked of the chairman who, in turn, poses them to a specific panel member. The reason for this directed questioning is to assure that the panel member is qualified to answer the particular question. At the termination of the period of questions and answers, the chairman summarizes the points made during the discussion.

In effect, the panel discussion is a small conference before an audience. The questions and answers of the chairman and panel members must be thought provoking in character and must stimulate the audience into participation. The questions posed by the trainee group must at all times be directed to the chairman, lest the meeting get out of control and become a discussion between one panel member and one trainee.

The panel chairman must be prepared to rephrase a question, if necessary, when it becomes evident to him that the trainee is not getting the response he desires. The chairman must also exercise care to fit the contributions together through summary at the close of the meeting.

The chief value of the panel discussion is that it brings together a group of individuals as panel members who have special knowledges of the subject matter. The quality of instruction, at least from

the viewpoint of subject matter content, should generally be greater than that offered by one discussion leader. Too, the trainee group audience has an opportunity to actively participate during the latter part of the meeting.

Occasionally, panel members holding diverse opinions may be used where it is the wish of the leader to use subject matter in which advantages and disadvantages, or pros and cons, are to be highlighted. Through this method, the areas of agreement and disagreement are defined in part by the speakers, and are further developed and explored by the subsequent audience discussion.

10. GROUP PROBLEM SOLVING
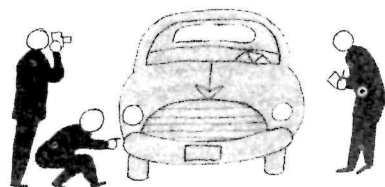
This technique, known by various other names, is the method in which a group of trainees is given an actual problem to solve. One member is designated as the group leader and organizes the group into a suitable working force for the particular problem. Each member should have sufficient latitude in his assignment to display individual discretion and sound judgment.

Group problem solving is not a paper exercise. An actual, physical problem must be provided. For example, a typical problem for this group approach would be the stopping of a vehicle on a park highway and the apprehension of several fugitive occupants. A group of three or four trainees could be given the role of park rangers whose mission would be to make the apprehension in a safe but effective manner. They would be given a patrol car and such other equipment as they would need. Other trainees would be given a second car and enact the role of the fugitives. The problem would be enacted on a park road before an audience comprised of trainees and instructors. After the apprehension was made, the audience group would hold a critique of the incident and comment on the methods used by the participants.

This technique is best used where basic knowledge and skills have been previously taught by some other method. The fields of law enforcement, fire control, accident investigation, investigation of complaints, or rescue operations are particularly well suited to group problem solving. The problem can be a sort of a graduation exercise which will test the trainee group in the particular application of the principles learned.

During the execution of the problem the instructor must be alert for wrong application of techniques and procedures, and must be certain to correct these in the critique which follows. The physical staging of the problem requires considerable advance planning and preparation. Occasionally, where the problem may require two competing groups of trainees (as in the example cited above) the instructor may have one group react in an unconventional manner in some phase of the problem just to see how well the other group can cope with the unexpected situation.

Group problem solving of this variety can be a lot of fun for the trainee group and a very graphic and effective method of imparting information. It is one of the best examples of "learning by doing" as applied to the group process of training.

11. CASE STUDY METHOD

The case study method is a training technique designed:

a. To permit group members to increase their knowledge and awareness of particular subjects and problems through interchange of views.

b. To help participants learn, in a meaningful way, general principles, implications and issues of particular problem areas.

c. To improve their skill in <u>listening</u>.

d. To point up that there frequently is no single solution to a problem, that there may be several or many solutions, or even no solution. In general, the aim is to encourage respect for the views or solutions of others, to reduce rigid attitudes regarding "correct" solutions, and to encourage the seeking out of many solutions before one decides on the "best" solution.

e. To point up the need for careful, systematic discussion of a problem, breaking down the problem-solving process into a <u>sequential</u> process having these stages:

   (1) Problem definition, including securing facts and ideas about the problem.

   (2) Proposing solutions.

   (3) Evaluating the merits of each of the proposed solutions.

   (4) Choosing or deciding (decision-making) among the alternatives.

   (5) Implementing the solution: i.e., developing plans for action. (This step probably would not be discussed in the typical case study discussion).

ROLE OF THE LEADER IN CASE STUDY DISCUSSIONS

The case study leader's role is to encourage group members to discuss a problem. He does this by starting the discussion rolling with such questions as: "What's going on here?" or "What is the problem?" He then waits for someone to pick up the ball. There may be a long pause at this point, but the skilled discussion leader will wait the pause out. Once a group members responds and states the problem (not a solution), other group members should be encouraged to respond to the initial statement.

The leader will function best if he encourages free discussion and refrains from serving as "the expert" or lecturer. The group at large will have enough expertise to discuss, analyze, and "resolve" the problem. However, the leader should, wherever necessary, raise questions which encourage relevant thinking.

After the problem has been defined and discussed for 20 - 30 minutes, solutions (for another 30 - 45 minutes) should be obtained from the group. These should be listed on the blackboard by the leader. The solutions may then be evaluated as to their desirability, practicality, relevance to the intent of laws, regulations, established policies and programs, management problems or concepts, etc. (By management problems or concepts we mean such areas as communications, ethics, morale, motivation, career development, etc.)

Sometimes group members say: "We do not have enough facts to make a decision." The skilled discussion leader will assure them that adequate facts are at hand; besides, in making decisions about management problems, managers frequently have to act on the basis of the facts they do have. In fact, it is unrealistic to ever hope to have all the facts about a problem involving people.

It is not essential that the group agree on a "best" answer. The case study session is intended, rather, to stimulate thinking, insight and awareness and to provide certain types of knowledge about a problem area. It is also intended to show that more than one solution may well be possible, and that group methods of discussion can help to produce more solutions. It should be obvious that a better decision is possible if we can choose from more than one alternative.

The session may be completed by (a) a short summary by the leader highlighting pertinent policies, requirements, and principles, and (b) the dissemination of readings and handouts bearing on the topic. The leader should refrain from providing "school solutions" about the case. Most groups will have enough "wisdom" to come up with practical solutions to the problem involved.

The primary purpose of the case study method, whether it is used to teach law, supply administration of certain phases of personnel management, is to stimulate thinking and discussion. A case, then, is a tool for training. It thus makes <u>little difference</u> whether the case is developed from a situation within the <u>National Park</u> Service or selected from another Department. For example, in a law course given in a California college the cases may be drawn from Maine, Massachusetts, or Missouri as well as California, the important thing being how valuable the cases are from a learning standpoint.

We make this point since trainees new to the case method often ask "Why do we use cases which are not based on National Park Service situations?" The answer is that we <u>could</u> deal exclusively with National Park Service type cases. However, since cases drawn from within the Service do not cover all the topics which we wish to treat, we are required to seek out cases from outside the Service. Actually National Park Service cases require changing of names, locations, some of the details, etc., to avoid possible embarassment to any of the people involved. The end result, in either case, is a case which is not truly identified with its actual point of origin.

It is the job of the discussion leader, then, to point out at the outset and thereafter that "the case is the thing" and not to worry too much about the source of the case. What is important is that we have a "good" case. A good case, as an experienced case study leader sees it, is one which has a high degree of <u>realism</u> in it. That is its main characteristic. Realism, obviously, is essential to ensure that the trainees will enter wholeheartedly into the discussion of the case.

In sum, the trainee who complains about the organizational setting of the case is probably resisting the new learning. If the case study leader uses the case properly as a training device, he can help the trainee make a successful transition from the case to the learnings involved.

INSTRUCTIONS TO PARTICIPANTS IN CASE STUDY DISCUSSIONS*

You have been given a copy of the case which will be used in our first case study session. All of our cases are actual situations which have taken place in various Governmental organizations.

Analysis and discussion of cases by you and your fellow group members will help to increased insight into the managerial and human aspects involved and to consider various courses of action.

The value of the sessions will depend largely on the thoroughness of your preparation. Therefore, the following suggestions are offered to assist you in preparing yourself for participation as a discussion group member:

a. Study the case carefully prior to the session.

b. As you study each case, you should:

1. Develop a clear picture of the situation being studied. Ask yourself: "What is going on here?" This calls for realistic imagination because it is never possible to secure all the facts about a management situation.

2. Pay particular attention to the attitudes, values, aspirations, anxieties, and feelings of the people involved. Note the "friction points" between individuals and the causes therefor. Distinguish carefully between facts which are known and clear cut, vs. opinions, inferences and assumptions by the characters in the case as well as your own.

3. Clarify the problem. Ask yourself, "Just what is wanted, and what am I up against?" "Why are the people in the case acting as they are?" "What caused the problem?"

4. Determine the alternatives and the key factors, pro and con, in deciding the solution. There may be several possible solutions to a problem, and the wise choice rests on identifying the crucial differences among the solutions. Added questions to ask are: "Am I merely treating symptoms or, more properly, the basic cause(s)?" "What is the likelihood of the proposal(s) succeeding?" "How will the people involved react to the course of action I favor?"

c. The amount of learning from the discussion will depend on the quality of participation. Questions you should ask yourself are:

Do I listen accurately to group members?

Am I tolerant of their opinions?

Am I trying to understand their point of view?

Am I and others expressing our likes and dislikes (prejudices) openly? Or are we rationalizing about such feelings?

Am I encouraging others to "open up" so all will have a chance to be heard and to give the group the benefit of their experience?

d. Be prepared to explain your position in the group discussion. One of the purposes of case study work is to allow you to test your reasoning on management problems and solutions with other seasoned supervisors.

e. As you read the case and participate in the discussion, note the management principles or concepts which the case points up. These ideas will be drawn from the group and placed on the blackboard by the case discussion leader.

*This material should be reproduced as a handout to accompany the first case which is given to the trainees.

ADMINISTRATIVE ASPECTS

Attention to the administrative aspects of the program will aid materially the success of the program. Here are several pointers:

1. Select the case or cases you wish to have the group discuss in connection with a particular topic.

2. Distribute copies of the case(s) to all participants in advance of the session so they can be read <u>before</u> class. Also provide them with "Instructions to Participants in Case Study Discussions" (see p. 92).

3. Keep the group small - 8 to 14 members will encourage greater participation.

4. Keep the atmosphere informal. Some groups find that serving coffee is helpful for this purpose.

5. Try to set up a round table to encourage face-to-face communication and to emphasize that the leader is one of the group, not a lecturer.

6. Allow enough time to discuss the case and to provide solutions - about one hour should be adequate. Less complex cases may require less time. Obviously, a larger group will increase the time required to discuss a case adequately.

7. Have a blackboard or large white pad available.

8. It is highly desirable that the Personnel Officer and/or the Administrative Officer be in attendance, either as discussion leader or resource person, to provide data regarding the legal and regulatory requirements pertaining to a particular subject.

9. Provide handout materials which bear on the case.

<u>EVALUATION</u>

The effective case discussion leader will be keenly interested
in the results of the session. He can assess results through such
devices as:

      1. Completion of questionnaires <u>before</u> and <u>after</u> each
session to compare knowledge, attitudes about the
problem, etc.

      2. Completion of reaction sheets to the session by
group members (in regard to satisfaction with role of
group members, degree of participation, the leader,
atmosphere, etc.).

      3. Securing suggestions from group members for improvement
of future case study sessions.

      4. Securing quantitative data, with the aid of an observer,
regarding participation by each group member and the leader.

12. IN-BASKET EXERCISE

The In-Basket Technique is a game or simulated exercise particularly designed to provide training for the manager. It simulates a period in the day of a manager during which he is confronted with an in-basket. The in-basket contains a variety of letters, memos, reports, complaints, requests, press clippings, all of which require him to take some action. These actions may involve phone calls, contacts with individuals, calling of meetings, "yes" or "no" decisions, sending notes to individuals, etc. There obviously is no "right" answer to any problem in the in-basket.

In general, the in-basket resembles a realistic set of administrative, operating, communication and human relations types of problems of varying degrees difficulty, some of which have significant organizational inter-relationships. For added realism, the exercise is done under the pressures of a time limitation, e.g., one hour.

The learnings from the work on the in-basket may relate to planning, organizing, delegating, staff-line relationships, communication, friction, cooperation, introducing change, race relations, employee motivation, public relations, etc.

Although the in-basket involves individual work, results or decisions reached should be compared and discussed in small groups for additional learnings. This may be followed by a final discussion with the entire group.

A sample in-basket, added information about it, and instructions for the use of the technique are contained in the A. A. Daly, "In-Basket Business Game," _Journal of the American Society of Training Directors,_ August 1960.

EFFECTIVE TOOLS

TO AID THE INSTRUCTOR

I. ANALYZING A JOB FOR TRAINING PURPOSES

Many of us are so familiar with a number of technical park operations that we never take time to think about the component jobs which make up the operation. Similarly, some instructors never take a job apart to see how many different tasks go into the total job. Generally they teach the operation as a whole which, while it may be meaningful to them, often leads to confusion on the part of less experienced trainees.

The instructor, in making a job analysis for training purposes, sometimes looks at the job in the light of his own experience in doing it. It is essential that after he makes the analysis he review it in the light of the way a learner would look at it. The job may appear simple to the instructor, but it will not look so simple to the learner.

In most jobs the operations and steps in the breakdown vary greatly in their degree of difficulty to teach to the average trainee. In some jobs the order of the operations and steps is not fixed. This permits a choice in the order of instructing in these operations and steps. It usually is better to train in some of the simpler steps first if the operation itself permits. The instructor should determine the training sequence of the steps. He should also estimate the time needed for the training in each step. Throughout the training of employees for that step, this estimate should be revised by noting the time needed by each trainee for each of the difficult steps. Some instructors have found it helpful to "hot-spot" the operation breakdowns by special notations on the steps and key points that cause the greatest difficulties. Two questions may be asked: "Where do things usually go wrong on the job?" and "What are the stumbling blocks to the beginner?" More time is devoted to these "hot-spots" during the initial training of new employees.

The instructor should study the operation breakdown and determine which steps to present in each unit of instruction. Care should be exercised to insure that each unit contains no more than can be learned by the trainees at one time. Units should be planned in the light of learner' difficulties. Some operations are so simple that the entire operation can be presented in one unit while other operations are so complicated that one or two steps are sufficient for one unit. Each unit should be successfully completed before the succeeding unit is presented.

A practical way of starting an analysis is to list the typical jobs in the operation. From such a list should then be eliminated those jobs which for various reasons cannot or need not be included in the training program. This results in a final list of typical jobs which will make up the content of the training sessions.

By way of very simple illustration we may take the project of constructing a wire fence. The over-all operation may be broken down into the following jobs:

1. Location of the fence line
2. Digging the post holes
3. Setting the fence posts
4. Bracing the corner posts
5. Stretching the wire
6. Installing wire spacers
7. Installing gates

In may be that the employees already know how to dig satisfactory post holes and may know how to set posts firmly. These two jobs can therefore be eliminated from further training consideration. Each one of the other jobs, however, should then be broken down to indicate what the employee does and what the employee needs to know. An example of such a job breakdown follows:

JOB ANALYSIS

JOB: Stretching the wire

Operations (do)		Keypoints (know)
1. Fasten wire to end post	1a.	Which side of posts to stretch wire on
	1b.	How to anchor end of wire
	1c.	How to set staple to avoid kinking and pulling wire
	1d.	Number of staples to use
2. Unroll wire	2a.	How to handle a roll of wire
	2b.	Proper procedure to avoid kinking when unrolling
3. Apply wire stretchers	3a.	How wire stretchers operate
	3b.	How to anchor stretchers
4. Stretch wire	4a.	Stretch wire until kinks barely begin to straighten
5. Staple to posts	5a.	Same as 1c-d above

Once the breakdown of the job is accomplished in some manner similar to the above, the instructor will find it comparatively easy to prepare a lesson plan to assist him in the subsequent training activity.
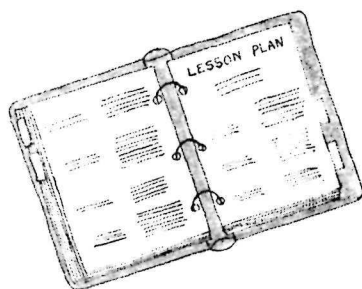
2. LESSON AND DISCUSSION PLANS

Too many instructors feel that they maintain sufficient mastery of a subject to enable them to walk into a teaching situation on a moment's notice and with no advance preparation. Usually, during the course of the lesson this fact becomes painfully evident to the trainees.

Some instructors feel that it is unbecoming for them to have to refer to notes. They feel that it indicates that they do not know their subject matter sufficiently well to talk glibly about it. On the contrary, it is actually flattering to the trainee group to see an instructor consult his notes. It impresses the trainee group with the fact that he thinks enough of the occasion to give the subject some advance study and preparation.

There are many methods of making up lesson and discussion plans, and all of them have some merit. Some are quite elaborate; others quite simple. They need to spell out to the instructor only those steps in the lesson or that subject matter which he needs to guide him to a successful conclusion. A lesson plan keeps the instructor "on top" of his subject at all times. It provides an orderly presentation with a sequence of subject matter which is meaningful to the trainee. It helps to provide a short and snappy training session. It cultivates an impression of the instructor as an orderly thinker. It prevents the inadvertent omission of material. It guarantees emphasis on proper points of the lesson and at the right time. In short, it is such a good guarantee of an effective period of instruction that it is a wonder that everyone doesn't use one!

No one method for developing a lesson plan is advocated. For the benefit of those Service supervisors who may never have had experience with lesson plans, a modified Navy method of developing such a plan is presented as a comprehensive method. The preparation of a discussion plan is discussed on page 102 of the Supervisors Management Guide, a copy of which is available in all field areas. Many other methods are just as good. The modified Navy approach is outlined as follows:

a.   Introduction

The introduction to a lesson should do each of the following:

(1) Develop trainee interest
(2) Direct thinking along desired lines
(3) State objectives of the lesson
(4) Tell trainees the value of the subject matter to them
(5) Tell what methods will be used
(6) Tell trainees what will be expected of them by the end of the session.

b.   Presentation

This is the "plan of action." In this section the instructor puts together his outline of subject matter and his proposed method of presentation. In other words: What are you going to teach and how are you going to teach it?

(1) Outline of subject matter
(2) Notes as to method to be used
(3) Suggestions for instructor activity ("Show chart," "Develop on blackboard," etc.)
(4) Suggestions for trainee activity ("Trainee work problem," "fill in missing line," "trainees make sketch," etc.)
(5) Specific questions to be asked.

c.   Application

Indicate in this section what the trainee will do to apply (use immediately) the skills taught. He may work problems, work on a project, or in some other way demonstrate his mastery of the subject matter.

d.   Summary

Recapitulate the main points of the material presented and tie up all the loose ends for the trainee

(1) Organize the material in the mind of the trainee
(2) Offer a chance to strengthen weak spots in instruction
(3) Offer opportunity for questions from trainee group

e.   Test

Offer some type of test (oral or otherwise) to assure yourself that you have accomplished the objectives of the lesson. Such a test may disclose that the instructor has missed the boat entirely, or has maintained his objectives to an acceptable degree.

The wise instructor will keep his lesson plans on file for future use. It is possible that a Service supervisor who frequently serves as instructor could have a notebook full of lesson plans. When called upon to lead a discussion or offer a lecture to a trainee group, he would need only consult his notebook for the appropriate lesson plan and, thus, save considerable time in preparation. In some training situations where the same subjects are taught every six months or every year, such a notebook of lesson plans is a practical approach to efficient training. Possibly a set of standard lesson plans could be developed for a supervisory staff and all supervisors have access to one notebook of approved lesson plans. A great deal of standardization of instruction could be achieved in this manner, providing that all supervisors were given an opportunity to familiarize themselves with such plans by actually conducting training sessions with the use of such plans.

3. MEANING AND PURPOSE OF TRAINING AIDS

The purpose of any training aid is always the same, namely, as a tool which makes it easier both for the trainer to present what is to be learned and for the trainee to master it with a maximum of effectiveness and a minumum of wasted time and effort. These ends, training aids accomplish in the following ways:

1. They provide accurate, effective, and vivid images that insure correct perception of what is presented to the trainees.

2. They help provide a common basis for learning on the part of the trainees, which their own individual experience may not provide.

3. They allow for graphic presentation of material in terms of clarity and emphasis.

4. They help to provide for clear understanding, lasting retention, and easy recall of the subject matter.

5. They help to give trainees a common denominator of understood material, which contributes to intelligent discussion after their use.

6. They help simplify and explain complex ideas.

7. They show the sequence of a complicated series of operations, procedures, or ideas.

8. They clarify relationships of the total subject matter under discussion to the parts thereof.

9. They can substitute for actual equipment when such is not available or when it is impracticable to bring the equipment to the training room.

10. They tend to stimulate interest, to arouse and sustain attention, and to contribute to those positive attitudes that are an essential prerequisite for effective learning.

11. They give training a "reality emphasis" by focusing the trainees' attention on materials that they can see, handle, hear, and see in operation. Thus learning aids are calculated to give a sense of realism and practicality to the training process. They are based on the premise that real and direct experience, or the closest approximation thereto, is the best foundation on which to build comprehension and understanding.

VARIETIES OF LEARNING AIDS

The variety of learning aids that are available to the trainer is almost inexhaustible. Some of the more important are the following:

1. Blackboards, chalkboards, leaf-overs, and overlays
2. Motion-picture films
3. Filmstrips and slides
4. Projectors
5. Written materials: textbooks, manuals, pamphlets, mimeographed notes, training-session outlines, and so on
6. Training graphics: sketches, graphs, charts, pictures, cartoons, posters, diagrams, maps, etc.
7. Display boards and flannel boards
8. Cutaways
9. Models and mock-ups
10. Trainers and demonstrators
11. Tape recorders
12. Television

CRITERIA FOR SELECTING A TRAINING AID

Since learning aids are tools to be utilized by the trainer for the attainment of a specific purpose rather than substitutes for the trainer excellence or "gimmicks" for "jazzing up" a training session, it is important that the instructor be guided by a certain clearly understood criteria in their selection. The trainer who ignores these criteria runs the risk of wasting the company's money, his own precious time, and the trainees' co-operative interest. What, then, are these criteria?

1. Is the training aid calculated to attain the specific objective of the training session by motivating trainee learning, arousing interest, holding attention, clarifying core ideas, and emphasizing important points while saving time and effort?

2. Is the use of this particular aid the best means for accomplishing this aim, or can it be better achieved by another procedure?

3. Will it really help the trainee to learn, or will it merely "expose" him to the training aid?

4. Can it be readily integrated into the over-all training session by giving an overview of the topic, practical illustrations of what is discussed, detailed analysis of procedural steps, case study, or review of the principal ideas? Or does it merely serve to provide entertainment, temporary relief from the hard work of the training meeting, or some other extraneous purpose?

5. Does it meet a real need on the part of both the trainer and the trainee?

6. Will it stimulate the trainees to think, and does it provide opportunities for the trainer to ask provocative questions?

7. Does it provide the groundwork for a follow-up discussion on the part of the trainees?

8. Does it help to deepen the trainees' insight into the matter under consideration? To sharpen their critical sense? To increase their ability to analyze and solve problems? To make their own applications? To obtain a more detailed, yet better-integrated, knowledge of the subject matter?

9. Does it stir the trainees to increased desire and ability to express themselves? Or does it make them more passive?

10. Does it add to trainee satisfaction with a particular training session and with the program as a whole?

11. Does it broaden their interests and give them a feeling of accomplishment?

12. Is it attractive? Color, movement, humor, and multiple sense appeal help bring out main ideas and important details.

13. Is it simple and easy to understand? Complicated posters, charts, graphs, etc., may defeat their purpose by making the trainee more confused than he was before.

14. Is the aid correct in all details? Training aids should be used to help the learning process; time should not be wasted apologizing for defects or correcting mistakes in them.

15. Is it up-to-date? Films especially can lose much of their impact if such details as styles of clothes, equipment, etc., hopelessly "date" them as being behind the times.

16. Is the aid geared to the intelligence, experience, vocabulary level, and social mores of the group?

17. Can the aid be seen clearly by everyone in the training group when it is in use?

18. Can the training aid be set up quickly and easily, so that it is ready for use and can be used when actually needed without wasting time and running the risk of losing the trainees' attention?

19. Can it be used with various groups and in different training situations, so that the company may get a fair return on the money expended in providing the aid?

20. Is the aid economical to purchase, borrow, or make and to use?

21. Is it easy to keep in good working order? It is sturdy enough to stand up under normal, or perhaps abnormal, handling?

22. Can it be stored and taken out of storage easily and quickly?

23. Does the aid have a certain natural attraction, so that it arouses interest?

24. Does it allow the trainer opportunities to test the trainees' understanding of what the aid is trying to get across to them? For instance, does a film give a preliminary overview of the main points to be covered? A summary of the main ideas? Natural transitional points when the trainer may stop the film and have the group discuss either what has preceded or how it might handle a problem that has been presented?

25. Can the aid be tied into what has been previously learned, is now being learned, and will be learned at future training sessions?

26. Does the aid stick to one of at most a few principal ideas, or does it wander back and forth from point to point?

27. Does the aid emphasize what should be emphasized, while keeping subordinate what is of secondary importance?

28. Does it measure up to the sixty-four-dollar question, "Does it make it easier for the trainer to instruct and for the trainee to learn?"
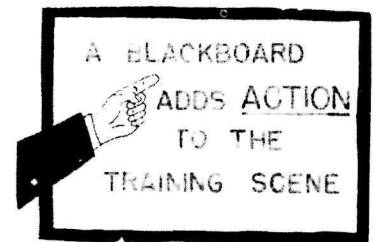
4. BLACKBOARDS AND CHALKBOARDS

Perhaps the most frequently used, and often the most abused, training aid is the common blackboard or chalkboard. From the cave writings of prehistoric man to the latest neon billboard, men have used some kind of writing boards or sign boards to get across more effectively what they were trying to communicate. If the true meaning of a word is the picture that it develops in the mind of the listener, then there will always be an important place for the blackboard in a training program. Familiarity, however, often breeds contempt. Many trainers are so familiar with the ever-present blackboard that they fail to realize that they often violate at least some of the following suggestions.

1. <u>Make Sure That Your Handwriting Is Legible.</u> Bear down on the chalk; it is not meant to be an experiment in subliminal stimulation. If you cannot write well, then print. Letters to be seen at a distance of thirty feet should be at least $2\frac{1}{2}$ inches high.

2. <u>Plan How You Will Use Your Space before You Begin to Write.</u> It is annoying and confusing for the trainee to have to jump from one end of the blackboard to the other because of your poor planning. Good planning of blackboard use will also minimize the need for erasing. When something is erased, there is always the risk that it may also be erased from the trainees' minds.

3. <u>After You Finish Writing, Get Out of the Way.</u> Every trainer makes a better door than window. Pointers and yard-long rulers were invented largely because the trainees cannot see through you.

4. <u>Talk to the Class, Not to the Blackboard.</u> Trainees do not want to get things "on the rebound," as though it were a basketball game. Learn to write and speak at the same time, being sure at least to glance at the group frequently while doing so. Never write for any prolonged period, unless you want to lose the attention of the trainees.

5. <u>If You Have a Great Deal to Put on the Blackboard, Try to Do So before the Session Begins.</u> If you cannot do this, then use another method of presentation, perhaps a simple duplicating process.

6. Ignore the Lower Half of the Blackboard. Trainees at the
    rear of the room and in the corners probably cannot see it
    very well anyway.

7. When You Have Satisfactorily Covered One Idea, Procedure,
    Or Point, Clear the Blackboard Completely. Do not risk
    having the trainees confuse new material with unerased
    scraps of old.

8. Watch Out for Glare. Sunlight and some forms of electric
    light can at times create a very disturbing glare.

9. Make Certain the Diagrams, Drawings, and So On Are Accurate
    and Neat. If you have little talent in this direction, use
    templates and stencils. If you have an opaque projector
    and wish to display a diagram, map, or other complicated
    visual aid on the board, simply project the reflected image
    of the diagram or picture on the board and then trace its
    image on the blackboard.

10. If You Are Constantly Using Statistical Concepts, It May
    Help to Line One Section of the Board Into A Grid. This has
    one disadvantage, the section of the board is almost made
    useless for any other purpose.

11. Use Color and Shading. Color and shading not only allow you
    to emphasize major items by contrast but also have an attention-
    getting aspect to them.

12. Never Let the Chalk "Screech." This can be rather annoying
    to the trainees. If it does screech once, then hold the
    chalk at an acute angle with board and in line with the
    the direction of writing, and you will not repeat this
    mistake.

13. Make Certain That Everything That Is Written on the Board
    Is Grammatically Correct. Errors in spelling and mistakes
    in English detract from the effectiveness of what you are
    writing.

14. Organize What Is Written for Its Total Effect. Do not scrawl
    all over the board without recognizable plan or pattern.

Although a blackboard can be made to serve many uses, the most
important are generally the following:

1. Outline What Is To Be Covered in a Training Session. Even a
    brief outline of the major topics to be covered or the main
    problems to be considered, especially if it is not possible
    to duplicate the session outline, can serve both to give the
    trainees an overview of the meeting and to know exactly how
    each part fits into the total plan.

2. **List Trainee Ideas, Suggestions, Questions, Points of View, Reasons for Taking a Given Position, or "Pros and Cons" Concerning a Particular Course of Action.** Seeing ideas spelled out on the board stimulates other trainees to participate, while keeping important previously made statements in the focus of their attention.

3. **Enumerate Steps in a Procedure, Process, or Operation.** This has an advantage over having the steps mimeographed, since the trainees see each step flow into the following step of the operation.

4. **Teach Technical Terms and Their Meaning.** When trainees see a technical term spelled out, they are much more likely not only to remember it but also to spell it correctly.

5. **Summarize Key Points in the Training Session.** This practice tends to give a feeling of completeness to what has been said over an hour or two-hour period.

6. **Sketch the Interior Parts of Equipment without Going to the Trouble of Taking It Apart.** This is particularly true if trainees are having difficulty in understanding a specific section or operation of the equipment.

7. **Build Up Gradually, Instead of Presenting the Entire Whole at Once, a Graph, Table, or Diagram, So that Trainees May Understand Just How the Completed Graphic Came About.**

8. **Give the Correct Solution to Problems Which Have Been Assigned Trainees.**

9. **Allow Trainees to Clarify Their Statement or Arguments.** At times such statements may not be clear to others who merely hear them. Writing them on the board facilitates understanding.

10. **List Review Questions, Assignments, References, Etc.** The trainer should never underestimate the importance or flexibility of the lowly blackboard in his desire to use some of the more sophisticated devices. The chalkboard is more naturally geared to instruction than many other devices. A blackboard can also easily be changed to a magna-board by merely affixing wire screening or a sheet of soft iron to it, and then painting it the appropriate color. Magnetized objects can then be moved about with little or no difficulty. Blackboards are also useful for drawings in series that illustrate, for instance, the evolution of a technical process. Covering all but the one drawing that is being considered and, as the discussion proceeds, revealing the rest give an interesting "strip-tease" effect. At any rate, the blackboard affords the trainer more possibilities, with less expense, than any other aid.

5. THE ART OF QUESTIONING

The use of questions by the discussion leader can be a most effective training technique for directing and stimulating discussions, and for establishing the vital two-way contact between the instructor and the group of trainees. Properly used, questions add variety and interest by encouraging trainees to participate and keeping their minds alert to the particular subject under discussion.

There is more than a little to the art of asking questions, particularly leading questions, and considerable practice is required of every person who hopes to stimulate constructive group thinking. No less important is the use of questions which will keep the discussion on the right track.

Questions which may be answered "Yes" or "No" have very little use in discussion excepting when they are used in a rhetorical sense, for emphasis, rather than expecting an answer. The leader will have little trouble bringing out discussion if he will aim his questions by using "What," "When," "Why," "Where," "Who," and "How."

Questions should never be asked of the trainees in an alphabetical order. This puts everyone at ease except one man. Nor should the instructor or discussion leader go around the room in regular order with his questions. He should direct them at all parts of the room and to all segments of the trainee group.

Usually, when asking a question, the instructor should use four distinct steps; (1) State the question to the entire group of trainees, thus getting all to thinking what the answer might be. (2) Pause for a moment to allow the trainees to formulate the right answer. (3) Call on a trainee to answer the question. (4) Evaluate the answer and comment on it favorably or otherwise. By asking a question before indicating who is to answer it, the question is a challenge to the entire group, and not merely to the person called upon.

One deviation from this method is to ask the group to write their answers to the question individually. Then, ask one member to read the answer. This has the advantage of making each member of the group do some very positive thinking about the question.

Questions need to be clearly and precisely stated and frequently require advance preparation. Instead of asking the question "What hinders effective cooperation?" the leader will do much better if he phrases it to say, "In your experience what are some of the causes of poor cooperation?" Or he could say, "What are some of the reasons that you have observed why men fail to pull together?"

In this manner the instructor has put the question on a more personal plane and the trainee is challenged to bring forth from his own background an observation which will pertain to the discussion. As much as possible the instructor should consider the individual trainee when he poses a question. In many cases he will want to take advantage of the work experience which a particular trainee has acquired.

Some discussion leaders are apt to be so full of their subject that they keep on asking questions without giving members of the group ample time to reply. A barrage of questions of this kind should not be thrown at the group, one right after another. Other instructors will attempt to rephrase an answer from a trainee to include all the information he has at his disposal. This is defeating to the trainee since it is quite obvious to all that the trainee meant no such thing.

The competent discussion leader directs his manner of questioning with these points in mind:

a. That all trainees can hear and understand the question

b. That only one trainee at a time answers the question

c. That all trainees have equal opportunity to participate, favoring neither the especially bright, those in the first row, or the eager-beaver. Draw out the timid or reluctant; "jolt" those whose attention may be wandering.

Frequently, the instructor is asked questions by the trainee group. He may desire to answer some of these questions himself, particularly if he feels that he may be the only one who may possess the required information. Or, he may elect to "throw back" the question to some group member whose background and experience will assure a knowing reply to the question. This technique of "throwing back" questions to the trainee group is effective in that it gains additional participation and at the same time establishes the instructor as an individual who credits the group with a considerable amount of knowledge pertinent to the subject under discussion. The instructor, however, must use care to avoid directing the question to an individual whose limited background or experience may not enable him to offer a constructive reply.

When it is the wish of the instructor to follow the role of "mediator" rather than "leader," questions can be used by him to stimulate, guide, and pace group discussions. The instructor achieves this by subtly rephrasing direct statements into the form of questions which prompt and direct the discussion without taking the initiative away from the group.
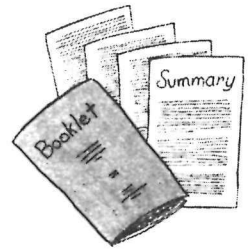
6. <u>HANDOUTS</u>

The handout is an effective method of supplementing an instruction period. The handout is merely some form of printed material which the trainee can take away with him for later reading or study. It may pertain to the session just completed, or it may introduce a more advanced phase of the subject matter.

A handout which is intended to summarize a specific training session may take several forms. It may consist of a general outline of the points covered in the discussion. It may take the form of a complete set of classroom notes on the subject, although this has a dubious value unless the trainee group for one reason or another is unable to take its own notes. Or, it may be a general written statement on the subject prepared in advance by the instructor.

A handout may relate to the instruction period just completed only in a general way. It may be a purchased booklet or pamphlet with only general application to the lesson at hand, but which may contain other related information of interest to the trainee.

Handouts are intended to supplement classroom notes--not supplant them. When selected or prepared with a particular training session in mind, they are a most effective means of providing the trainee with information which he can use at a later date to assist him to recall the training session, or with which he may supplement his own training programs.

7. MANUALS, HANDBOOKS, ETC.
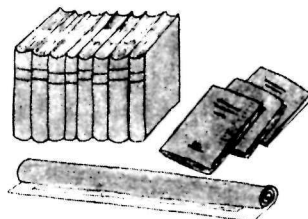
        The intent of this section is to remind the Service instructor
that he has a wealth of factual information readily available to him in
a number of publications. Too often the instructor overlooks obvious
training materials because he does not think of them as training materi-
als. In many cases he can refer to Service manuals, handbooks, and
other publications and find all the material he needs for the prepara-
tion of his lessons.

        Further, these materials can be used as reference sources
or as required advanced reading assignments by the trainees. Where new
permanent employees are being trained they can be given outside reading
assignments to broaden their knowledge and at the same time acquaint
them with the reference sources. Required reading can become a realis-
tic step in any career development program.

        Examples of printed materials referring to the National Park
Service and its work, and which are available in most field areas, are:

Books: ADAMS, Andsel. These We Inherit; The Parklands of America.
           San Francisco: Sierra Club. 1962.

           ALBRIGHT, Horace M., and TAYLOR, Frank J. Oh Ranger!
           New York: Dodd and Mead Co. 1947.

           BROCKMAN, Christian Frank. Recreational Use of Wildlands.
           New York: McGraw-Hill., 1959.

           CHITTENDEN, Hiram Martin. The Yellowstone National Park.
           Oklahoma: Norman University Press Co. 1964.

           ISE, John. Our National Park Policy, A Criticial History.
           Baltimore: The John Hopkins Press., 1961.

           JAMES, Harlean. The Romance of The National Parks. New York:
           The Macmillan Co., 1939.

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