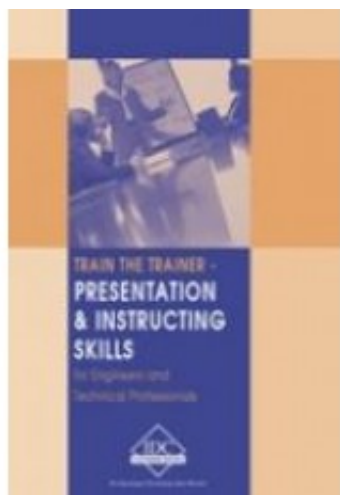


TR-E - Train the Trainer Presentation and Instructing Skills for Engineers and Technical Professionals



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Short Description

This manual is designed to equip you with the skills required to become an effective and consistent technical instructor. Ever changing and complex technology requires a constant need of technical training, which can be quite intimidating. An effective technical instructor needs a combination of technical skills and presentation abilities to help delegates overcome technical barriers.

Description

This manual is designed to equip you with the skills required to become an effective and consistent technical instructor. Ever changing and complex technology requires a constant need of technical training, which can be quite intimidating. An effective technical instructor needs a combination of technical skills and presentation abilities to help delegates overcome technical barriers.

This manual will guide you on how to overcome the fear of speaking in public and addressing technically skilled delegates, how to deliver spellbinding presentations and employ practical, memorable and clear instruction methods. Learning must be challenging, encouraging, reflective and entertaining. It requires both the instructor and the participant to listen, to understand, to agree and to do.

Table of Contents

Download Chapter List

[Table of Contents](#)

First Chapter

Introduction to technical training

1. Introduction to technical training

1.1 What is technical training?

Training is defined as the process of sharing; teaching new skills and knowledge; or updating previously learned skills and information. Training provides enhanced learning in order to improve performance on the job. It also includes training new personnel, introducing a new technology, and/or improving an employee's performance.

Technical training is mainly concerned with people and technology. It helps increase competence and improves performance of professionals in an efficient and effective manner. It also helps in designing, implementation and operation of systems within specific technical environments. Furthermore, technical training provides the changing and enhanced market requirements needed for the survival and future growth of the business.

1.2 Principles of technical training

Technology training provides new forms and practices that the trainees can use in their workplaces to promote radical innovation, while keeping pace with the rapid and frequent change of the technical age.

The most important principles of technical training are as follows:

- Technical training is an emotional and intellectual process where the trainer's first job is the establishment of a rapport or an emotional bond with the trainees.
- A user-friendly, culturally appropriate information package, which fits the learner's level. Reading and designing of visuals should be skillfully organized.
- The theme and the content of the program should be accurate, interesting

and informative.

- The training program should be understandable and should be easy to follow throughout the training period. The trainer should be organized and focused.
- The instructor/trainer must use multiple approaches, media, and senses to get through to all participants/trainees as each of them have different learning styles.
- Technical training should provide scope for interaction, action learning and practice.
- The learning environment in a technical program should be free from all possible distractions. This includes things like noise, physical or emotional discomfort, personal problems, negative attitudes, or as far as the trainer is concerned, distracting mannerisms or dress.
- Collaborative (team) learning can enhance the learning environment of the technical program.
- Feedback mechanisms should be in place to allow learners to voice their opinions on the training program. Constant evaluation and improvement of the program ensure up to date information to the learners.
- A trainer is not a 'sage on the stage' but 'a guide on the side'. Her/his task is to devise strategies and provide guidance to the learner in a rich learning environment.

1.3 What is a technical presentation?

A technical presentation is a way of communicating technical ideas and information to a group. A good presentation has:

- Content - It provides technical information, which is required by the audience, and can be absorbed in one sitting.
- Structure - It has a logical beginning, middle, and end. It must be sequenced and properly spaced to ensure easy understanding.
- Packaging - It should be well prepared so that the audience gains maximum information through graphical and diagrammatic displays.

1.3.1 Purpose of a technical presentation

A technical presentation keeps delegates informed as to technical ideas and information relating to new and modern technologies in an ever changing environment. Today organizations are under immense pressure to meet the challenges from angles of profitability as well as market share. This is causing obsolescence of existing technologies. Organizations are forced to adopt newer technologies; thus creating a huge demand for skilled and knowledgeable

technical people who need to upgrade their existing knowledge. This type of presentation is specially designed for the audience who is comfortable with information in graphical and diagrammatic displays, learning maximum skills and techniques through active participation by the way of live product demonstrations, whiteboards and projection screens. Communicating complex technology to a broader audience requires the use of metaphors, prior experience and visual illustrations. A technical presentation serves this purpose.

Benefits of effective technical training:

- Increased job satisfaction leads to improved productivity
- Less breakages and breakdowns
- Timeliness of operation
- Increased work commitment and self-confidence
- Less need for close supervision
- Improved work standards
- More flexibility
- Lower accident risk

1.4 Background to speaking in public

Lectures and public addressing allow us to achieve many goals. Whether we work alone or in groups, we need to speak in public to fulfill certain task. We often need to speak to groups, to be a successful leader or achieve something meaningful in life. For hundreds of years, speaking in public or to a group or audience has been essentially a form of public communication. There have been brilliant lectures that have inspired us. The ability to speak well is an acquired skill and without it, speaking in public may be a source of stress for everyone.

To be a successful speaker one must think analytically about actions and try to keep the following key principles in mind:

- Do not think that public speaking is inherently stressful.
- Do not think you need to be brilliant or perfect to succeed.
- Do not try to impart too much information or cover too many points in a short presentation.
- Do not have the wrong purpose in mind (to receive rather than to give/contribute).
- Do not try to please everyone (this is unrealistic).
- Do not try to emulate other speakers (very difficult) rather simply be yourself (very easy).
- Do not fail to be human and humble.

- Never be fearful of potential negative outcomes (they almost never occur and even when they do, you can use them to your advantage).
- Do not try to control the wrong things (the behavior of your audience).
- Over preparation can result in unnatural public speaking. Rather develop confidence and trust in your natural ability to succeed.
- Do not think your audience will be as critical of your performance as you might be.

1.5 What are the differences/similarities between public speaking, presentations and training?

Public speaking, presentations and training are different methods of communication each involving different processes of transmitting information from an individual (or group) to another. To communicate successfully one has to understand the other person or a group, and has to work hard to get the other person or group to understand them.

The essence of public speaking is to give the audience some 'value'. It has been one of the essential means of personal empowerment and civic engagement by providing us training in researching topics, organizing our ideas, and presenting ourselves skillfully. Public speaking is highly structured and usually imposes time limitations on the speaker. It requires detailed preparation and use of formal language.

Presentations involve listening and watching. A presentation is one of the best ways to impart information or introduce new products or ideas through charts and graphical displays. The audience may not actively respond to a presentation program unless it includes a 'Q-&-A' session at the end. A good presentation is informative, educational and persuasive.

'What I hear, I forget,

What I see, I remember,

What I do, I understand'. - Confucius

'Training is about building skills through active involvement and interaction. Training is about *doing it*'

- Henry Stewart, Institute of IT Training, United Kingdom

Training is the learning that helps to improve job performance. A good training

session demands active involvement of the participants. An effective training program has three basic features: (1) compatibility; (2) evaluation and instruction; and (3) analysis and improvement. Good trainers adjust their voices to the audience and avoid distracting physical mannerisms and verbal habits.

1.6 Maximizing technical training techniques

An audience generally feels comfortable with a presentation that is simple and focused. Preparing such a presentation is often a difficult task and requires a lot of time and effort. The trainer's ideas should follow a clear pattern. The presentation pattern of the trainer may be chronological, spatial, causal, topical theory and practice or problem and solution.

1.6.1 Chronological pattern

The trainer's ideas and the technical information displayed in the presentation are structured in a chronological order. The topic of the desired subject is presented in terms of its historical aspect and the points are developed through time sequences.

A chronological pattern allows the audience to follow a logical sequential time pattern, a relative easy method of learning.

1.6.2 Spatial pattern

A spatial presentation works well where the information and ideas have to be organized relative to space or place.

1.6.3 Causal pattern

A causal pattern in a presentation structure arranges the technical material and ideas according to the causes of a problem. The trainer has to be precise and to the point. Avoid a lengthy presentation while using this pattern, which tends to become boring.

1.6.4 Topical pattern

While using this form of presentation, the instructor arranges the informative points according to their importance. It is a common and effective means of structuring the presentation.

1.6.5 Theory and practice pattern

This form of presentation is very effective and the audience feels comfortable with this approach. Here the trainer uses the theory of any situation and cites practical examples to establish the idea.

1.6.6 Problem and solution pattern

The presenter needs to be balanced while using this approach. This pattern, as the name suggests, displays both the problem and solution aspect of a situation. The listeners should analyze the problem clearly and then slowly move onto the solution. Since listeners are interested in solutions, the presenter should not waste too much time describing the problem, but rather move on to the solution in a clear and concise manner.

1.6.7 Analysis

The presenter must target the audience. If the presentation is prepared for reflective candidates while the audience is predominantly directive, they are likely to get bored. Hence, it is very important to have a thorough audience analysis - such as job titles, ages, knowledge and skill, cultural background etc. Audience profiling is an important precursor to make the technical training successful.

“People don’t do much homework regarding the sophistication of audiences. They usually underestimate the level.... You want to present at or slightly above the knowledge level of people in the room....”

Brook Byers, principle partner of Kleiner, Perkins, Caulfield,
Byers;

(Interview July 22, 1991)

1.6.8 Question and answer

Good questioning increases the listeners’ involvement, enhances thinking and develops a questioning attitude during the presentation, which makes training effective. There are three different types of questions.

- Information questions
- Processing questions
- Imaginative questions

Information questions are concerned with ‘just the facts’, to share information from the questioner’s learning and personal experiences. **Processing**

questions require listeners to use analytical, synthesis and evaluation skills to organize and manipulate information. **Imaginative questions** explore differences. These questions allow listeners to explore and think outside the box to generate ideas. Listeners use the information they have received, creating something with it and/or applying it in a different area.

1.6.9 Step by step process

Technical training techniques involve five steps:

Assessing the need

Need assessments and/or skill assessments before planning a presentation is required in order to establish exactly what topics need to be covered. If the trainer does not know what the participants want, measuring the effectiveness of the training becomes difficult. Knowing what skills and knowledge are required is essential to the development of any training event. Similarly, without knowing what skills and knowledge the participants possess, an effective training event cannot be developed. Needs assessments may be conducted using surveys, interviews, focus groups and skill tests.

Developing training materials

Customized training is good and involves a lot of planning rather than mere spilling the contents of the brain on a subject onto pieces of paper. It is necessary to use need assessments to get a list of topics for the event and the trainer has to make sure that the order is in a logical fashion. Include illustrations and hands-on exercises with easy to follow instructions in the course manual.

Preparation

Presentation timing and flow can be effectively programmed by doing a preparatory session before the presentation. It is a good idea to practice with an audience that has a similar skills level. Testing each exercise yourself is necessary to prevent problems or unexpected results during the presentation. Timing each part of the event is essential to finish the presentation on time.

Delivering the training

This is where the actual training is delivered using skills and knowledge of the presentation.

Evaluating the training

Trainees' evaluation is used to establish whether or not the training has met the objectives. Content for the trainees' evaluation can be partially based on the questions asked during the assessment phase. Course evaluations are based on the audience's assessment of several factors that determine the effectiveness of the training.

Most organization track evaluation results to summarize participants' reactions to the training. Overall results can lead to future improvement. Developing good training skills is a process that improves over time and with experience.

'What is the trainee supposed to be able to do as a result of training?'

Bob Mager

Problem shooting

The trainer has to anticipate and plan well in advance for all probable problems that may arise during the presentation. Good presenters have alternative plans as back-up to use in exigencies. It indicates the level of dedication and involvement of the presenter to deliver the training successfully. Audiences always appreciate a person who can handle problems or situations effectively and professionally without blaming the equipment or other people. A presenter who solves the problems creates a positive feeling among the audience, which is essential for the success of the training.

1.7 Organize and present in-house technical training

Technical training can enhance a team or a group with sufficient leadership skills to propel the company into a growth mode. It is very important, therefore, to determine when and what kind of training staff members need. Planning and organizing in-house training programs need knowledge of class design, adult learning principles and some practice. All training must have clearly defined objectives. Training must be tailored to meet the needs of both the employer and the employee.

Planning training involves both educational and administrative components:

- Setting overall course objectives
- Developing a general plan for training
- Writing objectives for each training session

- Determining the training approach, methodology and techniques
- Developing training sessions plans
- Determining resource requirements
- Developing the budget for training activities
- Preparing the training program proposal

An effective in-house training program should have the three basic features:

- **Compatibility** -The training program must work within the command's framework and schedule.
- **Instruction and evaluation** -Instruction involves the actual training of the personnel. Evaluation checks the progress of each person and the ability of the trainer to perform in a team context.
- **Analysis and improvement** -Analysis helps to observe groups and individual performances, comparing the results with standard criteria.

While conducting a technical training program, it is important to use methods of training that meet your objective. In formal structured training, standard lesson plans should be used. Conducting on-the-job-training is a personalized means of teaching and developing professional skills. It is used to train personnel to execute and perform daily tasks, such as planned maintenance system checks and meeting personnel qualification standards.

The personnel's training needs are considered and a training plan and summary are drawn up sequentially over a period of time that is reviewed throughout the year.

Example of training plan and summary for RG Ltd. NZL

Module Code	Training Needs	Timing
CB05	Practical Safe Operation and Maintenance of Circuit Breakers and Switchgear	September
ED09	Practical Troubleshooting, Maintenance and Protection of AC Electrical Motors	Jan/February
EL09	Practical Troubleshooting of Electrical Equipment and Control Circuits	January
ER01	Practical Earthing/Grounding, Bonding, Lightning and Surge Protection	June
HM05	Practical Solutions to Harmonics in Power Distribution	Spring
HV07	Practical Safe Operation and Maintenance of Circuit Breakers and Switchgear	Spring & Summer

Table 1.1

Example of training plan

1.8 Train to refresh

Today, training of employees is no longer a closed cycle. The main purpose of training is to incorporate individuals into the technological and organizational parameters of productive processes. Employees are given training to refresh and reinforce skills or introduce new concepts or techniques.

1.9 Teaching new technical techniques and skills

Some traditional training methods, advocating gradual, incremental change, will restrict optimal technology training. Such training is least capable of providing radical and innovative technology to the trainers, which is of utmost importance in a modern world where technology changes continuously. Modern technology training should focus on those innovative skills and techniques required in the classroom to assist students in the learning process, equipping them with an up-to-date and practical know-how.

The instructional methods developed by modern technology training are based on new forms and practices and include the following:

- **Presentation** - Innovative ways to present technical training using visuals
- **Demonstration** -Trainees observe the performance of a task
- **Drill** -A session of repetitive practice designed to improve retention of knowledge
- **Game** -Competition is used to practice principles
- **Simulation** -Captures the characteristics of a real situation or task
- **Field trip** -A planned visit to observe others performing the tasks
- **In-basket** -Training incorporating a set of tasks that will be faced on the job
- **Laboratory** -Allows experimentation and testing by trainees
- **Peer training** -Training by those who perform the job
- **Role play** -Act out a dramatization of a situation to apply what has been learned
- **Vestibule training** -Private place set aside in the work area to allow training in an off-line environment
- **Lecture** -Used to present facts and explanations
- **Team teaching** -More than one instructor involved in training the group in one sitting

1.9.1 Teach what THEY need, not what YOU know

Good speakers/presenters need to know the demographic feature of their listeners and consider their interests and concerns as their own. Proper audience analysis and knowledge of the speaking environment will make the trainer confident that he/she is giving the right training to the right audience. Specific questions are to be developed for the client or audience to let him/her know what they actually need. Audience analysis plays an essential part of speech preparation. If the trainer overlooks this vital step and delivers the lecture according to his/her knowledge or point of view, it is bound to bore the audience and the training may be meaningless.

1.9.2 Organize and present technical facts from the trainee's point of view

It is important for the trainer to arrange the presentation of the technical material before the training session. A practical structure for technical presentations is shown below:

Introduction	·	Rapport builder
(1-2 minutes)	·	Attention getter
	·	Main message
Body	·	Presentation plan
	·	Three to five key points
	·	Each key point backed up by varied evidence and examples
Summary	·	Restatement of main message and key points
(1 minute)	·	Call to action

Table 1.2

Structure for technical presentations

This structure allows for limitations in the learning environment.

The need for simple, linear order

Structural complexity of the presentation may confuse the audience. The audience feels comfortable and relaxed if the presentation program is simple,

precise and clear.

The need for well-spaced repetition

It is quite natural that audiences sometimes miss or mishear some parts of the instructor's speech because of various distractions – internal or external.

According to the famous rule of thumb, the audience takes in only one-third of the speaker's lecture. It is advisable that the trainer repeats the main points three to four times throughout the lecture to allow the information to sink in.

The need to adapt to the audience's natural attention curve

The natural attention curve of an audience is as shown in Figure 1.1.

Figure 1.1

Natural attention curve of an audience

Audiences are quite alert and enthusiastic at the beginning of the presentation, excited and eager to gain as much of knowledge. During the next few hours they are taken over by their bodies and are dragged down. When, finally they suddenly hear the miraculous words 'In summary....' they stir themselves up and try to discover the portions they missed during the nap.

1.9.3 Deliver an audience-centered presentation (tailor presentation to fit the audience)

Tailoring the presentation according to the audience's needs is one of the vital aspects of an effective presentation. A good trainer should realize that each learning situation is different. He/she should perform a pre-training research, commonly known as a needs assessment, to determine these situations.

The following points show the three important variables that a trainer should keep in mind when conducting needs assessments:

- **The participant's subject/experience maturity** - The participant's maturity level related to subject or experience is determined by the length of time the learner has been working with the subject matter and related skills, and the relative quality of that experience viz., background,

education, etc.

- **The participant's learning needs** - The best way to determine this is to interview or observe the participants and understand the problems they are experiencing in the subject area. It helps the trainer to define the learning goals and design the training event.
- **The subject matter requirements** -The trainer should know the subject to be trained and the type of treatment the subject will require. He/she should also be aware of the standard that is to be achieved by the end of the training session. Developing a 'competency model' and a good knowledge of the participants and their particular learning needs help the trainer to decide on the type of learning structure and the type of training approach to pursue.

"The biggest deficiency in a presenting is not making it meaningful to the audience. Most people present from their own viewpoint and think the audience will connect"
- Nick Vlahakis, COO, Alliant Tech Systems;

(Interview October 3, 1991)

1.9.4 Build good rapport with the audience

It is important for the trainer to perform specific actions to develop/build a good personal rapport with the audience.

- Listen to them
- Give them time
- Say what you mean
- Use icebreakers if necessary
- Don't make empty promises/threats
- Treat learners as individuals; know names, etc.
- Value all contributions
- Warm welcome at each course session
- Share enthusiasm
- Involve students in all activities
- Share personal experiences/anecdotes
- Be genuine and honest - be human!!

1.10 Empathetic training (think like your trainees)

The trainer should listen to the trainees with empathy, which means that he/she understands the feeling of the trainees and shares some similar emotions with them. Empathetic listening requires that the trainer understands the trainees'

situation and is ready to help them. Such behavior on the part of the trainer plays an important role in reassuring the nervous audience. An empathetic response is essential during questioning, but should not negatively affect the answer.

1.10.1 Speak to train, not to impress

Good speakers use language to direct audiences' attention and encourage their involvement. Words and phrases have enough power to shift an audience from passive to active listeners and vice-versa. Training should always follow a simple and lucid language, allowing the trainees to feel comfortable and be active listeners. It is often observed that some of the speakers use large words, euphemisms or indirect and lengthy phrases during the training just to impress or dodge the audience, e.g. use **elevator operator** instead of '*Vertical transportation facilitator*'.

1.10.2 Using persuasive techniques to train

Persuasion is as old as humanity. For thousands of years this ancient technology has been used to convince and persuade. It has evolved over the centuries to become more effective. The activities of persuasion rely heavily on Aristotle's 2000-year-old rhetorical strategy. Persuasion technology is used for presenting or promoting a point of view and augments a human face-to-face or voice interaction, particularly in training or other situation.

The three appeals of Ethos, Pathos and Logos developed by Aristotle were used to make messages persuasive.

Ethos refers to the speaker's credibility. It emphasises that speakers are more effective as persuaders if they are believed by listeners. The credibility of the speaker is established by her/his dress, moves and the way s/he speaks. The speaker must appear confident and controlled throughout all verbal and non-verbal messages in a training presentation.

The speaker's emotional appeal to the listeners is referred to as Pathos; it emphasizes that listeners respond with emotion to ideas. The power of emotion cannot be underestimated. Use of images in presentations or verbal images in speech also do carry a lot of emotional power and such appeal to pathos add depth to any training program.

Figure 1.2

Three appeals of Ethos, Pathos and Logos

Logos is the logic of the speaker's argument; logos establishes the fact that listeners can be convinced by facts, statistics and other forms of evidence to accept an argument. The more the listeners are exposed to the speaker's point of view and details supporting them, the more is the chance of securing their belief (see Figure 1.2).

Effective persuasive presentations have a balanced mix of ethos, pathos and logos – of credibility, passion and logic.

Technologies that can be used for persuasive purposes are:

- Books and pamphlets
- Impressive clothing, a method used since ancient times
- Conventional mass media, such as print media, cinema, radio and television
- Presentation software and hardware, such as Microsoft PowerPoint used with a data projector.
- Subliminal advertising.
- Computer simulation and modeling of electors and customers.
- Computer and video games with deliberate presuppositions behind their scenarios.
- Targeted mailing lists and email lists.

1.10.3 Levels of involvement in training

Speaking to the audience at the right 'level' is essential to maintain a good interest level throughout the training program. Researching the audience and analyzing their needs enable the presenter to include the information the audience finds most interesting and require most.

Before writing the presentation, the aims and objectives are to be kept in mind. It is the most important starting point for success. By concentrating on the audience level, the presenter will be in a position to influence them effectively. The assessment includes the level of information presented, terminology, background to provide, forms of reinforcement material, graphics and styles of delivery. Three levels of audience familiarity are given below:

Knowledge Level	Suggested Approach
Low	• Realistic about objective and points that can be

covered.

- Stress how something is done (illustrations, demonstrations, etc).
- Provide background, basic with full encouragement.
- Simple English without any jargon etc.
- Use stories, analogies, examples and simple graphics.

Medium

- Restate, summarize and promote questions.
- Set the level slightly above the previous level.
- Provide a bit more detail.
- Give a big picture overview.
- Trainer may ask occasional questions to determine the trainees' understanding.
- Clarify and interpret information.
- Use the expanded form of the acronyms first time only.

High

- Use jargon with awareness.
- Level can be set high enough provided you don't have mixed audience.
- Groundwork can be covered quickly.
- More detail and analytical information is required.
- Trade terminology and jargon can be used.

Table 1.3

Audience knowledge level vs training approach

1.11 Roles and responsibilities in the technical training cycle

The technical training cycle is a model that can be used to represent a systematic approach to training and development. Developing a learning event consists of three phases - planning, execution and follow-up - which are inter-related in a continuous cycle (see Figure 1.3).

Figure 1.3

Technical training cycle

Analyze – The two primary purposes of this phase are:

- To determine if training is needed
- To confirm that the training is based on reliable and identified training requirements.

In this phase, the requirement for training is to be identified, as well as who should receive training. The trainer must be familiar with the tasks/skills required to perform the functions or jobs involved.

Design – In this phase the trainer has to:

- Formulate the strategy to be used in the training program
- Collect data on which the learning objectives are to be based
- Design the training approach
- Select the training methods, tools and timing

Develop – The trainer develops training methods and much attention is paid during this phase to the supporting material, overheads, technological requirements etc. This phase also includes experiences, tools and methods of delivery.

Conduct – The trainer conducts the actual training, monitors progress and response of the trainees and attempts to evaluate the effectiveness of the design and delivery of the training.

Evaluate – The training program is evaluated and feedback is gathered for updating the training design.

1.12 Experiential and active technical training techniques

The trainee's experiences are at the center of the learning process in experiential technical training and a trainer encourages these experiences where a system of theory, experience and reflection is given priority above speech. Experience-based training is a learner-centered approach, which is designed to help trainees to perform more effectively at work. The trainer introduces a series of group initiatives. Participants attempt to solve each challenge and the trainer asks debriefing questions that invite participants to link their behaviors exhibited in the problem solving process to their workplace issues.

In order to aid training and the development process of trainees, different experiential learning techniques are used such as role-playing, games, simulation, observation, case studies, group activity etc. This is called Active training. Experiential training helps trainees perform more effectively at work.

1.12.1 Trainee numbers (audience size)

Any number of delegates can sit in a lecture room, but when it comes to practical training, audience numbers has to be reduced drastically. The general rule stipulating that if a participant group exceeds 30, additional trainers will be needed, is not always practical in a technical environment. For technical and specialized training, this figure needs to be revised and should be limited to a maximum of 10-12 students. Large groups decrease each member's opportunity to participate actively and should be guarded against as far as practical technical training is concerned.

The trainer needs to be informed as to how many people will sit in his audience in advance to allow him to prepare adequately and to cater for the expected number of participants.

The size of the audience also determines the copies of handout material to be prepared and equipment that must be available in each meeting room for processing of data.

The anticipated audience size influences the number of training institution staff required to handle registration and other administrative or logistical formalities before, during and at the close of a workshop.

1.12.2 Training small groups

The less skillful the trainees are, the smaller the groups should be. Also, when training is to be supplied within a limited timeframe, the group should be very small. **Small groups maximize learning and encourage audiences to**

participate actively in learning. Small groups foster teamwork among trainees and allow for coverage of a wide scope of material in a short time span. Assigning roles within small groups, makes them responsible for learning.

1.12.3 Training large groups

It is difficult to use interactive training techniques appropriately while training large groups. Large groups discourage participation, limit access to a variety of information, decrease personal contact and inhibit the development of team spirit. Large groups make it easy for a few inactive members to rely on others to do their work and training loses its effectiveness.

1.12.4 Individual coaching

The main characteristics of individual coaching/training are as follows:

- It is learner centered.
- Teacher independent for most tasks, including classroom management.
- Open to new people, material and things.
- Open to acceptance, risk-taking, creativity and individuality.
- Open to various groupings.
- Complex and resourceful.

1.13 Technical training challenges/problems and solutions

- Most training functions are independent. The silo approach keeps solutions from being integrated into the strategic business plan.
- The image of training is often poor. Training needs to be a key tool in attracting (employer of choice) and retaining the very best.
- Most training designs were developed from the 'education model'. New models need to be added to the mix of strategies.
- Almost all training programs are 'pre-event' based. None are 'current problem' based.
- Most training assessments are historical and backward focused. Training needs to forecast and anticipate problems as well. It needs 'smoke detectors' to let managers know they have potential problems (that are training related) before they get out of hand.
- Training is done too far in advance of the perceived need and as a result attendees often fail to pay sufficient attention. Do 'just before the need' training so that participants can see the direct/ immediate relevance of the training. In a fast changing world training that doesn't use the latest

technology and that isn't continually updated has no value.

- Training programs need to 'learn' from its successes and failures. There needs to be a feedback loop between performance data, appraisals and remuneration so that programs can 'improve' based on how they do or don't impact actual performance.

1.14 Defining realistic technical training objectives

Various organizations conduct employees' training programs every year, assuming them to be effective for improving performance and productivity. Sometimes, billions of dollars are wasted when training fails to attend this goal.

The objective of realistic technical training is to help and correct this situation by empowering the trainees. The training is focused on organizational goals, strategies and key business objectives. Workshops couple new concepts and proven strategies with critical skill practice that are needed to prepare the learner for immediate on-the-job application.

1.15 Managing expectations

Effective training needs to satisfy the audience's expectations. In other words, persons opting for training have some expectations, which they hope, will be beneficial to them in their workplace. Competent training needs to be:

- Immediately beneficial
- Delivered on the job or as close to it as possible
- Delivered by a credible person
- Useful to solving the problems that the trainee faces today
- Must have 'face validity'/be believable right away.
- Have high energy and hands on elements.
- Delivered in simple and precise words.
- Produce short-term measurable business impact.

All employees don't learn at the same speed. Self-directed/self-service learning enables trainees to move at their own speed. Training can't be offered in a 'one-size fits all' approach. It is seldom tailored to different learning styles or speeds. Great training offers mass customized solutions. Offering multiple options (self-service, individual attention, a choice of mediums, lengths etc.) and identifying everyone's learning preferences and what actually works for them, are required.

Great training is 'one size fits one'.

