THREE

USING AUDIOVISUAL AIDS

INTRODUCTION

Using appropriate audiovisual aids is a critical step in the training process. Audiovisual materials supplement training activities by highlighting important points or key steps or tasks. Because individuals have different styles of learning, using a variety of audiovisuals allows the participant to receive information in different ways and reinforces the learning process.

> Prior to each training session, test all audiovisual equipment to make sure that the equipment is working properly.

Chapter Objective

After completing this chapter, the participant will be able to use audiovisuals effectively to present information.

Enabling Objectives

To attain the chapter objective, the participant will:

- Present information using a writing board
- Present information using a flipchart
- Present information using transparencies
- Present information using slides
- Present information using a videotape

WRITING BOARD

A writing board can display information written with chalk (chalkboard or blackboard) or special pens (whiteboard). Although there usually are more effective methods of transmitting information, the writing board is still the most commonly used visual aid. It is especially useful for impromptu discussions, brainstorming sessions and note taking.

Advantages to using a Writing board:

- The boards are available in most training rooms and do not require electricity.
- The boards are easy to use and inexpensive.
- The boards are suitable for use by both trainers and participants.
- The boards are excellent for brainstorming, problem solving, making lists and other participatory activities.

Disadvantages to using a Writing board:

- The board cannot hold large amounts of material and may require continual erasing.
- Writing on the board is time consuming.
- It is difficult to write on the board and talk to the participants at the same time.
- The board can get messy.
- There is no permanent record of information presented.

Tips for Using a Writing Board:

- Keep the board clean.
- Use chalk or pens that contrast with the background of the board so that participants can see the information clearly.
- Make text and drawings large enough to be seen in the back of the room.
- Prepare complex drawings in advance (if very complex, an overhead transparency or 35 mm slide may be preferable).
- Underline headings and important or unfamiliar words for emphasis.
- Do not talk while facing the board.
- Do not block the participants' views of the board; stand aside when writing or drawing is completed.
- Allow sufficient time for participants to copy the information from the board.

FLIPCHART

A flipchart is a large tablet or pad of paper, usually on a tripod or stand. It can be used to display previously prepared notes or drawings as well as for brainstorming and impromptu discussions.

Advantages to using a Flipchart:

- Flipcharts are available in most training rooms, easy to move from room to room and do not require electricity.
- Flipcharts are small enough that several may be used simultaneously (e.g., for small group work).
- Flipcharts are easy to use, inexpensive and available in most locations.
- Flipcharts are suitable for use by both the trainers and participants.
- Flipcharts are excellent for brainstorming, problem solving, making lists and other participatory activities.
- Pages of information can be prepared in advance and revealed at appropriate points in the presentation.
- Pages can be removed from the pad and taped on the walls of the training room.

Disadvantages to using a flipchart are the same as those listed for the writing board except that there is a permanent record of information presented.

Tips for Using a Flipchart:

- Use wide-tipped pens or markers; markers with narrow tips produce printing that is difficult to read.
- Print in block letters that are large enough to be read easily from the back of the room.
- Use different colored pens to provide contrast; this makes the pages visually attractive and easier to read.
- Use headings, boxes, cartoons and borders to improve the appearance of the page.
- Use bullets (•) to delineate items on the page.
- Leave plenty of “white space” and avoid putting too much information on one page (crowded and poorly arranged information is distracting and difficult to read).

- When pages are prepared in advance, use every other page. If every page is used, colors will show through and make text difficult to read.

- Have masking tape available to put pages up around the room during brainstorming and problem-solving sessions.
- To hide a portion of the page, fold up the lower portion of the page and tape it. When ready to reveal the information, remove the tape and let the page drop.
- Face the participants, not the flipchart, while talking.

TRANSPARENCIES

The overhead projector is one of the most commonly used and most versatile pieces of audiovisual equipment. This visual aid projects images onto a screen using **transparency** film and silhouettes of opaque objects. A **transparency** is a plastic or acetate sheet (film) containing written or drawn material. An **overlay** is one transparency placed over another to show complex information. For example, in a presentation on QA models, the trainer could use one transparency showing the quality triangle and a second transparency, which is laid over the first, showing the QA cycle.

Advantages to using Transparencies:

- The projector is simple to use and can be used in almost any training room which has electricity and is less sensitive to fluctuations in voltage than film and slide projectors.
- The projector can be used with the classroom lights on, allowing participants to take notes.
- Use of transparencies saves time (writing on a board is slower than talking) and allows the trainer more time for discussion with participants.
- They are inexpensive and can be prepared quickly and easily.
- They can be used repeatedly.

Disadvantages to using Transparencies:

- The projector requires electricity to run.
- The trainer cannot project directly from the printed page.
- If transparencies are not produced before-hand than a supply of transparency film and means of production must be available.

- Sometimes the trainer or projector can block the participants' view of the screen or the room arrangement makes it difficult to see the projected image.

Making Transparencies:

There are three ways to produce transparencies:

- Use permanent or non-permanent (water soluble) ink pens to create text or drawings on plastic or acetate sheets.
- Use a copy machine with transparency film designed for copiers. Any original that produces a copy of acceptable quality on paper will produce an equivalent copy on transparency film. The transparencies are loaded in the appropriate copier paper tray and the transparency master is placed on the glass copy surface and copied onto the transparency film.
- Use a computer and laser or ink-jet printer. The information to appear on the transparency is produced on the computer using word processing or graphics software. The page is then printed on special transparency film. If an ink-jet printer is used, a specific type of transparency film labeled for use with ink-jet printers must be used to ensure that the ink adheres to the film.

Tips for Preparing Transparencies:

- Limit the information on each transparency to one main idea and about five to six lines of large type.
- Use large lettering (at least 5 mm tall, preferably larger, if printing or 18 point or larger if using a computer). Ordinary typed materials or a page from a book are not suitable for transparencies unless they are enlarged, which can be done on many photocopy machines.
- Print text. It is easier to read than script handwriting.
- Make graphics and drawings large enough to be seen easily in the back of the room.
- Mount transparencies in standard mounting frames or insert them in plastic pockets with frames. These provide a more professional finish, make the transparencies easier to handle and also protect them.
- Number the transparencies to keep them in the correct

order (numbers can be written on the transparency itself or on its outside frame).

- Store the transparencies in a box with a lid, in an envelope or a "pocket" made from manila folders or sheets of clear plastic to protect them from dust and scratches.
- Some trainers use the paper copy of the transparency to write notes and important points to highlight during presentations.

Tips for Using the Overhead Projector:

- Before the presentation begins, locate and check the operation of the on/off switch.
- Be sure that there is an extra projector bulb and that it is working. Some overhead projectors have two bulbs so that if one burns out, a second is available at the flick of a switch.
- Focus the projector and check the position of the image on the screen using a transparency **before** beginning the session.
- Turn the projector on after the transparency is placed on the glass and turn it off before removing the transparency.
- Face the participants, **not** the screen, while talking.
- Show one point at a time and control the pace of the discussion by covering selected information with a piece of paper. (The paper can be placed either on top of or beneath the transparency and moved down to reveal the next item.)
- Use a pointer or pencil directly on the transparency to focus attention on a specific area; this allows the trainer to maintain direct eye contact with the participants.
- Allow plenty of time for the participants to read what is on the screen and take notes.
- Turn the projector off when you are finished using the transparencies.

SLIDES

The 35 mm slide projector is a commonly used audiovisual aid which offers many of the same advantages of the overhead projector. One important difference is that full color images are easier to create using slides. Slides can be prepared by the trainer or purchased commercially.

Advantages to using slides:

- Slides are relatively inexpensive and easy to produce. They can be made locally by the trainer.
- Slides can be shown in a fairly light room which allows the participants to take notes.
- Slides can be used with audiotapes to produce a slide show with narration.

Disadvantages to using slides:

- The slide projectors are much more expensive than overhead projectors.
- The slide projectors are more fragile and do not tolerate voltage fluctuations as well as overhead projectors.
- Slides are not updated as easily or produced as inexpensively as transparencies.

Guidelines for Preparing Slides:

- Limit each slide to one main idea (detailed information should be put into a handout, not on a slide).
- Text slides should be short and concise. It is recommended that a slide contain no more than 35 words (approximately five lines of text).
- Legibility of the material on the slide is crucial. A good rule is that if a slide can be read by the naked eye “without a projector” it will be legible to participants in the back of the room.
- Number the slides in pencil or pen on the mounting frame.
- It is essential to mark or “spot” slides for projection:
  - Place the slide on a light box (an overhead projector is ideal) so that the image appears as it will on the screen.
  - Turn the slide upside down.
  - With the slide upside down, mark or number the slide in the upper right-hand corner.
  - When inserting in slide tray, place slide upside down (the mark or number should be visible in the

upper right-hand corner).

Tips for Using the Slide Projector:

- Arrange the room so that all participants can see the screen; make sure that there is nothing between the projector and the screen.
- Set up and test the slide projector before the participants arrive.
- Make sure there is an extra projector bulb in working condition; practice replacing the bulb.
- Locate the focus control and check the focus of the projector and position of the image on the screen.
- Run through all the slides in advance to ensure that they are in the correct sequence and inserted properly in the slide tray (with the mark or number in the upper right-hand corner).
- Determine if all or some of the lights can be left on during the slide presentation; this will make note taking easier for the participants.
- During the presentation, avoid rushing through a series of slides. This can be very frustrating for the participants. Take time to view and discuss each slide. Where appropriate, ask participants questions regarding what they are seeing on a slide.

VIDEOTAPES

Videotapes are creative audiovisual aids. Using a single camera and recorder system, audio and video signals are recorded on videotape which can be played back on a videocassette machine and television screen or monitor.

Advantages to using videotapes:

- Videotapes provide better color and detail than traditional film.
- Videotapes can be prepared by the trainer and/or participants to reflect local conditions.
- Commercially developed videotapes may be purchased or borrowed.
- TV monitors, especially commercial grade, tolerate fluctuations in voltage much better than either overhead projectors or slide projectors.

- Video players are less expensive and easier to maintain than slide projectors.

Disadvantages to using videotapes:

- Videotapes may not be totally consistent with the QA methods and tools presented by the trainer.
- Participants may be distracted by cultural differences such as accents, appearance or communication customs.

Tips for Using Videotapes:

- Preview the videotape to ensure that it is appropriate for the participants and consistent with the course objectives.
- Before the training session, check to be sure that the videotape is compatible with the videotape player. Run a few seconds of the tape to ensure that everything is functioning properly.
- Cue the videotape to the beginning of the program.
- Arrange the room so that all participants can see the video monitor.
- Prepare the participants to view the videotape:
  - State the session objective.
  - Provide an overview of the videotape.
  - Focus participants' attention by asking that they look for a number of specific points during the viewing of the videotape.
- Discuss the videotape after it has been shown. Review the main points that the participants were asked to watch for as they viewed the videotape.
- Prepare test items based on the videotape content if appropriate.

SUMMARY

Audiovisual aids such as writing boards, flipcharts, overheads, slides and videotapes add variety and interest to the learning experience. Presentations that use only oral lectures can be boring and decrease the likelihood that participants will retain the important learning points.

There are advantages and disadvantages to each form of audiovisual aid. The skilled trainer knows how to use the advantages of each aid to add to his or her presentation and how to avoid the disadvantages. Before a presentation, be sure to practice using all required audiovisual equipment in order that the training session will go as smoothly as possible.

FOUR

USING INTERACTIVE TRAINING TECHNIQUES

INTRODUCTION

An effective presentation can be one of the most exciting and rewarding aspects of a trainer's responsibilities. The trainer able to maintain participant interest with an exciting, dynamic delivery using a variety of training methods is more likely to be successful in helping participants reach training objectives. The time and effort invested in pre-course planning pay off as the trainer and participants interact, discuss, question and work together.

Every presentation (training session) should begin with an **introduction** to capture participant interest and prepare the participants for learning. After the introduction, the trainer may deliver content using an **illustrated lecture**, **demonstration** or **small group activity**. Throughout the presentation, **questioning** techniques can be used to encourage interaction and maintain participant interest. Finally, the trainer should conclude the presentation with a **summary** of the key points or steps.

This chapter focuses on developing presentation skills using a variety of training techniques.

Chapter Objective

After completing this chapter, the participant will be able to use interactive training techniques when introducing new knowledge and skills.

Enabling Objectives

To attain the chapter objective, the participant will:

- Introduce a training session
- Summarize a training session
- Use effective questioning techniques
- Plan and present an illustrated lecture
- Use a variety of small group activities (e.g., role play, case study, brainstorming, etc.)

INTRODUCING A TRAINING SESSION

The first few minutes of any training session are critical. Participants may be thinking about other matters, wondering what the session will be like, or have little interest in the topic. The **introduction** should:

- Capture the interest of the entire group and prepare participants for the information to follow
- Make participants aware of the trainer's expectations
- Help foster a positive training climate

Use a Variety of Techniques

The trainer can select from a number of techniques to provide variety and ensure that participants are not bored. Many introductory techniques are available to the trainer including the techniques described below.

- **Review the session objectives**. Introduce the topic by a simple restatement of the objectives to keep the participants aware of what is expected of them.

  Example: "This afternoon we will learn how to use flowcharts to show the steps in a process. Our objective is to use the flowchart to analyze what happens during the process and identify problems or areas requiring further information. Any questions before we begin?"

- **Ask a series of questions about the topic**. The effective trainer will recognize when participants have prior knowledge concerning the course content and encourage their contributions. The trainer can ask a few key questions, allow participants to respond, discuss answers and comments and then move into the body of the presentation.

  Examples:

  "Can someone give us an example of a problem statement that includes a pre-described solution?"

  "Jose, this is a slide showing the floor plan of a family planning clinic. There are at least three problems related to client flow. Can you identify one of them?"

  "Silvia, the next topic is identifying possible solutions. What are some ways to generate ideas for solutions?"

- **Relate the topic to previously covered content**. When a number of sessions are required to cover one subject, relate each session to previously covered content. This ensures that participants understand the continuity of the sessions and how each relates to the overall topic. Where possible, link topics so that the concluding review or summary of one presentation can introduce the next topic.

Example: "When we finished yesterday we were discussing who should be included on a problem-solving team. Today, we will begin reviewing tools and methods that a team can use to analyze a problem."

- **Share a personal experience**. There are times when the trainer can share a personal experience to create interest, emphasize a point or make the topic more job-related. Participants enjoy hearing these stories as long as they relate to the topic and are used only when appropriate.

  Example: "Today we used some tools a coach can use to analyze the group dynamics in a team. I would like to share with you an experience I had with a team in Zambia using the analysis of team roles...."

- **Relate the topic to real-life experiences**. Many training topics can be related to situations most participants have experienced. This technique not only catches the participant's attention, but facilitates learning because people learn best by anchoring new information to known experiences. The experience may be from the everyday world or relate to a specific process or problem.

  Example: "Our next topic is identifying potential solutions. Have you worked with a team or a supervisor or manager who began analyzing a problem with a solution already in mind? How did that affect analyzing the problem and generating all possible solutions?"

- **Use a case study or small group activity**. Case studies or small-group activities focus attention on a specific situation related to the training topic. Working in small groups generally increases interest in the topic.
  Example: "In our next exercise you will practice using cause and effect diagrams to brainstorm possible causes of this problem. Please read the case study in your handout and answer the questions. We will discuss your possible causes when everyone has finished."

- **Use a videotape or other audiovisual aid**. Use of appropriate audiovisuals can be stimulating and generate interest in a topic.

Example: "Now we will view a video that describes the notion of paradigms and how looking differently at the same situation can provide valuable insights. Afterwards we'll discuss how this relates to QA."

- **Use an imaginative transparency.** Trainers should keep a file of topic-related cartoons, signs, slogans, acronyms and similar items. When appropriate, these can generate a few smiles and interest at the same time.
- **Make a provocative statement**. This technique should be used sparingly and with great care. The idea is to make a controversial statement designed to create a reaction. The ensuing discussion will increase interest in the topic to be presented. Be careful, however, not to make a statement that will upset or alienate participants because this will have a negative impact on the learning climate.

  Example: "Our topic this morning is selecting appropriate solutions to problems. My experience as a trainer has shown me that training is almost always the most appropriate solution to any problem. Ramon, what do you think?"

- **Give a classroom demonstration**. Most QA training courses involve some methods, techniques and tools that lend themselves to demonstrations, which generally increase participant interest.
- **Use a game, role play or simulation**. Games, role plays and simulations generate tremendous interest through direct participant involvement and therefore are useful for introducing topics or demonstrating learning points.

  Example: "Today we will discuss the idea of systems and processes and how variation can affect desired outcomes. To introduce this topic we are going to take a few minutes to play a simulation called the 'Red Bead Game.'

- **Relate the topic to future work experiences**. Participants' interest in a topic will increase when they see a relationship between training and their work. The trainer can capitalize on this by relating objectives, content and activities of the course to real work situations.

Example: "In this course we will cover a systematic approach to addressing the types of problems you frequently encounter in your work as clinical managers and supervisors. "

SUMMARIZING A TRAINING SESSION

A **summary** is used to reinforce the content of a presentation and provide a review of its main points. Generally, a summary is given at the end of a presentation. When training topics are complex, however, periodic summaries may be used to ensure that participants understand the material as it is being presented. In addition, summaries may be used prior to demonstrations or breaks which interrupt the presentation.

The summary should:

- Be **brief**
- Draw together the **main points**
- **Involve** the participants

Many summary techniques are available to the trainer including some which are described below.

- **Ask the participants for questions.** This will give participants an opportunity to clarify their understanding of the instructional content and may result in a lively discussion focusing on those points that seem to be the most troublesome.
- **Ask questions of the participants.** The questions should focus on major points of the presentation.
- **Administer a practice exercise or test.** This gives participants an opportunity to demonstrate their understanding of the material. After the exercise or test, use the questions as the basis for a discussion by asking for correct answers and explaining why each answer is correct.
- **Use a game to review main points.** This provides some variety when time permits. One popular game is to divide participants into two teams, give each team time to develop review questions and then allow each team to ask questions of the other. The trainer serves as moderator by judging the acceptability of questions, clarifying answers and keeping a record of team scores. This game can be highly motivational at the same time it serves as an excellent summary.

USING QUESTIONING TECHNIQUES

What is a key characteristic of an effective trainer? Which instructional strategy will the best trainers employ? Which techniques will make the training session more interesting? Effective **questioning and reinforcement** techniques answer all three of these questions.

The primary purpose of questioning is to encourage the participant to **think** about the training topic. Most trainers agree that participants often say that they understand the content, but a knowledge or skills assessment may prove otherwise. Effective questioning gives participants an opportunity to think through content and gain a fuller understanding of concepts being presented.

Involving participants through questioning will help to maintain interest and attention. This is especially critical when:

- The topic is complex
- Training sessions are lengthy
- The topic is not as exciting as the trainer or participants hoped

Questions can be used at any time to:

- Introduce a topic
- Increase the effectiveness of the illustrated lecture
- Promote brainstorming
- Supplement the discussion process

Effective Questioning Techniques

Use a variety of questioning techniques to maintain interest and avoid a repetitive style.

- **Ask a question of the entire group**. The advantage of this technique is that those who wish to volunteer may do so; however, some participants may dominate while others may not participate.

  Example: “Would someone please tell me why we...?”

- **Target the question to a specific participant by using her/his name prior to asking the question**. The participant is aware that a question is coming and can concentrate on the question and respond accordingly. The disadvantage is that once a specific participant is targeted, other participants may not concentrate on the question.

Example: “Jose, can you tell me what would happen if we...?”

- **State the question, pause and then direct the question to a specific participant**. All participants must listen to the question in the event that they are asked to respond. The primary disadvantage is that the participant receiving the question may be caught off guard and ask the trainer to repeat the question.

  Example: “What are the disadvantages of working in teams? Rosminah, can you tell us?”

The key in asking questions is to avoid a pattern. The skilled trainer uses all three of these techniques to provide variety and maintain the participants’ attention.

- **Use participants’ names during questioning**. This is a powerful motivator and also helps ensure that all participants are involved.
- **Repeat a participant’s correct response**. This provides positive reinforcement to the participant and ensures that the rest of the group hears the response.

  Example: “Juan is correct. Problem statements should not indicate a solution nor blame.”

- **Provide positive reinforcement for responses.** This keeps the participant interested in the topic. Positive reinforcement may take the form of praise, displaying a participant’s work, using a participant as an assistant or using positive facial expressions, nods or other nonverbal actions.

  Examples:

  “I couldn’t have said it better!”

  “Very good answer, Alain!”

  “I like the way you stated that, Aimee.”

  “Excellent thinking, Jose.”

- **When a participant’s response is partially correct**, the trainer should reward the correct portion and then improve the incorrect portion or redirect a related question to that participant or to another participant.

  Examples:

  “I agree with the first part of your answer; however, can you explain...?"

"You almost have it! Lydia, can you give Virgilio some help?"

"Rachid is correct. Sometimes increased inputs can improve the quality of outcomes. However is that always true? Alain, what do you think?"

- **When a participant's response is incorrect**, the trainer should make a noncritical response and restate the question to lead the participant to the correct response.

  Examples:

  "Sorry, Silvia, that's not correct. Let's look at the situation in a different way. Suppose we...."

  "That's not quite what I was looking for. Let's go back to our previous session. Mr. Dimiti, think about the need for data to make decisions. Now if we...."

  "Maria, let me rephrase the question. What would happen if we were to adjust for special cause variation?"

- **When a participant makes no attempt to respond**, the trainer may wish to follow the above procedure or redirect the question to another participant. After receiving the desired response, return to the first participant to involve her/him in the discussion.

  Example: "Jose, can you add any other advantages to working in teams to those that Enrique has listed?"

When **participants ask questions**, the trainer has two options:

- Respond to the question
- Respond with another question

The trainer must draw on personal experience to determine which is appropriate for each situation. When the question deals with a complex subject or relates to a topic not previously discussed, the trainer may wish to answer the question.

Example: "That's an excellent question, Alex. In fact, our discussion tomorrow will focus on collecting data to support notions of causes. To answer your question briefly,...."

Questions based on the topic, however, may be answered best by asking the participant another question.

Example: “Dr. Ramos, you asked ‘when’ we use flowcharting. Under what circumstances would flowcharting not be a useful tool when analyzing a problem?”

Two final cautions with regard to questions from participants are:

- When the trainer cannot answer a question, s/he should acknowledge the question and admit that the answer is not known. After the session, research the answer and share it during the next session.
- When participants ask questions that will guide the discussion away from the topic, the trainer must decide whether answering the question and the ensuing discussion will be valuable. When participants will benefit and time permits, s/he may wish to follow the new line of discussion. If not, the trainer must move the discussion back to the topic.

PLANNING AND PRESENTING ILLUSTRATED LECTURES

The illustrated lecture is the most common method of classroom instruction. In an illustrated lecture, the content is derived largely from the knowledge area and presented verbally by the trainer. Its effectiveness as a training method is markedly enhanced through the use of questioning techniques and well-designed audiovisuals such as transparencies, slides and videotapes. (See **Chapter 3** for detailed information on using audiovisuals.)

Advantages to the Illustrated Lecture:

- When properly designed and presented, an illustrated lecture is effective for mixed groups of fast and slow learners.
- An illustrated lecture will deliver large amounts of information in a relatively short period of time.
- The audience for an illustrated lecture can be larger groups than is feasible for brainstorming, discussions and other small group activities.
- The trainer controls the content and delivery (what is said and when it is said).

Disadvantages to the Illustrated Lecture:

- Lecturing is a demanding activity! The trainer and participants must be able to sustain concentration and attention, sometimes for extended periods of time.
- Participant involvement and contributions may be

minimal if the trainer fails to encourage participant interaction.

- The lecture usually proceeds at a pace dictated by the trainer. Participant understanding of the information should be monitored through questioning and feedback to assure that the presentation is not moving too rapidly or, equally important, too slowly.
- There is a tendency to overload participants with **too much information**. Presentation of too much information strains their short-term memory capacity.

Planning an Illustrated Lecture

The **first step** in planning an illustrated lecture is to review the lecture objectives. Will the illustrated lecture be the most appropriate strategy to meet the objectives? The trainer's plan for giving an illustrated lecture should contain:

- The lecture objective(s)
- An outline of key points
- Questions to involve the participants
- Reminders of participant activities, use of an audiovisual aid, etc.

The purpose of the **outline** is to allow the trainer to glance at the key points without reading the content to the participants. Questions to be asked should be noted at appropriate places in the outline. Notes regarding the use of audiovisuals or class activities also should be made at those points in the presentation where they are to be used.

An effective illustrated lecture:

- Begins with **a strong introduction**
- Is followed by **a smooth transition** into the body of the lecture
- Follows the **planned outline**
- Uses a variety of **audiovisual aids**
- Includes activities that **involve the participants**
- Concludes with an **effective summary**

Presenting an Illustrated Lecture

There are a number of **presentation skills** which can be used to make an illustrated lecture more effective. The skilled trainer uses a variety of techniques to involve participants, maintain interest and avoid a repetitive presentation style. Some common techniques are listed below.

- **Follow the lecture plan and trainer's notes**, which include the lecture objectives, introduction, body, activity and audiovisual reminders, summary and evaluation.
- **Communicate on a personal level**. Many participants will be unfamiliar with the terms, jargon, acronyms and language of a new subject. The trainer should use familiar words and expressions, explain new terms and attempt to relate to the participants during the training session.
- **Maintain eye contact with participants**. Eye contact provides the trainer with feedback on how well participants understand the content and helps to communicate a caring attitude on the part of the trainer. Eye contact also is useful in establishing and maintaining a positive learning climate (see **Chapter 2**).
- **Project one's voice to the back of the room.** Vary volume, voice pitch, tone and inflection to maintain participants' attention. Avoid using a monotone voice, which is guaranteed to put participants to sleep!
- **Avoid the use of slang** or repetitive words, phrases, or gestures. These may become distracting with extended use.

  Examples:

  "OK, now...."

  "Is that clear?"

  "Do you see what I'm saying?"

  Hands in pockets, pacing or rocking on heels.
- **Exhibit enthusiasm during the presentation**. Such enthusiasm may be demonstrated by acting excited about the topic, smiling, moving with energy and interacting with participants.
- **Move about the room**. Moving around the room ensures that the trainer is close to all participants at some time during the session. As the trainer moves toward a participant and maintains eye contact, the participant is encouraged to interact.

  To ease the trainer in moving about the room from participant to participant, the desks or tables should be set up in a U-shaped arrangement. This allows the trainer to move easily to any individual and also encourages participants to interact because they are facing each other.

- **Use appropriate audiovisual aids** during the presentation.
- Be sure to ask both **simple and more challenging questions.**
- **Provide positive feedback** to participants during the presentation.

  Examples:

  "Very good point, Ilka!"

  "Thanks for sharing that story."

  "Anne Marie has made an excellent comparison!"

- **Use participant names as often as possible.**

  Examples:
  - During questioning and when providing positive feedback
  - To help keep the participants focused on the presenter
  - To foster a positive learning climate

- Display a **positive use of humor**.

  Examples:
  - Topic-related cartoons on an announcement board
  - Topic-related humorous stories
  - Topic-related cartoons for which participants are asked to create captions

- **Provide smooth transitions between topics**. Within a given presentation, a number of separate yet related topics may be discussed. When shifts between topics are abrupt, participants may become confused and lose sight of how the different topics fit into a bigger picture. The trainer must ensure that the transition from one topic to the next is smooth. This can be accomplished by:
  - A brief summary
  - A series of questions

    - Relating content to practice or using an application exercise (case study, role play, etc.) before moving on to the next topic

- **Be an effective role model**. The trainer should be a positive role model in dress, appearance, enthusiasm for the training course, being on time and finishing at the scheduled time.

FACILITATING SMALL GROUP ACTIVITIES

Guidelines for Small Group Activities

There are many times during training when the participants will be divided into several **small groups** which usually consist of four to six participants. Examples of small group activities are described below.

- **Solving a problem** which has been presented by the trainer or another participant
- **Reacting to a case study** which may be presented in writing, orally by the trainer or through videotape or slides
- **Preparing or carrying out a role play** within the small group and presenting it to the entire group

Advantages to Small Group Activities:

- Provide participants an opportunity to **learn from each other**
- **Involve** all participants
- Create a sense of **teamwork** among members as they get to know each other
- Provide a **variety of viewpoints**

Sometimes small groups will stay together through several or all small group activities to build the sense of a team. Other times, the trainer may prefer that participants are not in the same group for every activity in order to encourage interaction among all participants.

The trainer can create small groups in several ways, including:

- **Assign** participants to groups
- Ask participants to **count off** "1, 2, 3," etc. and have all the "1s" meet together, all the "2s" meet together, etc.
- Ask participants to **form their own groups**
- Ask participants to **draw a group number** (or group name) from a hat

The classroom(s) used for small group activities should be large enough to allow different arrangements of tables and chairs so that individual groups can work without disturbing one another. The trainer should be able to move easily about the room to visit each group. If available, consider using smaller rooms near the primary classroom where small groups can go to work on their problem-solving activities, case studies or role plays.

Activities assigned to small groups should be challenging, interesting and relevant; should require only a short time to complete; and should be appropriate for the background of the participants. Each small group may be working on the same activity or each group may be taking on a different problem, case study or role play. Regardless of the type of activity, there is usually a time limit. When it is the case, inform groups when there are 5 minutes left and when their time is up.

Instructions to the groups may be presented:

- In a handout
- On a flipchart
- On a transparency
- Verbally by the trainer

Instructions for small group activities typically include:

- Directions
- Time limit
- A situation or problem to discuss, resolve or role play
- Participant **roles** (if a role play)
- **Questions** for a group discussion

Once the groups have completed their activity, the trainer will **bring them together** as a large group for a discussion of the activity. This discussion might involve:

- **Reports** from each group
- **Responses** to activity questions
- **Role plays** carried out by participants and their reactions
- **Recommendations** from each group

It is important that the trainer provide an effective summary discussion following small group activities. This provides closure and ensures that participants understand the point of the activity.

Case Study

A **case study** is a training method using realistic scenarios that focus on a specific issue, topic or problem. Participants typically read, study and react to the case study in writing or verbally during a group discussion. The primary **advantage** of the case study is that it focuses the attention of the participant on a **real situation**. Participants may work separately or in small groups to solve or complete a case study.

Advantages to Using a Case Study:

- It is a **participatory** method of training which actively involves participants and encourages them to interact with each other.
- Participants react to **realistic** and **relevant cases** that directly relate to the training course and often to their work environment.
- Reactions often provide **different perspectives** and **different solutions** to problems presented in the case study.
- Reacting to a case study helps participants **develop problem-solving skills**.

Case studies can be developed by the trainer or the participants. Situations for the case studies can be found in one or more of the following sources:

- Clinical or managerial experiences
- Medical histories/records, reference manuals, clinical journals, etc.
- Experiences from clinic staff, managers, supervisors, participants or clients

After participants have read the case study, either individually or in small groups, they should be given the opportunity to react to it. Typical reaction exercises include:

- **Analysis of the problem**. The participants are asked to analyze the situation presented in the case study, determine the source of the problem as best they can, identify further information needs and possible solutions.
- **Focused questions**. These inquiries ask participants to respond to specific questions.

  ***Example*:** "Identify at least three problems from the flowchart provided."

- **Open-ended questions**. These questions provide participants more flexibility in responding.

***Example*:** "What conclusions can you draw from the scatter diagram of the data?"

- **Problem solutions**. The participants are asked to offer suggestions regarding the situation being presented.

Example: "How could this problem have been avoided? Is there a better way to design this process?"

Once participants have reacted to the case study they should be given the opportunity to share their reactions. This sharing might take the form of one or more of the following:

- **Reports** from individuals or small groups
- **Responses** to case study questions
- **Recommendations** from individuals or small groups

The trainer should summarize the results of the case study activity prior to moving on to the next topic.

An example of a case study can be found in **Sample 4-1** at the end of this chapter.

Role Play

A role play is a training method in which participants act out roles in a situation related to the training objectives.

Advantages to Using a Role Play:

- Role play can create a highly motivational climate because participants are actively involved in a realistic situation.
- Participants can **experience a real-life situation without having to take real-life risks**.
- Role play gives participants an understanding of a situation from the perspective of others.

Examples:

- Make participants aware of the communication skills needed to work in teams by asking them to assume the roles of team members in a prescribed situation (e.g., where team members are hostile or lack enthusiasm).
- Reinforce a session on the elements of a coach/team leader contract by asking participants to play out a first meeting between a coach and team leader.
- Reinforce a session on coaching skills by asking participants to prepare and present a role play demonstrating a coach working with a team for the first time.

To conduct the role play, the trainer should:

- Decide what the participants should learn from the role play (the objectives)

- Devise a simple situation
- Explain what the participants should do and what the audience should observe
- Discuss important features of the role play by asking questions of both the players and observers
- Summarize the session, what was learned and how it applies to the QA skill or activity being learned

An example of a role play can be found in **Sample 4-2** at the end of this chapter.

Brainstorming

Brainstorming is a both a QA and a training technique. Brainstorming **stimulates thought and creativity** and is often used in conjunction with group discussions. The primary purpose of brainstorming is to generate a list of ideas, thoughts or alternative solutions which focus on a specific topic or problem. This list may be used as the introduction to a topic or form the basis of a group discussion. Brainstorming requires that participants have some background related to the topic.

When used as a QA technique, brainstorming is often the first step in a series of techniques to uncover a broad range of items, group them by common themes (affinity analysis), rank or prioritize the items and choose a few items to work within problem solving or solution development. This use of brainstorming is discussed in other QA courses.

When used as a training technique, brainstorming often is used to generate a list without grouping, ranking or choosing among the items. The following guidelines describe the use of brainstorming as a training technique:

- Establish ground rules.

  Example: “During this brainstorming session we will be following two basic rules. All ideas will be accepted and Alain will write them on the flipchart. Also, at no time will we discuss or criticize any idea. Later, after we have our list of suggestions, we will go back and discuss each one. Are there any questions? If not let’s proceed.”

- Announce the topic or problem.

  Example: “During the next few minutes we will be brainstorming and will follow our usual rules. Our topic is ‘ways to communicate standards.’ I would like each of you to think of at least one way to communicate standards. Maria will write these on the board so that we can discuss them later. Who would like to be first? Yes, Ilka...."

- **Maintain a written record** of the ideas and suggestions on a flipchart or writing board. This will prevent repetition and keep participants focused on the topic. In addition, this written record is useful when it is time to discuss each item.
- **Involve the participants** and **provide positive feedback** in order to encourage more input.
- **Review written ideas and suggestions periodically** to stimulate additional ideas.
- **Conclude brainstorming by reviewing all the suggestions.**

Group Discussion

The **group discussion** is a training technique in which most of the ideas, thoughts, questions and answers are developed by the participants. The trainer typically serves as the **facilitator** and guides participants as the discussion develops.

Group discussion is useful:

- At the conclusion of a training session
- After viewing a videotape
- Following a demonstration
- After reviewing a case study
- After a role play
- After a small group exercise or activity
- Any other time when participants have prior knowledge or experience related to the topic

Attempting to conduct a group discussion when participants have limited knowledge or experience with the topic often will result in little or no interaction and thus an ineffective discussion. When participants are familiar with the topic, the ensuing discussion is likely to **arouse participant interest**, **stimulate thinking** and **encourage active participation**. This interaction affords the facilitator an opportunity to:

- Provide positive feedback
- Emphasize key points
- Create a positive learning climate

The facilitator must consider a number of factors when selecting group discussion as the training strategy:

- Discussions involving **more than 15 to 20 participants** may be difficult to lead and may not give all participants an opportunity to participate.
- Discussion requires **more time** than an illustrated lecture because of extensive interaction among the participants.
- **A poorly directed discussion may move off target** and never reach the objectives established by the facilitator.
- **If control is not maintained**, a few participants may dominate the discussion while others lose interest.

In addition to **group discussion** which focuses on the session objectives, there are two other types of discussions that may be used in a training situation:

- **General discussion** which addresses participant questions about a training topic (e.g., the pros and cons of collecting data to verify causes of problems)
- **Panel discussion** in which a moderator conducts a question and answer session between panel members and participants

Follow these key points to ensure successful group discussions:

- **Arrange seating to encourage participant interaction** (e.g., tables and chairs set up in a "U" shape or a square or circle so that participants face each other).
- **State the topic** as part of the introduction.

  Example: "To conclude this presentation on management styles, let's take a few minutes to discuss the importance of human relations and the supervision of nursing staff. Youssef, what do you think about the role of human relations and supervision?"

- **Shift the conversation** from the facilitator to the participants.

  Examples:

  "Abdul, would you share your thoughts on...?"

  "Rosa, what is your opinion?"

  "Michelle, do you agree with my statement that...?"

- **Act as a referee** to intercede only when necessary.

  Example:

  "It is obvious that Alain and Ilka are taking two sides in this discussion. Alain, let me see if I can clarify your position. You seem to feel that...."

- **Summarize the key points** of the discussion periodically.

  Example:

  "Let's stop here for a minute and summarize the main points of our discussion."

- **Ensure that the discussion stays on the topic.**

  Examples:

  "Sandra, can you explain a little more clearly how that situation relates to our topic?"

  "Monica, would you clarify for us how your point relates to the topic?"

  "Let's stop for a moment and review the purpose of our discussion."

- **Use the contributions of each participant** and provide positive reinforcement.

  Examples:

  "That is an excellent point, Rosminah. Thank you for sharing that with the group."

  "Alex has a good argument against the policy. Biran, would you like to take the opposite position?"

- **Minimize arguments** among participants.
- **Encourage all participants to get involved**.

  Example:

  "Maria, I can see that you have been thinking about these comments. Can you give us your thoughts?"

- **Ensure that no one participant dominates the discussion**.

  Example:

  "Christina, you have contributed a great deal to our discussion. Let's see if someone else has anything they would like to contribute to the discussion."

- **Conclude the discussion with a summary** of the main ideas. The facilitator must relate the summary to the objective presented during the introduction.

SUMMARY

Interactive training techniques require using a variety of methods and presentation skills to involve participants in the learning process. An effective presentation can be one of the most exciting and rewarding aspects of a trainer's responsibilities. The trainer able to maintain participant interest with an exciting, dynamic delivery, using a variety of training methods is more likely to be successful in helping participants reach training objectives. This is where the time and effort invested in pre-course planning pay off as the trainer and participants interact, discuss, question and work together.

The interactive training techniques discussed in this chapter included small group activities such as role play, case studies and group discussions as well as illustrated lectures. All of these require effective presentation skills to encourage participant attention and involvement. The skilled trainer uses a variety of these methods. These skills are summarized in the self-assessment guide presented in **Sample 4-3** at the end of this chapter.

SAMPLE 4-1

Case Study for Developing Run Charts

Directions for participants. Divide into small groups. Read and review this case study individually. Use the data supplied to draw a run chart. As a group, agree on the answers to the discussion questions. When all the groups have finished their discussion, the case study and answers from all of the groups will be reviewed in a group discussion.

Case Study

Recently several district supervisors have expressed concern about decreasing patient use of health services in several western Ujuju districts. In one area around the Mfune trading center, two clinics, Molo and Bwiri, have been especially affected. The district is interested in any changes in use because cost sharing was introduced recently in the district. They are concerned that charging for services may lead to decreased use in many health centers. To evaluate their assumption that use might be decreasing, the supervisors constructed a run chart from the monthly attendance returns supplied by six health centers in the area around Mfune trading center

Directions: Using the data below, construct a run chart for attendance at the six clinics around Mfune trading center for the past 12 months.

Health Center	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Molo	2608	2576	2321	2383	1982	1890	2100	1750	1569	1078	1145	877
Bwiri	1467	1592	1455	1673	1602	1391	1262	1027	802	923	621	507
Kadoma	895	683	705	798	623	787	509	539	718	699	802	764
Uzsei	2218	1878	1934	2173	1953	1841	1803	1999	2009	1760	1873	2089
Moloca	458	630	519	791	568	681	423	538	619	799	802	696
Mwadzi	3419	3081	2767	2971	3071	3544	3201	2937	2579	2787	3208	2466

Discussion Questions

1. In the run charts you made from the above data, what kinds of trends can you see? Are all health centers experiencing decreased attendance?

2. What kinds of decisions could you make using this data?

3. How else could you analyze this data to answer additional questions? (Hint: think about stratifying the data.)

SAMPLE 4-2

Role Play for Forming a Contract Between Coach and Team Leader

Directions for participants. Review the six coaching guidelines in the QA Coaching manual. Review the topics that coaches and team leaders should discuss and agree upon before beginning work together. The following Coach/Team Leader Contract guide outlines important points to be discussed.

Participant Roles	
Coach:	The coach has had 6 months of experience coaching problem-solving teams in this district. The team has worked together in other activities, but is just beginning problem solving. The coach has been asked by the team leader to help him/her to begin the work. The team leader does not know where to begin and is confused about what to do first. The coach has dealt with this type of situation before and uses the following guide to help the discussion.

Team Leader:	The team leader has been pressured by the district health office to begin problem solving activities and he/she does not know where to begin or how to approach this. The team leader already has some ideas about what problems to address first from a quality assessment that was completed a few months before. The team leader is also concerned about some of the team members who don't work well together and about confidentiality issues within the team. The team leader has asked the coach to come to the clinic to help him/her begin problem-solving activities and is looking to the coach for guidance about where to begin.
Focus of the Role Play:	The focus of the role play is on developing a working relationship between the coach and the team leader. The role play demonstrates how a coach can use the following guide and information from the coaching course reference materials to prepare for the first coach/team leader meeting.

Contract Guide

The coach should be sure that the following points are covered during the role play. The parenthesis contain tips for the type of information that is sought.

- Coach and team leader choose roles that relate to their clinical or administrative practice and propose a problem with which they are familiar. (For example, a nurse team leader and a clinical officer coach might imagine the nurse team leader is working on problems of high incidence of infection in postoperative wounds).
- Coach and team leader introduce themselves to eachother.
- Team leader describes why the coach is called for help. (Process improvement team forming, team leader asking for help in starting problem solving).
- Coach asks what the topic is. Team leader describes the problem (Describe problems with initial assessment).
- Coach asks what experience the team leader has in receiving coaching assistance. Team leader says s/he has never worked with a coach or facilitator.
- Coach and team leader review what they understand about their individual roles and what they expect from the other person, noting where some roles are the same and some are different.
- One of the players brings up the issue of confidentiality. (The team leader might be afraid the coach will tell supervisors about the problems in the workplace. The coach reassures the team leader that topics discussed by the team do not go outside the team unless the coach is asked to communicate them to others).
- The coach and team leader express their preferences for ground rules within the team as well as between them.
- The coach and team leader define the manner in which they want to meet to talk about progress (post meeting debrief, pre-meeting planning, or both).

- The coach asks what, if any, help the leader needs with:
  - arranging meetings (agenda setting, arranging location)
  - team building (assigning team roles, keeping records, planing exercises to strengthen team, planning team activity)
  - QA topics (wording a problem statement, knowing the steps in problem solving, using various tools and techniques)
  - Group dynamics (observing, intervening, giving feedback)
- The coach and team leader discuss preferred coaching intervention style (team leader needs to express preference for direct or indirect intervention, weaning from coach's direct involvement; if a private code should be used between them for indirect communication during the team meetings).
- The coach describes what to expect during a debriefing after a team meeting and how the leader might respond; leader says what s/he wants to know about, what support s/he suspects she needs.
- The role play closes by the team leader and coach planning the next steps (might be to make an agenda for the team meeting; construct a top level flow chart to select or confirm team member; write or clarify problem statement; brief supervisors on plans).

SAMPLE 4-3

Presentation Skills: Self-Assessment Guide

Rate yourself for the following statements using the rating scale below.

Rating Scale: 1 = I need improvement

2 = I am competent

3 = I am proficient

QA skills

________ I can teach information without assistance from other trainers.

________ My QA content is accurate.

________ I include the key messages and main points in the instructor outline and participant materials.

________ Any changes I make are consistent with needs of participants.

________ I use relevant, accurate examples to explain main points.

Presentation skills

Delivery: when I present:

________ My voice is clear.

________ My pace is comfortable.

________ My voice is loud enough for the room.

________ I do not talk to the overhead or screen.

________ I do not read materials from the screen.

________ My posture is comfortable.

________ My hands are not distracting.

________ I use available room for moving without being disruptive.

________ My non-verbal behavior encourages participation.

________ I gesture smoothly.

________ I make eye contact with people throughout the room.

________ My flip charts can be read even from the back of the room.

_______ My overheads can be read even from the back of the room.

_______ My overheads and flip charts summarize main points (not writing the text).

_______ I use pointers or pens without distracting participants (I avoid hitting screens, palms, repeatedly opening and closing them).

_______ I put pointers or pens down when not in use.

_______ I use questions to draw out participants.

_______ I listen to questions attentively, request clarification as needed, restate questions for the participants if needed, answer questions with correct and sufficient detail, reflect some questions back to class.

_______ I distinguish between questions or topics that need to be addressed and those that need to be put off until later.

_______ I finish presentations within allotted time.

Presenting information

_______ I present all information included in the instructional outline.

_______ I follow the sequence of information in the instructional outline.

_______ I check participants' understanding of main points before moving ahead.

Assisting with exercises

_______ I keep groups on task.

_______ I achieve desired outcomes of exercises.

_______ I encourage everyone to participate.

_______ I recognize stages of group development and make interventions appropriate to the group's stage.

_______ I summarize outcomes of exercises and the application of the exercises to learning.

Knowledge and use of the training process

_______ I use various approaches to introduce materials, including a variety of lecture, discussion, exercises, case studies, or other methods developed for the presentation.

_______ I evaluate participants during presentations to see if information is understood.

_______ I check to see if participants already know some of the material and make changes in content or objectives which are appropriate to their needs.

FIVE

USING COMPETENCY-BASED ASSESSMENTS

INTRODUCTION

The goal of QA training is to assist health professionals in learning to adopt QA techniques in order to improve work performance and services to clients. Trainers and participants must be able to **measure learning progress satisfactorily** and **evaluate performance objectively** to be sure that learning objectives are met and to make improvements in the training when learning objectives are not met.

Like any other system, training has inputs, processes and outcomes. Outcome measures of QA training are expressed in the learning objectives (e.g. "At the end of this chapter, participants will introduce a training session."). It is the trainer's responsibility to determine whether each participant has achieved the knowledge and skills defined in the learning objectives. This is accomplished through the use of knowledge and skill assessments. When these assessments are based on the **mastery learning** approach to training (described in **Chapter 1**), learning is measured in the following ways:

- Initial assessment of each participant's and the group's general knowledge and skills in the course topic to guide the trainer and participants in their work together during the course
- Continual assessment of each participant's mastery of the knowledge and skills defined in the course objectives

With this approach, successful achievement of learning objectives assures competency in performing a specific skill or applying a QA concept, rather than just an increase in knowledge (i.e., differences between pre- and post-test scores).

Chapter Objective

After completing this chapter, the participant will be able to use competency-based knowledge and skill assessments to measure progress in learning and evaluate performance.

Enabling Objectives

To attain the chapter objective, the participant will:

- Explain how competency-based knowledge assessments are used in QA training
- Describe the advantages and limitations of competency-based skill assessments
- Explain how competency-based skill assessments are used in QA training

Terms Associated With Competency Assessment

The use of competency-based assessments involves terms which a QA trainer may find to be new, or used in new ways. They are:

- Competent—knows the steps and can perform the skill or activity, based on comparing performance to standards
- Indicator—a measure
- Performance Indicator—a measure of someone's knowledge or skill - what a trainer would see or hear the participant do or say
- Competency-based Assessment—a method of using performance indicators to judge that someone is performing a particular task according to predetermined standards; note that this is not an assessment of **capability** to do or understand something, but rather the actual observation of performance of a skill or a measurement of knowledge

KNOWLEDGE ASSESSMENTS

Assessment of knowledge is an important factor in determining the success of training.

Knowledge assessment is conducted to:

- Determine participant knowledge of the subject at the beginning of the course (**pre-course questionnaire**)
- Motivate the participant to acquire new knowledge necessary to meet learning objectives
- Determine whether progress has been made toward achieving the learning objectives (**mid-course questionnaire**)

Writing **valid** and **reliable** questions requires special skills and considerable practice and experience. Therefore, to improve the quality of knowledge assessment, trainers increasingly are provided with pretested questionnaires, often as part of a training package. Questionnaire content must be based on course learning objectives, while learning objectives, in turn, must be based on the knowledge or skills required to do a certain QA task. This reference manual does not address task analysis, development of objectives or proper test construction. Those skills are taught in a course in instructional design.

Pre-course Questionnaire

The main objective of a **pre-course questionnaire** in the mastery learning approach is to assess what the participants, individually and as a group, know about the course topic. This allows the trainer to identify topics which may need additional emphasis or, in some cases, require less classroom time during the course. Providing the results of the pre-course assessment to the participants enables them to focus on their individual learning needs. In addition, the questions alert participants to the content that will be presented in the course. Because only general information is being tested in a pre-course questionnaire, questions should be presented in the **true-false** format which is simple and easy to score. (**Sample 5-1** is a section of the true/false questions from a problem-solving course.)

A special form, the **Individual and Group Assessment Matrix**, can be used to record the scores of all course participants (**Sample 5-2**). Using this form, the trainer and participants can quickly chart the number of correct answers for each of the questions. By examining the data in the matrix, the group can easily determine their collective strengths and weaknesses and jointly plan with the trainer how best to use the course time to achieve the desired learning objectives.

For the trainer, results of this questionnaire will help identify particular topics which may need additional emphasis during the learning sessions. Conversely, for those categories where 80% or more of the participants answer the questions correctly, the trainer may elect to use some of the allotted time for other purposes. In the QA Tools and Techniques course, for example, if the participants as a group did well (80% or more correct) in answering the questions in the category “Construction and Interpretation of Run Charts, Bar Graphs and Pie Charts” the trainer might assign the relevant portions of the reference manual as homework rather than discussing these topics in class.

For the participants, the learning objective(s) related to each question and the corresponding chapter(s) in the reference manual should be noted beside the answer column. To make the best use of the limited course time, participants may address their own individual learning needs by studying the designated chapter(s).

Mid-course Questionnaire

The main purpose of a **mid-course questionnaire**, which is administered as soon as all scheduled subject areas have been covered, is to help each participant (and the trainer) assess her/his progress in mastering the course objectives. **Multiple-choice** objective testing is used in this situation rather than **true-false** because it provides a better means of knowledge assessment, reduces the chance of guessing the correct answer and can be used to cover a broader range of content areas. (**Sample 5-3** is a section of multiple choice questions from a problem-solving course).

It is suggested that a correct score of 85% or more indicates knowledge-based mastery of the material presented in the course. For participants scoring less than 85% on their first attempt, the trainer should review the results with each participant individually and guide her/him on using the course materials (e.g., reference manual) to learn the required information. (Participants scoring less than 85% may repeat the mid-course questionnaire at any time during the remainder of the course).

SKILL ASSESSMENTS

Quality assurance skills are those things a person will do, say, or think to accomplish QA tasks and activities. Some of these skills are easy to describe, such as correct construction and interpretation of a bar graph. Other skills are more difficult to state, but can be both observed and evaluated, such as effective interpersonal communication, or use of client input in decision making.

Deciding whether a participant is competent to perform a QA skill or activity **during** and, most importantly, **after** training often is difficult. In part this is true because the training environment is never exactly the same as the work environment. Also, the standards for performing many QA skills are often outcome standards, which means that a participant may use a variety of steps (processes) to attain the desired outcomes. In addition, some trainers think that competency can be measured by the number of times a participant performs a new task—for example, the number of problem statements formed. Unfortunately, using this volume-based rationale, a person could complete a large number of **incorrect** problem statements and yet be thought of as competent. That, obviously, would be an incorrect interpretation of competency. Therefore, trainers need to evaluate participants objectively by measuring performance compared to a predetermined standard; that is, by using performance indicators. This results in a measure of competency.

When QA training concerns a **process**, (e.g. steps in effective client-provider communication), a job aid can be used to both guide learning and assist the participant in performing the skill. A job aid may be a list of steps in the process, or may be a form used in carrying out a process such as a fill-in-the-blank form used in writing a problem statement. To evaluate performance, a checklist, which is an objective measure of the steps in the process, is used. The checklist may be used by the participant in self-evaluation or by a trainer or supervisor. Both job aids and checklists use performance indicators. **Sample 5-4** contains an example of a job aid used in interpersonal communication training. **Sample 5-5** contains the checklist an observer would use to evaluate that performance in a work setting.

When QA training focuses on an **outcome**, a set of **criteria describing the desired outcome** can be used for evaluation. For example, an objective of the planning portion of Quality Awareness training is that the participants will write an action plan for implementing QA work. They are considered to be competent when their action plan containing goals, objectives, tasks, a timeline for accomplishing tasks and reaching objectives and assigned responsibilities is created. The outcome criteria would state that objectives logically relate to the goals, that objectives are measurable and specific, that tasks are logically related to the objectives and are specific, that tasks are measureable and objective, that the timeline contains specific target dates and responsible people assigned, and so on. Note that this desired outcome does not require a specific process—the team might use any of a number of ways to state goals, objectives or tasks and they may use a variety of time-prediction tools. As a trainer, you might be using the team's already defined processes to develop these items, rather than introducing a new process. The trainer's concern is that an action plan containing these items is developed and that the parts of the plan meet the stated criteria.

This set of outcome criteria can be turned into a checklist. If a checklist is not used, the criteria should be stated in the training materials so participants know what performance is expected. Trainers then use these criteria to determine whether the learning objectives are met. For example, if a team has difficulty creating the action plan, the trainer is obligated to work with them until either they are able to make a plan which meets the criteria or an alternative method for reaching the objective is developed.

Levels of Performance

Progress in acquiring new QA skills is measured in terms of **various levels or stages** of performance. The three levels of performance in acquiring a new skill, which were briefly described in **Chapter 1** (and are used throughout this manual), are defined more fully as follows:

- **Skill acquisition** represents the **initial phase** in learning a new task or activity. One or more practice sessions are needed for learning how to perform the required skills and the sequence (if necessary) in which they should be performed. Assistance and coaching/mentoring are necessary to achieve correct performance.
- **Skill competency** represents an **intermediate phase** in learning a new task or activity. The participant can perform the required skills according to predetermined standards, in the proper sequence (if necessary), but may not progress from step to step efficiently.
- **Skill proficiency** represents the **final phase** in learning a new task or activity. The participant efficiently and precisely performs the skills according to predetermined standards, in the proper sequence (if necessary).

Advantages to using Competency-based Skill Assessments

- Competency-based skill assessments can be used to facilitate learning a wide variety of skills and to measure participant behaviors in a **realistic job-related situation**.
- Instruments such as a job aid break down the skill or activity into the essential steps or tasks (process steps) required to complete the activity.
- They focus on a skill or activity that the participant typically would be expected to perform on the job or in the context of QA work.

Disadvantages to using Competency-based Skill Assessments

- Instruments such as job aids and checklists require **time and effort** to develop.
- Competency-based skill assessments must be performed by QA trainers or coaches who are **proficient** in the skills or activity to be learned.
- They require the availability of an **adequate number**

of skilled QA trainers or coaches to conduct the training because competency-based training usually requires a one-on-one relationship.

Using Job Aids

A job aid contains the individual process steps or tasks in sequence (if necessary) required to perform a skill or activity in a standardized way. Job aids are designed to help the participant learn the correct steps and sequence in which they should be performed (**skill acquisition**) and measure progressive learning in small steps as s/he gains confidence and skill (**skill competency**).

Job aids and checklists can be developed for any skill or activity (e.g., coaching a problem- solving team, conducting cause-effect analysis). If the trainer is working with a training package, these assessments, together with instructions on their use, usually are included for major QA activities. In other cases, this material is written as part of the reference manual.

Some job aids may be used both in training and in the workplace. **Sample 5-4,** Job Aid—Skills Needed for Effective Interpersonal Communication, is taken from a course to train health providers in effective interpersonal communication skills. This is presented as a card which the participant uses in training and then takes home as a pocket reference for use in the workplace.

Alternatively, job aids used in training may be different than those eventually used in the workplace. An example of this would be a list of the steps in problem solving. During training, the list might be part of the reference manual, but in the workplace the list might be made into a poster that stays in place in the room where quality improvement teams hold their meetings. Another type of job aid would be use of forms which prompt correct performance. An example of this would be to redesign clinical records to include spaces for recording head-to-toe assessment of children. The person using the form would be prompted to include all items of a head-to-toe assessment, and would not have to recall these items from memory. If such job aids exist, a trainer should include them as examples during the training.

Using job aids in competency-based training:

- Ensures that training is based on process standards
- Standardizes training materials and audiovisual aids
- Forms the basis of classroom exercises as well as participant practice sessions

In addition, job aids can be used as a self- or peer-assessment tool.

Examples of how job aids can be used at different stages of the course include:

- **Initially**, participants can use the job aids to follow the steps as the trainer role plays a coaching intervention or demonstrates a skill or activity.
- **Subsequently**, during the classroom session, a team may use the job aid to guide step-by- step activities such as the steps in drawing a pareto chart. During these sessions, the trainer(s) can circulate from group to group to monitor how learning is progressing and check to see that the participants are following the process standards outlined in the job aid.
- Once participants become confident in performing the skill or activity (e.g. demonstrating effective interpersonal communication in role plays), they can use the job aid to rate each other's performance. This exercise can serve as a point of discussion during a conference **before** participants provide coaching services, or in the case of interpersonal communication before participants interact with clients.

Using Checklists

A checklist uses performance indicators to measure a participant's compliance with standards. A checklist generally is derived from a job aid which itself is based on standards. While checklists are not often used for routine QA work such as developing indicators or problem solving, there are certain topics such as interpersonal communication between client and provider that lend themselves well to checklist use. Checklists are most often used in working with new QA coaches or trainers. Unlike job aids which are by necessity quite detailed, competency-based checklists focus only on the key steps or skills. Well-constructed checklists should contain only sufficient detail to permit the trainer to evaluate and record the overall performance of the skill. If a checklist is too detailed, it can distract the trainer from her/his primary purpose, which is to objectively observe the overall performance of the participant.

Using checklists in competency-based training:

- Measures participants' actual mastery of performance of the skills, not just their capacity to perform them
- Ensures that all participants will have their skills

measured according to the same standard

- Forms the basis of followup observations and evaluations

Sample 5-5 is a checklist used in the interpersonal communication course. The trainer observes the participant during a client-provider interaction, and rates performance against key performance indicators. The checklist contains indicators which reflect the detailed steps in the job aid (Sample 5-4).

When completed, this checklist, together with the clinical trainer's comments and recommendations, provides objective documentation of the participant's level of performance. Furthermore, it serves as one part of the process of attesting that the participant is qualified to perform a certain skill or activity.

SUMMARY

The goal of QA training is to assist health professionals in learning to adopt quality assurance techniques, in order to improve work performance and services to clients. The use of well-designed competency-based knowledge and skill assessment instruments can make mastering these QA skills easier.

The knowledge questionnaires described in this chapter are used to measure participant knowledge related to learning objectives, and guide the trainer in conducting the course. In contrast to pre- and post-tests which are one-time assessments of knowledge increase, the questionnaires described here measure **progress** in learning.

Job aids enable each participant to chart her/his progress in learning new skills and to pinpoint areas for improvement by breaking the skill or activity down into its essential tasks or process steps. When a variety of processes might lead to desired outcomes, outcome standards listed in reference materials allow both participants and trainers to determine that learning objectives are being met, without requiring specific process steps to be followed.

Finally, evaluating whether participants have acquired new skills can be done using competency-based (performance) **checklists**. These checklists can be used to measure a wide variety of participant skills and behaviors in **realistic job-related situations**.

SAMPLE 5-1

PRE-COURSE QUESTIONNAIRE

Instructions: In the space provided, print **T** if the statement is **true**, or **F** if the statement is **false**.

SELECTING AND DEFINING A PROBLEM

1. When brainstorming possible problems, only propose topics which are suggested by top management.	_________	Objective 2 PS Monograph Step 5
2. The gap between “what is” and “what is desired” is an area for process improvement.	_________	Objective 2 PS Monograph Step 5
3. Only a few problems can be addressed at one time, making prioritization an important part of problem selection.	_________	Objective 2 PS Monograph Step 5
4. Prioritization may be done through expert decision making.	_________	Objective 2 PS Monograph Step 5
5. A good problem statement includes a statement of probable cause.	_________	Objective 3 PS Monograph Step 6
6. Once a problem statement is written, it should not be changed as work progresses.	_________	Objective 3 PS Monograph Step 6
7. A problem statement describes the process within which an improvement is desired.	_________	Objective 3 PS Monograph Step 6

SAMPLE 5-2

INDIVIDUAL AND GROUP ASSESSMENT MATRIX

COURSE:_______________________________ DATES:_____________________

TRAINER(S):____

Question number	PARTICIPANTS												CATEGORIES
	1	2	3	4	5	6	7	8	9	10	11	12	
1													**PROBLEM SELECTION AND DEFINITION**
2													
3													
4													
5													**IDENTIFY WHO NEEDS TO WORK ON THE PROBLEM**
6													
7													
8													
9													**ANALYZE AND STUDY THE PROBLEM**
10													
11													
12													**SOLUTION DEVELOPMENT**
13													
14													
15													
16													**IMPLEMENT AND EVALUATE**
17													
18													
19													
20													

SAMPLE 5-3

MID-COURSE QUESTIONNAIRE

USING THIS QUESTIONNAIRE

This set of questions is designed to help participants monitor their progress during the course. It may be given at any time during the training after the subject content has been presented. A score of 85% or more indicates knowledge-based mastery of the material presented in the reference manual.

By the end of the course, all participants are expected to achieve 85% or greater. For

those scoring less than 85% on the first attempt, the trainer should review the results with the participant and guide him/her in using the reference manual to learn the required information.

Repeat use of the questionnaire should be done only after the participant has had sufficient time to study the reference manual and ask the trainer about any unclear information

Instructions: Write the letter of the single best answer to each question in the blank next to the question numbers on the answer sheet.

1. The advantage of brainstorming possible problems on which to work is that brainstorming:
    a. narrows the list of problems
    b. generates a list of problems staff already know about and are interested in fixing
    c. requires a preliminary facility quality assessment
    d. about possible problems forces a team to brainstorm about solutions at the same time
2. A well-written problem statement should contain the:
    a. "pain" caused by the problem
    b. probable cause of the problem
    c. recommended solution
    d. group of providers to blame for the problem

ANSWER KEY

1. The advantage of brainstorming possible problems on which to work is that brainstorming:
    a. narrows the list of problems
    b. generates a list of problems staff already know about and are interested in fixing
    c. requires a preliminary facility quality assessment
    d. about possible problems forces a team to brainstorm about solutions at the same time

SAMPLE 5-3 (continued)

MID-COURSE QUESTIONNAIRE

2. A well-written problem statement should contain the:
   a. "pain" caused by the problem
   b. probable cause of the problem
   c. recommended solution
   d. group of providers to blame for the problem

SAMPLE 5-4

Job Aid

Part A - Outside

Counseling—Education Giving

- Find out how client perceives illness
- Correct misconception of facts
- Use appropriate vocabulary
- Explain in an organized way what needs to be known/done next (in blocks)
- Check client's understanding about illness
- Recommend concrete behaviors to client
- Motivate client to follow treatment
- Make sure client accepts the treatment

Closing

- Make sure client knows when to come back
- Ask client if there is anything else he/she would like to know

Skills Needed for Effective Interpersonal Communication

Overall Socio-Emotional Communication

- Welcome client
- Use verbal and non-verbal communication behaviors

CHS/QAP, JHU, 1993

Part A - Outside

Counseling—Education Giving

- Find out how client perceives illness
- Correct misconception of facts
- Use appropriate vocabulary
- Explain in an organized way what needs to be known/done next (in blocks)
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- Make sure client knows when to come back
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Skills Needed for Effective Interpersonal Communication

Overall Socio-Emotional Communication

- Welcome client
- Use verbal and non-verbal communication behaviors

CHS/QAP, JHU, 1993

SAMPLE 5-4 (continued)

Job Aid

Part B - Inside

Guidelines to talk with Client—Dialogue	**Problem-solving skills—Gathering Data**
• Ask for feelings • Compliment client efforts • Reinforce feelings that are normal and understandable • Reflect the client's emotions – repeat what client said – invite him/her to speak more • Show empathy • Show support and partnership • Help patient not to worry	• Listen effectively • Encourage dialogue: ask open-ended questions • Avoid interruption • Avoid premature diagnosis • Resist immediate followup • Probe (explore) for more information • Ask about causes, difficulties and worries related to the problem

Part B - Inside

Guidelines to talk with Client—Dialogue	**Problem-solving skills—Gathering Data**
• Ask for feelings • Compliment client efforts • Reinforce feelings that are normal and understandable • Reflect the client's emotions – repeat what client said – invite him/her to speak more • Show empathy • Show support and partnership • Help patient not to worry	• Listen effectively • Encourage dialogue: ask open-ended questions • Avoid interruption • Avoid premature diagnosis • Resist immediate followup • Probe (explore) for more information • Ask about causes, difficulties and worries related to the problem

SAMPLE 5-5

CHECKLIST FOR ANALYSIS OF HEALTH PROVIDER OBSERVATION INTERPERSONAL COMMUNICATION SKILLS

STEP/TASK	YES (frequency)	NO	COMMENT (intensity)
A. Socio-emotional			
Welcome patient			
Use positive non verbal communication			
Repeat what patient said			
Show empathy			
B. Problem Solving			
Encourage dialogue (open-ended questions)			
Ask what causes problems			
Avoid premature diagnosis			
Explore more information			
Listen effectively			
C. Counseling Information Given			
Present information in block			
Use appropriate vocabulary			
Give specific behavioral recommendation			
Check acceptability of treatment			

Overall Comments

Time recorded for the encounter: _______ minutes