

# Train the Safety Trainer

A two-day introduction to effective safety training program development and presentation





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## Welcome!

This two-day workshop is intended to introduce you to effective methods in (1) managing safety training programs, (2) developing lesson plans, and (3) presenting safety training. We will cover the basic skills you need to develop and conduct safety training.

After successful completion of the course and exam, you will receive a distinctive certificate of recognition. As such, this Train the Trainer course does not certify or authorize anyone to be a safety trainer.

## Introductions

### Administrivia

- ✓ Getting around
- ✓ Ground rules



### Goals. This workshop will help you understand...

- ✓ OSHA training requirements
- ✓ How to develop and operate an effective safety training program
- ✓ Adult learning principles
- ✓ How to plan a training session and develop effective lesson plans
- ✓ Presentation skills
- ✓ How to conduct on-the-job (OJT) training

This material, or any other material used to inform employers of compliance requirements of OSHA standards through simplification of the regulations should not be considered a substitute for any provisions of the Occupational Safety and Health Act of 1970 or for any standards issued by OSHA. The information in this publication is intended for training purposes only.



### Form Teams

- Introductions
- Elect a Team Leader
- Select a Spokesperson



**Name your team!** Quickly brainstorm a creative name for your team for the day. Extra Credit: Use some form of the word "train" in your team name.

Team name \_\_\_\_\_



**Great Expectations!** Discuss what you want to learn in this course. Write your expectations on flipchart paper. Team spokesperson briefly present the team's list.

#### Our great expectations!

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#### Other great expectations!

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*"We are forced to rely on people, which is why we put so much emphasis on training them."* Henry Block, H&R Block



## Module 1

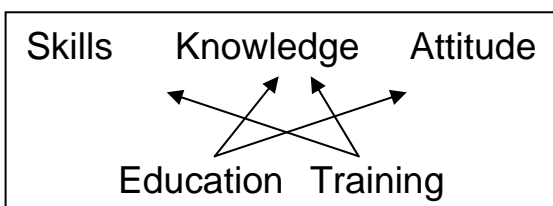
# DEFINING EDUCATION AND TRAINING

**Education** may be thought of as the presentation of general information that may or may not be used by the learner.

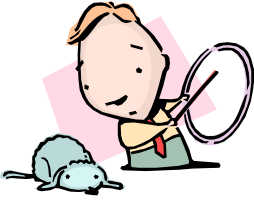
- “Ed-u-er-e” (ey-doo-ker-ey) Latin...that which leads out of ignorance
  - Anything that affects our knowledge, skills, and attitudes (SKA's)
  - The “why” in safety educates about the natural and system consequences of behavior
  - Primarily increases knowledge and attitudes
  - A process through which learners gain new understanding, acquire new skills, or change their attitudes or behaviors.
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**Training** on the other hand, is the development and delivery of information that people will actually use.

- One method of education
  - The “how” in safety
  - Primarily increases knowledge and skills
  - A specialized form of education that focuses on developing or improving skills - the focus is on performance.
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Training and Development - Focus: identifying, assessing and -- through planned learning -- helping develop the key competencies (knowledge, skill, attitudes - SKA's) that enable individuals to perform current or future jobs. (ASTD)



## What workplace training can and can't do for workers

Worker training is essential to every employer's safety and health program. The time and money it takes to train workers is an investment that pays off in fewer workplace accidents and lower insurance premiums. Effective training also helps inexperienced workers, who tend to have higher injury and illness rates than experienced workers.

However, training isn't likely to help if workers don't understand it, if they are unmotivated, or if they have poor work attitudes. Finally, no amount of training is likely to reduce workplace risk unless you make it part of a sound safety and health program.

### ***How does ineffective training negatively impact the organization?***

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***Analyze this! What are the root causes for lack of understanding, motivation, and proper attitudes?***

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## Module 2

# OVERVIEW OF OSHA STANDARDS

The Occupational Safety and Health Act of 1970 does not address specifically the responsibility of employers to provide health and safety information and instruction to employees, although Section 5(a)(2) does require that each employer ". . . shall comply with occupational safety and health standards promulgated under this Act." However, more than 100 of the Act's current standards do contain training requirements.



***What do your state or OSHA rules say about employer training responsibilities?***

**Trainer: Insert and discuss your state plan agency rules or relevant OSHA rule requirement for your organization in this module.**

*For training purposes only*





## Module 3

# THE ROLE OF THE TRAINER

To educate means "...to lead out of ignorance." Trainers are leaders. They are not necessarily expected to be experts on all aspects of the subject being presented. They are not responsible for each person's learning: individuals are responsible for their own learning and their own behavior.

### **Safety trainers are primarily change agents.**

Trainers also perform many other roles. The American Society for Training and Development (ASTD) study, Models for Excellence listed the following roles that trainers typically perform:

- Leader. Everyone is always both a teacher and learner.
- Evaluator. Identifying the extent of the impact of a safety training program.
- Group Facilitator. Managing group discussion and group process.
- Individual Development Counselor. Helping an employee assess personal safety competencies, values, and goals.
- Instructional Writer. Preparing written learning and instructional materials.
- Instructor. Presenting safety information and directing structured learning experiences.
- Manager of Training and Development. Planning, organizing, staffing, controlling safety training and development operations/projects.
- Marketer. Selling safety training and development viewpoints, programs, and services.
- Media Specialist. Producing audio-visual materials for safety training.
- Needs Analyst. Defining gaps between ideal and actual safety performance and specifying the cause of the gaps.
- Program Administrator. Ensuring that the facilities, equipment, materials, participants are present and that program logistics run smoothly.
- Program Designer. Preparing objectives, defining content, and selecting and sequencing activities for a specific safety training.
- Strategist. Developing long-range plans for safety training and development.
- Task Analyst. Identifying safety-related activities to attain specific results.
- Theoretician. Developing and testing theories of learning, training, and development.
- Transfer Agent. Helping individuals apply new safety-related learning to their work.



## ANSI Z490.1-2001 Instructor Qualifications

### Trainer criteria summary of subject matter expertise and training delivery skills:

- Trainers should be able to demonstrate an appropriate level of technical knowledge, skills, or abilities in the subjects they teach.
- Trainers should be able to demonstrate adequate competency in delivery techniques and methods appropriate to adult learning.
- Trainers should maintain competency by participating in continuing education, development programs, or experience related to their subject matter.
- The trainer should be able to apply adult learning principles as appropriate to their target audience.
- Adult learning principles should also be reflected in the learning objectives.

More information may be obtained at <http://www.ansi.org>

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## OSHA Guidelines for Instructor Competency

OSHA defines "Competent" as possessing the skills, knowledge, experience, and judgment to perform assigned tasks or activities satisfactorily as determined by the employer.

Instructors should be deemed competent on the basis of previous documented experience in their area of instruction, successful completion of a "train-the-trainer" program specific to the topics they will teach, and an evaluation of instructional competence by the Training Director.

Instructors should be required to maintain professional competency by participating in continuing education or professional development programs or by completing successfully an annual refresher course and having an annual review by the Training Director.

The annual review by the Training Director should include observation of an instructor's delivery, a review of those observations with the trainer, and an analysis of any instructor or class evaluations completed by the students during the previous year.

Source: 1910.120 App E, Training Curriculum Guidelines - (Non-mandatory)

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## Competency and qualifications

OSHA's safety and health requirements frequently use specific terms to identify the different categories of workers who must meet specific training requirements.



**Match these terms! Read each of the definitions below and match them with the terms on the left.**

- A certified person has successfully completed specialized training and that the training has been certified in writing by a professional organization. For example, OR-OSHA's safety and health rules allow only trained audiologists, otolaryngologists, or technicians who have been certified by the Council of Accreditation in Occupational Hearing Conservation to perform audiometric tests.
- A Designated person has received extensive training in a particular task and is assigned by the employer to perform that task in specific operations.
- An Authorized person is permitted by an employer to be in a regulated area or assigned by an employer to perform a specific task or to be in a specific location at a jobsite.
- A Competent person is someone who has broad knowledge of worksite safety and health issues, is capable of identifying existing and predictable worksite hazards, and has management approval to control the hazards. For instance: Only a competent person can supervise erecting, moving, or dismantling scaffolds at a worksite, for example.
- A qualified person is someone who, through training and professional experience, has demonstrated the ability to resolve problems relating to a specific task or process. For example, an individual may be qualified to perform electrical circuit tests but not qualified to perform hydraulic pressure tests.

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*For training purposes only*



## Module 4

# DEVELOPING THE TRAINING PROGRAM

A "program" contains a written plan, policies, processes, procedures, rules, forms, reports, and possibly other documents. In order to meet the continuing need for highly trained safety and health staff, it's important to develop a safety training program that includes a written plan for training new-hire and current employees.

The purpose of a training plan is to provide training professionals with clearly written policy and guidelines for implementing an effective safety education and training program for employees.

**The plan should contain elements that are informative and directive.**

- It should inform everyone about the safety training mission, policies, procedures
- It should also clearly state who is responsible for carrying out the mission, policies and procedures

At a minimum a training program should include a plan that includes information and directives on the following:

- a needs assessment
- learning objectives that reflect the different levels of training
- description of course content and format
- necessary resource materials
- the criteria for course completion
- processes that ensure delivery by competent trainers in a suitable training environment
- a continual improvement evaluation process
- adequate training documentation and recordkeeping
- assignment of responsibilities
- how the various training elements will be accomplished



## Tie Training to Natural and System Consequences

Complete the sentence below.

**Training without \_\_\_\_\_ is a waste of time and money!**



**Natural consequences** occur automatically in response to our behaviors/actions. We are punished or rewarded by something for what we do. If we fall down, two consequences naturally occur; we either get hurt or we don't. In safety natural consequences refer to hurt or health as outcomes.



**System consequences** are possible organizational responses to our behavior/actions. We are punished or rewarded by someone for what we do. Various consequences may occur; someone may administer discipline, apologize, etc.

**What are the natural and system consequences of safe/unsafe behaviors/activities?**

**For the employee?** \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**For the employer?** \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**When does the "real" education occur?**

\_\_\_\_\_  
\_\_\_\_\_

**What is the outcome when safety training is not supported by the corporate culture?**

\_\_\_\_\_  
\_\_\_\_\_



## ANSI Z490.1-2001 Instructor Qualifications

**Trainer criteria shall include subject matter expertise and training delivery skills:**

- Trainers shall have an appropriate level of technical knowledge, skills, or abilities in the subjects they teach.
  - Trainers shall be competent in delivery techniques and methods appropriate to adult learning.
  - Trainers shall maintain their training skills by participating in continuing education, development programs, or experience related to their subject matter expertise & delivery skills.
  - The trainer shall apply adult learning principles appropriate to the target audience and the learning objectives.
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## OSHA Guidelines for Instructor Competency

- Instructors should be deemed competent on the basis of previous documented experience in their area of instruction.
  - Instructors should be required to maintain professional competency by participating in continuing education or professional development programs or by completing successfully an annual refresher course.
  - The annual review by the Training Director should include observation of an instructor's delivery, a review of those observations with the trainer, and an analysis of any instructor or class evaluations completed by the students during the previous year.
  - Source: 1910.120 App E, Training Curriculum Guidelines - (Non-mandatory)
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(Sample)

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## Safety and Health Training Plan

### 1.0 Introduction

Training is one of the most important components within our company's safety management system. It gives employees an opportunity to learn their jobs properly, bring new ideas into the workplace, reinforce existing ideas and practices, and it helps to put our Safety and Health Program into action.

Everyone in our company will benefit from safety and health training through fewer workplace injuries and illnesses, reduced stress, and higher morale. Productivity, profits, and competitiveness will increase as production costs per unit, turnover, and workers compensation rates lower.

### 2.0 Management commitment.

We (or company name) will provide the necessary funds and scheduling time to ensure effective safety and health training is provided. This commitment will include paid work time for training and training in the language that the worker understands. Both management and employees will be involved in developing the program.

To most effectively carry out their safety responsibilities, all employees must understand (1) their role in that program, (2) the hazards and potential hazards that need to be prevented or controlled, and (3) the ways to protect themselves and others. We will achieve these goals by:

- Educating everyone on the natural and system consequences of their actions
- Educating all managers, supervisors and employees on their safety management system responsibilities
- Educating all employees about the specific hazards and control measures in their workplace
- Training all employees on hazard identification, analysis, reporting and control procedures
- Training all employees on safe work procedures and practices

Our training program will focus on health and safety concerns that determine the best way to deal with a particular hazard. When a hazard is identified, we will first try to remove it entirely. If that is not feasible, we will then train workers to protect themselves, if necessary, against the remaining hazard. Once we have decided that a safety or health problem can best be addressed by training (or by another method combined with training), we will follow up by developing specific training goals based on those particular needs.

**Employees.** At a minimum, employees must know the general safety and health rules of the worksite, specific site hazards and the safe work practices needed to help control exposure, and the individual's role in all types of emergency situations. We will ensure all employees understand the hazards to which they may be exposed and how to prevent harm to themselves and others from exposure to these hazards.



We will commit available resources to to ensure employees receive safety and health training during the following:

- Whenever a person is hired -- general safety orientation including an overview of company safety rules, and why those rules must be followed.
- Whenever an employee is given a new job assignment -- during formal classroom training, and again, when the supervisor provides specific task training. It's extremely important that supervisors emphasize safety during initial task assignment.
- Whenever new work procedures are begun -- during formal classroom training and supervisor on-the-job training.
- Whenever new equipment is installed -- if new hazards are introduced.
- Whenever new substances are used -- hazard communication program may apply.
- The bottom line -- train safety whenever a new hazard is introduced to the employee.

Employees must know they are responsible for complying with all company safety rules, and that most accidents will be prevented by their safe work practices. They must be very familiar with any personal protective equipment required for their jobs. They must know what to do in case of emergencies.

Each employee needs to understand that they are not expected to start working a new assignment until they have been properly trained. If a job appears to be unsafe, they will report the situation to their supervisor.

**Supervisors.** Supervisors will be given special training to help them in their leadership role. They will be taught to look for hidden hazards in the work under their supervision; insist on the maintenance of the physical protection in their areas; and reinforce employee hazard training through performance feedback and consistent enforcement when necessary

We will commit necessary resources to ensure supervisors understand the following responsibilities and the reasons for them:

- Detecting and correcting hazards in their work areas before they result in injuries or illnesses
- Providing physical resources and psychosocial support that promote safe work
- Providing performance feedback and effective recognition and discipline techniques
- Conducting on-the-job training

Supervisors are considered the primary safety trainers. All supervisors will complete train-the-trainer classes to learn training techniques and how to test employee knowledge and skills. They will also receive training on how to apply fair and consistent recognition and discipline. Supervisor training may be provided by the supervisor's immediate manager, by the Safety Department, or by outside resources.

**Managers.** All line managers must understand their responsibilities within our Safety and Health Program. This may require classroom training and other forms of communication that ensure that managers understand their safety and health responsibilities. Formal classroom training may not be necessary. The subject can be covered periodically as a part of regular management meetings.

Managers will be trained in the following subject areas:

- The elements of the safety management system, and the positive impact of the various processes within the system can have on corporate objectives,
- Their responsibility to communicate the Safety and Health Program goals and objectives to their employees, and
- Their role that includes making clear assignments of Safety and Health Program responsibilities, providing authority and resources to carry out assigned tasks, and holding subordinate managers and supervisors accountable.
- Actively requiring compliance with mandatory Safety and Health Program policies and rules and encouraging employee involvement in discretionary safety activities such as making suggestions and participation in the safety committee.

Training will emphasize the importance of managers' visibly showing their commitment to the safety and health program. They will be expected to set a good example by scrupulously following all the safety and health rules themselves.

### **Incentives, Recognition and Reward**

The purpose of an effective incentive/recognition process is to motivate employee involvement and build ownership in our safety culture. When employees make suggestions that improve our safety training, we will formally recognize their contributions. When employees make a significant contribution that meets established criteria, we will recognize and award tangible rewards. Employees will submit all suggestions directly to immediate supervisors. Supervisors are authorized to recognize/reward employees on-the-spot when the suggestion substantially improves the training process or content.

## **3.0 Training and Accountability**

We understand that training without accountability is ineffective. Our safety culture must support the training. A culture of consequences is essential. To help make sure our efforts in safety and health are effective we have developed methods to measure performance and administer consequences.

Supervisors and managers must understand that their first responsibility is to make sure they have met their obligations to their employees before considering disciplinary action.

Managers and safety staff will be educated on the elements (processes) within the safety accountability system. The safety committee will be trained on, and continually evaluate, our safety accountability system. Training will focus on improving the Safety and Health Program whenever hazardous conditions and unsafe or inappropriate behaviors are detected.

Safety orientation will emphasize that compliance with safety policies, procedures, and rules as outlined in the safety plan is a condition of employment. Discipline will be administered to help the employee increase desired behaviors, not to in any way punish. An explanation of the natural and system consequences of behavior/performance will be addressed in every safety training session.

## 4.0 Types of Training

Required rules-related training will be conducted according to established guidelines ANSI Z490.1-2001. We will also make sure additional training is conducted as deemed appropriate.

\_\_\_\_\_ (Responsible individual) will ensure Safety and Health Program training is in full compliance with OSHA standards. In general safety training will be conducted on the following levels:

- **General Safety Education:** General safety information is communicated to employees. No measurement of Skills, knowledge, attitudes (SKA's) are required.
- **Specific Safety Training:** Specific safety information and instruction on performing safe procedures and practices. SKA's are measured/tested. Employees must meet established criteria for SKA's to successfully complete the course.

**New Employee Orientation.** The format and extent of orientation training will depend on the complexity of hazards and the work practices needed to control them. Orientation will include a combination of initial classroom and follow-up on-the-job (OJT) training.

- For some jobs, orientation may consist of a quick review of site safety and health rules; hazard communication training for the toxic substances present at the site; training required by relevant OSHA standards, e.g., fire protection, lockout/tagout, etc; and, a run-through of the job tasks. This training will be presented by the new employee's supervisor or delegated employee.
- For larger tasks with more complex hazards and work practices to control them, orientation will be structured carefully. We will make sure that our new employees start the job with a clear understanding of the hazards and how to protect themselves and others.

We will follow up supervisory training with a buddy system, where a worker with lengthy experience is assigned to watch over and coach a new worker, either for a set period of time or until it is determined that training is complete.

Whether the orientation is brief or lengthy, the supervisor will make sure that before new employees begin the job, they receive instruction in responding to emergencies. All orientation training received will be properly documented.

**On-the-Job Training (OJT).** OJT training relates principles and theories to work skills that are then taught and applied in the work environment. OJT is designed to reinforce formal classroom training. All new-hire employees require training to perform their jobs effectively. In this regard, OJT is an essential supplement to formal classroom training. OJT assignments may be provided concurrently with formal training to emphasize and complement material covered in formal training courses. Time allotted to accomplish OJT assignments should be compatible with the new-hire's current knowledge, skill, and experience levels. The employee's supervisor should assess the employee's ability to successfully complete OJT training.

**Contract workers** will receive training to recognize our specific workplace's hazards or potential hazards.

**Experienced workers** will be trained if the installation of new equipment changes their job in any way, or if process changes create new hazards or increase previously existing hazards.

**All workers** will receive refresher training as necessary to keep them prepared for emergencies and alert them to ongoing housekeeping problems.

**Personal Protective Equipment (PPE)**. Workers needing to wear personal protective equipment (PPE) and persons working in high risk situations will need special training. Supervisors and workers alike must be taught the proper selection, use, and maintenance of PPE. Since PPE sometimes can be cumbersome, employees may need to be motivated to wear it in every situation where protection is necessary. Therefore, training will begin with a clear explanation of why the equipment is necessary, how its use will benefit the wearer, and what its limitations are. Remind your employees of your desire to protect them and of your efforts, not only to eliminate and reduce the hazards, but also to provide suitable PPE where needed.

Individual employees will become familiar with the PPE they are being asked to wear. This is done by handling it and putting it on. Training will consist of showing employees how to put the equipment on, how to wear it properly, and how to test for proper fit and how to maintain it. Proper fit is essential if the equipment is to provide the intended protection. We will conduct periodic exercises in finding, donning, and properly using emergency personal protective equipment and devices.

**Vehicular Safety**. All workers operating a motor vehicle on the job (on or off premises) will be trained in its safe vehicle operation, safe loading and unloading practices, safe speed in relation to varying conditions, and proper vehicle maintenance. We will emphasize in the strongest possible terms the benefits of safe driving and the potentially fatal consequences of unsafe practices.

**Emergency Response**. We will train our employees to respond to emergency situations. Every employee at every worksite will understand:

- Emergency telephone numbers and who may use them
- Emergency exits and how they are marked
- Evacuation routes, and
- Signals that alert employees to the need to evacuate

We will practice evacuation drills at least semi-annually, so that every employee has a chance to recognize the signal and evacuate in a safe and orderly fashion. Supervisors or their alternates will practice counting personnel at evacuation gathering points to ensure that every worker is accounted for. We will include procedures to account for visitors, contract employees, and service workers such as cafeteria employees. At sites where weather or earthquake emergencies are reasonable possibilities, additional special instruction and drilling will be given.

**Periodic Safety and Health Training**. At some worksites, complex work practices are necessary to control hazards. Elsewhere, occupational injuries and illness are common. At such sites, we will ensure that employees receive periodic safety and health training to refresh their memories and to teach new methods of control. New training also will also be conducted as necessary when OSHA standards change or new standards are issued.

Where the work situation changes rapidly, weekly meetings will be conducted as needed. These meetings will remind workers of the upcoming week's tasks, the environmental changes that may affect them, and the procedures they may need to protect themselves and others.

**Identifying types of training.** Specific hazards that employees need to know about should be identified through total site health and safety surveys, job hazard analysis, and change analysis. Accident and injury records may reveal additional hazards and needs for training. Near-miss reports, maintenance requests, and employee suggestions may uncover still other hazards requiring employee training.

## **5.0 Monitoring the Training Program.**

Monitoring the employee's progress through the developmental period is critical to ensure success of the training program. Monitoring provides information to the supervisor regarding the benefits and effectiveness of the training received. In addition, it provides information on the ability of the employee to achieve training goals and objectives. Both the employee's supervisor and training staff play major roles in the monitoring process. To ensure adequate monitoring of the safety training program:

- The supervisor will ensure that each employee has completed the necessary prerequisites before the start of work.
- The supervisor will review the employee's performance of task assignments.
- The supervisor will conduct a review with the new-hire employee following each required training activity. This review provides the supervisor with information on the progress of the employee and can assist in identifying areas requiring further training.
- When the supervisor determines that the new-hire employee has sufficient experience to successfully complete a task, the OJT review may be discontinued.
- The supervisor and employee will complete training documentation.

## **6.0 Safety and Health Training Program Evaluation**

An evaluation of the effectiveness of the training program will be conducted periodically. Staff from the training department will interview managers, supervisors and employees who have participated in the program to determine the effectiveness of the training, and to obtain suggestions for program improvement.

Evaluation will help determine whether the training provided has achieved its goal of improving employees safety and performance. When carefully developed and carried out, the evaluation will highlight training program strengths and identify areas of weakness that need change or improvement.

- Evaluation will include analysis of employee attendance at training sessions. Training will not work for an employee who does not show up. Absenteeism can signal a problem with the worker, but it can also indicate a weakness in training content and presentation.
- We will compare pre- and post-training injury and accident rates overall. The periods of time being compared must be long enough to allow significant differences to emerge if training has made a difference.
- We will determine whether the training provided has achieved its goal of improving employee safety performance. Evaluation will highlight training program strengths and identify areas of weakness that need change or improvement.

\_\_\_\_\_ (The safety committee/coordinator) will evaluate training through the following methods:

- Observation of employee skills.
- Surveys and interviews to determine employee knowledge and attitudes about training.
- Review of the training plan and lesson plans.
- Comparing training conducted with hazards in the workplace.
- Review of training documents.
- Compare pre- and post-training injury and accident rates.

If evaluation determines program improvement is necessary, the safety committee/coordinator will develop recommendations.

(It's often is easier to conduct an activity than to judge it. But do not ignore this evaluation phase. It will allow you to calculate your training program's bottom line profitability. Have the goals of training been achieved? Do the results warrant offering the training again at some later date? How can the program be improved? Once you have made the effort to provide employee safety and health training, you certainly want to be able to answer these questions.)

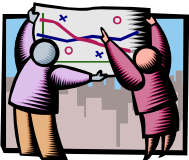
## 7.0 Certification

\_\_\_\_\_  
Reviewed by (Signature)

\_\_\_\_\_  
Date

\_\_\_\_\_  
Approved by (Signature)

\_\_\_\_\_  
Date



**What benefits does a formal safety training plan offer to employers and employees?**

**Benefits to the employee:**

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**Benefits to the employer:**

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## Module 5

# DETERMINING IF TRAINING IS NEEDED

The first step in the training process is a basic one: to determine if a problem can be solved by training.

- Whenever employees are not performing their jobs properly, it is often assumed that training will bring them up to standard.
- However, it is possible that other actions (such as hazard abatement or the implementation of engineering controls) would enable employees to perform their jobs properly.

### **Problems that can be addressed effectively by training include:**

- those that arise from lack of knowledge of a work process
- unfamiliarity with equipment, or
- incorrect execution of a task

### **Training is less effective (but still can be used) for problems arising from:**

- an employee's lack of motivation, or
- lack of attention to the job

Whatever its purpose, training is most effective when designed in relation to the goals of the employer's total safety and health program.

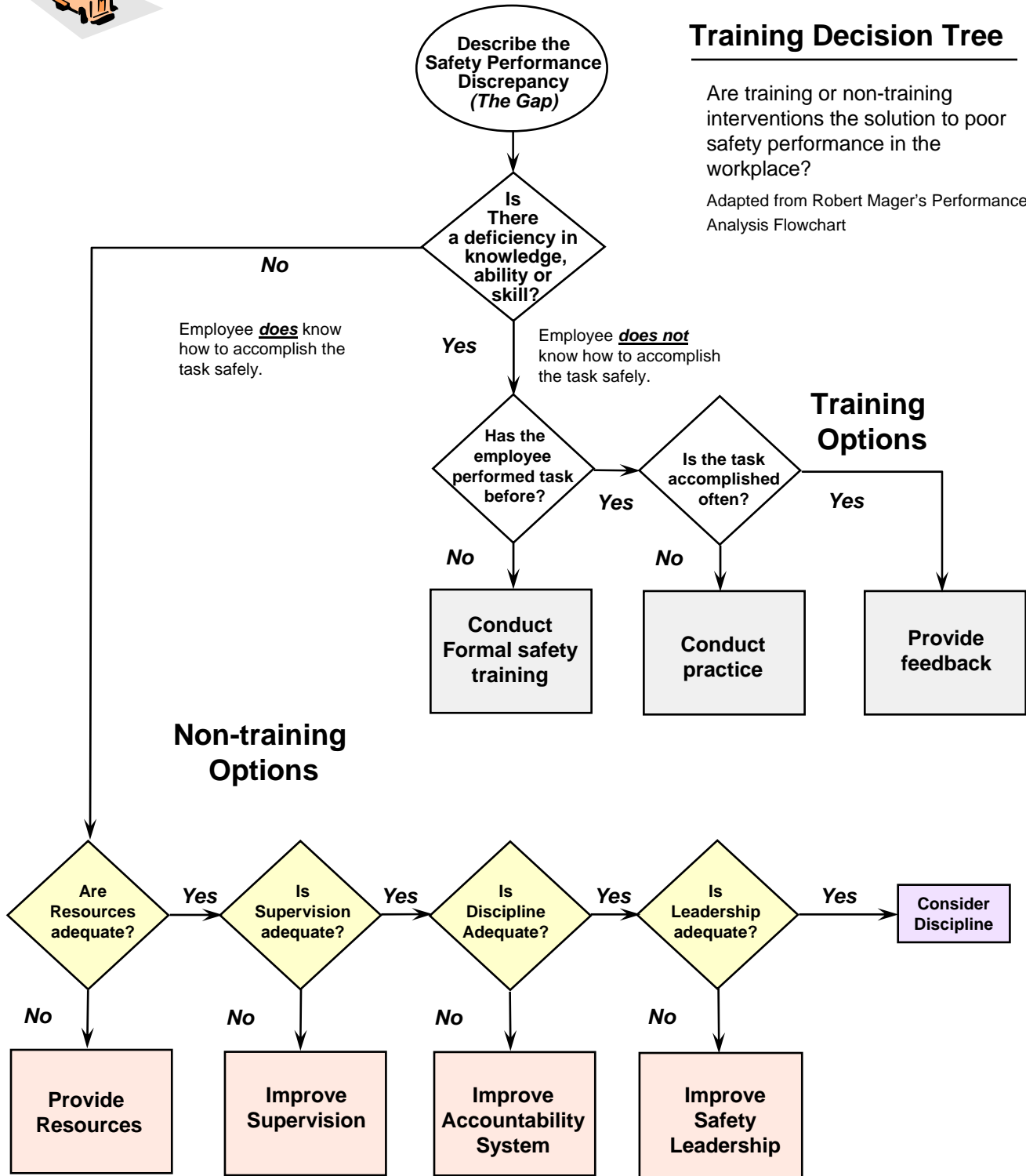


## Poor safety performance may not be the result of a training deficiency

### Training Decision Tree

Are training or non-training interventions the solution to poor safety performance in the workplace?

Adapted from Robert Mager's Performance Analysis Flowchart







# Module 6

## IDENTIFYING TRAINING NEEDS

### HOW TRAINING NEEDS ARISE

There are a number of triggers that may generate a training need. If any of these are likely to effect the department in the future or have in the near past, one or more employees may need training.

#### **Potential Triggers Influences**

- New employees
- Promotions or transfers
- New procedures
- New equipment
- New standards
- New relationships
- Change of curriculum
- Downsizing
- Retirements
- Increased work load
- Management changes
- Changed ownership

#### **Internal Indicators**

- Employee complaints
- Incident/accidents
- Grievances or discipline
- High turnover
- Poor quality ratings
- High or increasing rates of sickness or absence
- Disputes
- Low levels of motivation
- Cases of harassment
- Missed deadlines

#### **External**

- New legislation
- Changes to legislation
- Competitor activity
- Professional body regulations and requirements
- QA codes of practice
- Funding Council requirements
- International standards

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## How to get the information you need

Needs analysis will provide information about (1) the learner, and (2) the task that will help us design training that meets specific learner needs. The employees themselves can provide valuable information on the training they need. Safety and health hazards can be identified through the employees' responses to such questions as whether anything about their jobs frightens them, if they have had any near-miss incidents, if they feel they are taking risks, or if they believe that their jobs involve hazardous operations or substances.

### To get information about the audience



- Observe workers doing work
- Interview and/or survey workers
- Review employee personnel records
- Determine demographics (age, gender, race)
- Determine experience level
- Determine learning styles
- Determine aptitudes, knowledge
- Determine attitudes toward subject being taught

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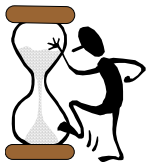


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### To get information about the tasks



- Observe experts doing the task
- Interview experts about the task
- Review job descriptions, policy statements, reports

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Once the kind of training that is needed has been determined, it is equally important to determine what kind of training is not needed. Employees should be made aware of all the steps involved in a task or procedure, but training should focus on those steps on which improved performance is needed. This avoids unnecessary training and tailors the training to meet the needs of the employees.



## CASE STUDY

### Wombly Widgets, Inc.

The situation: OSHA has just completed a comprehensive on-site consultation and recommended to the owner of Wombly Widgets, Inc. that effective training be developed and conducted for:

1. **Hazard Communication Program.** When asked, employees demonstrated a lack of knowledge regarding: (1) spill/emergency procedures, and (2) container labeling requirements for the chemicals they were using.
2. **Lockout/tagout.** Maintenance workers were not familiar with the written lockout/tagout procedures for mechanical power presses.
3. **Personal protective equipment.** Workers were discovered: (1) wearing defective respirators, and (2) improperly storing respirators.
4. **Emergency action and fire prevention plans.** No training has been developed or conducted in: (1) emergency evacuation, or (2) use of fire extinguishers.
5. **Safety committee.** No hazard identification training has been conducted.
6. **Accident investigation.** Supervisors have not received training in effective incident/accident investigation procedures.

### **Currently no such training exists!**

The owner has now come to you, of course, and given you the responsibility for developing and conducting safety training at Wombly. The owner has agreed to allow you to include a few other employees in this effort.

## Background information

- Wombly employs 72 workers (60 employees, 8 supervisors, 4 managers).
- Twenty workers are exposed to the chemicals used in the manufacturing process. Chemicals used in the production process include hydrofluoric acid.
- Seventeen workers are exposed to high noise levels (90+ dBa) during their work shifts.
- Five production workers use/service/maintain mechanical power presses.
- Two janitors regularly use chemicals for cleaning office and plant work areas.
- Three maintenance workers regularly use grinders, table saws, drill presses, various tools, and welding equipment for servicing and maintaining equipment and machinery.
- Two maintenance workers are responsible for cleaning out chemical storage tanks using respirators.
- Thirty-five production workers and one maintenance worker consider English a second language.
- There are six members of the safety committee. The HR manager, production supervisor, maintenance worker, production worker, admin specialist and the receptionist.



**Group Exercise:** Using the worksheet below, (1) choose one of the six training topics listed by the consultant, and (2) use the information given for the case study to conduct an initial needs analysis for that topic. (Ask instructor for more information.)

### Needs Analysis Worksheet

1. Training need as stated by requester or as you view it.

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2. Why the training is required:

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**3. Description of audience receiving training:**

- Job category/position and number of attendees in each learner group

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- Degree of familiarity with the content of training

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**4. Description of the training subject/content:**

- Content of the training. General nature of the subject, topic, job task

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**5. Scheduling requirements of the training:**

- Training start date(s) \_\_\_\_\_
- Length of training \_\_\_\_\_
- Frequency of training \_\_\_\_\_
- Time of training \_\_\_\_\_

**6. Logistical requirements of the training:**

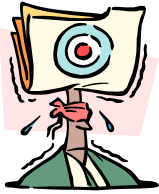
- Physical location \_\_\_\_\_
- Estimated number of participants \_\_\_\_\_
- Space required to conduct training \_\_\_\_\_
- Equipment and other resources required \_\_\_\_\_

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## Module 7



# DEVELOPING GOALS AND OBJECTIVES



Establish clear-cut, competency-based learning objectives that describe what the learner will be able to do at the end of the training presentation

### ***What is a training goal?***

A goal is nothing more than a wish. A training goal is a little bit more than that. It's a general statement about what you want to train. For instance, a training goal might state, "Train our new employees on hazard reporting procedures." In this course we focus on getting beyond goals. We'll focus on writing operational objectives.

### ***What is a learning objective? \****

A learning objective is a statement describing a learning outcome, rather than a learning process or procedure. It describes results, rather than the means of achieving those results. It defines expectations for the learner.

### ***Why do we need to write objectives?***

- They help the instructor design and select instructional content and procedures
- They help the instructor organize the learner's own efforts and activities
- They help the instructor evaluate or assess the success of instruction

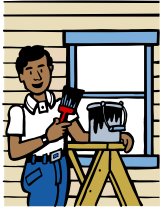
### ***What are the criteria for an effective learning objective?***

Let's analyze the following learning objective to discover its required criteria:

"At the end of the training session, without help, you will list all of the steps of the accident investigation process."

1. **The objective states a time limit.** "At the end of the training session"
2. **The objective specifies the conditions of performance.** "without help"
3. **The objective identifies the performer(s).** "you"
4. **The objective contains one action verb.** "list"
5. **The objective specifies an acceptable standard of performance.** "all steps"

\* Source: Instructional Objectives, Nancy Lenthe Dowling, Stephanie McKinnon, Professional Safety, ASSE, Sept 2002.



## Action verbs to use in writing objectives

Action verbs describe observable/measurable behaviors. Use action verbs when writing objectives for Level Two training. Use concrete vs abstract verbs. For instance, if you use the verb, “demonstrate,” in an objective, you’ll have to figure out how the student will demonstrate. The action verb that answers that question is the one you want to use.

### Action Verbs

classify	describe	discuss	explain	review	select
identify	sort	tell	translate	arrange	name
define	order	duplicate	list	label	match
recall	repeat	reproduce	apply	operate	choose
prepare	schedule	sketch	illustrate	solve	interpret
use	analyze	appraise	discriminate	calculate	distinguish
categorize	examine	compare	experiment	contrast	inventory
criticize	question	diagram	test	arrange	manage
assemble	organize	collect	plan	compose	prepare
construct	propose	create	set up	design	synthesize
write	evaluate	argue	judge	assess	predict
attack	rate	score	estimate	perform	



## Group Exercise: How do these objectives measure up?

**Group Exercise:** Analyze each of the following objectives to determine if they measure up to the five criteria. If they do not, indicate which of the learning objective criteria are missing.

1. The objective states a time limit
2. The objective specifies conditions of performance
3. The objective identifies the performer(s)
4. The objective contains one action verb
5. The objective specifies an acceptable standard of performance

**"Gain a greater awareness of our hazard communications program."**

Objective is adequate \_\_\_\_\_ inadequate \_\_\_\_\_

Missing criteria number(s): \_\_\_\_\_

**"Be able to perform all steps of the lockout/tagout procedure."**

Objective is adequate \_\_\_\_\_ inadequate \_\_\_\_\_

Missing criteria number(s): \_\_\_\_\_

**"Be able to list and discuss six benefits of an effective safety committee."**

Objective is adequate \_\_\_\_\_ inadequate \_\_\_\_\_

Missing criteria number(s): \_\_\_\_\_

***"You will be able to correctly perform all steps of the oil spill cleanup procedure."***

Objective is adequate \_\_\_\_\_ inadequate \_\_\_\_\_

Missing criteria number(s): \_\_\_\_\_





## Training at Wombly Widgets:

Use the following template to construct two learning objectives for the training your group will present.

**Time limit** ➡ **Condition** ➡ **Performer(s)** ➡ **Action Verb** ➡ **Standard**

Example: "At the end of the training session, given a written accident scenario, your group will list at least two surface causes and two possible root causes that may have reasonably contributed to the accident."

### Objective #1:

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### Objective #2:

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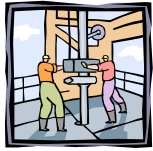
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## Here's an idea - To develop objectives, work backwards

James Evans (“Behavioral Objectives Are No Damn Good,” from *Technology and Innovation in Education*, Washington, D.C.) has pointed out the usual procedure of writing the objectives and then the criterion or performance test to measure the student’s learning is not the most efficient sequence. Instead, Evans recommends that the trainer develop the criterion or performance test first, then write the objectives. The following approach outlines this simplified procedure for writing training objectives.

### **Step 1: Complete a simulated task analysis**

Picture in your mind the job environment, materials, and events so you have an understanding of the job to be performed. (An actual task analysis would be better if it could be done.)

### **Step 2: Identify performance requirements**

Identify the specific things the employee is required to do in order to perform the job in question. These specific "performance items" should be written down in preparation for developing the criterion test.

### **Step 3: Develop a criterion test**

The criterion test should have a direct relationship to the performance requirements of the job. It should also require the actual behavior that we want the learners to be able to perform. If we want them to be able to explain, the criterion test item should ask for an explanation. For instance: If we want them to be able to properly use a respirator, the test should tell them to inspect it, and so on.

#### **In developing a criterion test there are three areas of concern:**

1. What questions do we want the learner to be able to answer, and what are the minimum critical components of an acceptable answer?
2. What problems do we want the learner to be able to solve, and what are the critical components of an acceptable solution?
3. What actions or tasks do we want the learner to be able to carry out, and what are the critical components of acceptable action?



# Module 8

## DETERMINING COURSE CONTENT

**The content is everything the learner will have to learn in order to achieve a learning objective.**

Selecting content for a training program is a decision-making process. That is, trainers must decide what and how much about a particular area of study they want trainees to learn or know. In essence, content is the subject matter of the lesson.

If the objective is to teach someone to safely drive a forklift, then the course content may be learning to start, load, accelerate, shift, steer, stop, and inspect the forklift. It is the step-by-step process of what the trainee must learn if the objective is to be attained.

### Two important criteria

Two important criteria for deciding on content are usefulness and appropriateness in relation to the stated objectives.

- **It must be useful.** The content should be important to the employee. The content should be perceived as relevant, useful to the employee.
- **It must be appropriate.** Ideally, each particular topic within the training session should directly support one or more objectives. If it does not, then that part of the content may be perceived as inappropriate, unclear or not well thought out.

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**Figure this out! If the objective is to learn how to drive the forklift, all of the following would be useful and appropriate for the student to learn except?**

- a. The related OSHA rules related to forklifts
- b. Overview of the history and development of the forklift
- c. How to operate the forklift since he will be driving the forklift in the workplace



## Developing Learning Activities

Once the objectives for the training are precisely stated, then learning activities can be identified and described.

### Learning activities are important for a number of reasons:

- They enable employees to demonstrate that they have acquired the desired skills and knowledge
- They help ensure that employees effectively transfer the skills or knowledge from the training session to the job
- They help make training more interesting, increase motivation to learn

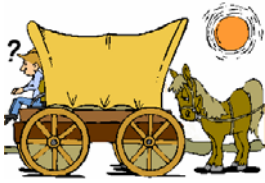
### Hands-on Training: Learn by doing

Hands-on training is usually quite effective in training because it uses a simulated work environment that permits each student to have experience performing tasks, making decisions, or using equipment appropriate to the job assignment for which the training is being conducted.

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## Sequencing - Don't put the cart before the horse

The sequencing of training content and material is almost as important as the content itself. And, it can defeat the purpose of a training program if it is not carefully thought out.

Trainers should be concerned about the logical sequencing of training, because if the lesson does not unfold in a building, reinforcing way, learning may be less effective.

As an example, a trainer would not have a worker jump into a hazardous task without first learning some basic information covering related hazards and necessary steps to work safe.

### Basic “strategies” to consider in sequencing safety training:

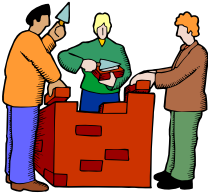
1. Information should flow from the general to the specific - Move gradually to the many and varied specific on-the-job applications of the concepts discussed.
2. Information should develop from the simple to the complex - The design should begin with a fairly simple conceptual overview of the subject to be learned.
3. Training concepts should move from theory to practical application.
4. Training may transition from known to unknown concepts, ideas, or processes.
5. For On-the-Job Training (OJT), sequence the content so that it corresponds to the order in which the tasks are performed on the job.

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## On The Job Training (OJT) Sequence

**Step 1. Introduction.** Tell the learner what you're going to train. Emphasize the importance of the procedure to the success of the production/service goals. Invite questions. Emphasize accountability.

**Step 2. Trainer show and tell.** The trainer demonstrates the process. The trainer first explains and demonstrates safe work procedures associated with the task. In this step the learner becomes familiar with each work practice and why it is important.



Trainer: **PERFORMS** and **EXPLAINS** each step.



Learner: **OBSERVES** each step and **QUESTIONS** the trainer.

**Step 3. Trainer ask and show.** The learner explains the procedure to the trainer, while the trainer does it. This gives the trainer an opportunity to discover whether there were any misunderstandings in the previous step. This step also protects the learner because the trainer still performs the procedure. The learner also responds to trainer questions.



Learner: **EXPLAINS** each step and **RESPONDS** to questions.



Trainer: **PERFORMS** each step and **QUESTIONS** the trainee.

**Step 4. Trainee tell and show.** The trainer has the trainee do it. The learner carries out the procedure but remains protected because the learner explains the process before proceeding to do it



Learner: **EXPLAINS**, **GETS PERMISSION**, and then **PERFORMS** each step.



Trainer: **GIVES PERMISSION**, **OBSERVES** each step and **QUESTIONS** the trainee.

**Step 5. Conclusion.** Recognize accomplishment. Reemphasize the importance of the procedure. How it fits into the overall process. Tie the training again to accountability.

**Step 6. Document.** Training documentation should be more than an attendance sheet. See the sample training certification document in Module 15. It represents one possible way to document training.

**Step 7. Validate.** The supervisor or other person validates the training by observing performance and asking questions at some point in time after the training.



**Group Exercise:** Use the worksheet below to develop the course content and the sequence you'll use in presenting the topic.

1. Write one of the learning objectives developed in the last module.
2. Next, list what employees will need to **know** in order to complete those actions.
3. List the **actions** employees must take to accomplish the objective.
4. Finally, **sequence** the course content according to how it should be most effectively presented to achieve the objective.

**Course Content Development Worksheet**

This worksheet helps determine everything the learner needs to know and do to meet this objective.

**Learning objective:** At the end of training, learners will (will be able to)...

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**Knowledge Requirements:** What learners need to do to prove they know to complete the above actions. Learners must know... (list subjects)

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**Actions:** Describe what learners will need to do to achieve the above objective. Learners must be able to ...(list activities)

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## Course Content Development Worksheet

**Presentation Sequence:** Determine the sequence strategy your group will use. List the sequence of training topics to be discussed.

Sequence strategy: \_\_\_\_\_

1 \_\_\_\_\_

2 \_\_\_\_\_

3 \_\_\_\_\_

4 \_\_\_\_\_

5 \_\_\_\_\_

6 \_\_\_\_\_

7 \_\_\_\_\_

8 \_\_\_\_\_





## Module 9

# DEVELOPING LEARNING ACTIVITIES

A few factors will help to determine the type of learning activity to be incorporated into the training. One aspect is the training resources available to the employer. Can a group training program that uses an outside trainer and film be organized, or should the employer personally train the employees on a one-to-one basis? Another factor is the kind of skills or knowledge to be learned. Is the learning oriented toward physical skills (such as the use of special tools) or toward mental processes and attitudes? Such factors will influence the type of learning activity designed by employers. The training activity can be group-oriented, with lectures, role play, and demonstrations or designed for the individuals with self-paced instruction.

### **It's important to consider appropriate training methods because:**

- They provide an effective means for the trainee to learn specific information.
- They keep the trainee interested and involved in the learning process.

### **Important questions to ask about the training methods used include:**

- Will the method effectively help the learner accomplish the learning objective?
- Does the method work for the number of learners participating?
- Does the method take into account any special characteristics of the group?
- Will the method work at the training location?
- Will there be enough classroom time to complete the method?
- Will the employer be able to provide the resources to support the method?

Determining methods and materials for the learning activity can be as varied as the employer's imagination and available resources will allow. The employer may want to use charts, diagrams, manuals, slides, films, viewgraphs (overhead transparencies), videotapes, audiotapes, or simply blackboard and chalk, or any combination of these and other instructional aids. Whatever the method of instruction, the learning activities should be developed in such a way that the employees can clearly demonstrate that they have acquired the desired skills or knowledge.



## What motivates adult learners?

Adults, by definition, are responsible people who seek to build their self-esteem through practical learning activities in which their competency is enhanced. Adults have a strong need to be able to successfully apply what they learn to the job. If they think training is a waste of their time, they are not likely to be motivated to learn.

### ***You bet I want to do this!***

What's the formula to help ensure adult learners are motivated in a training session? Adult motivation occurs on four integrated and increasingly more effective levels:



• **Success.**

The learner believes that he or she has the ability to successfully complete the training. "Hey, I can do this!"

$$M = S$$

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• **Volition.**

Along with a feeling of success, the learner has a sense of choice or willingness to learn. This is the most critical level of motivation for adult learning. "I can do it my way."

$$M^2 = S + V$$

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• **Value.**

In addition to success and volition, the learner thinks the training is important. The learner may not particularly enjoy the material, but they take it seriously. "I want to do this because it's important."

$$M^3 = S + V + V$$

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• **Enjoyment.**

Finally, the learner not only feels confident about completing the training, they are willing and they believe it's important, they also have fun learning. "I like doing this!"

$$M^4 = S + V + V + E$$

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\* Adapted from: *Enhancing Adult Motivation to Learn*, Raymond J. Wlodkowski, ISBN 0875896480



## What's my learning style?

You may want to administer this simple survey to a sample (or all) employees in your workplace to help determine the best training methods for the training you present.

Check yes or no beside each of the following statements to discover how you generally learn. Be honest and think in terms of most of the time, not exceptions.

	YES	NO
1. I learn a lot from listening to instructors	_____	_____
2. I figure things out best by trial and error.	_____	_____
3. Books are easy for me to learn from.	_____	_____
4. Give me a map and I can find my way.	_____	_____
5. I like to have directions explained to me verbally.	_____	_____
6. I can assemble something without looking at the instructions.	_____	_____
7. I learn a lot from discussions.	_____	_____
8. I'd rather watch an expert first and then try a new skill	_____	_____
9. I like to take things apart to see how they work	_____	_____
10. I can remember most of what is said without taking notes	_____	_____
11. My best classes involve activities and movement	_____	_____
12. Diagrams and drawings help me understand new concepts	_____	_____

### How to interpret the results

This short quiz cannot diagnose accurately how you learn, it can give you insight into how you see yourself and the learning process.

#### You learn by hearing.

You are a strong auditory learner if you answered "yes" to questions 1, 5, 7 and 10.

#### You learn by seeing.

You are a strong visual learner if you answered "yes" to questions 3, 4, 8 and 12.

#### You learn by doing.

You are a strong kinesthetic learner if you answered "yes" to questions 2, 6, 9 and 11.

### How many hearers, seers, and doers are there?

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## What Methods Work For You

There are more than a hundred different methods of helping others learn. Here are but a few, but probably the most common, popular, and easiest to use.

**Check the two training methods that work best and least for you.**

- \_\_\_\_\_ 1. CASE STUDY: Actual or hypothetical situation.
- \_\_\_\_\_ 2. LECTURE: Oral presentation of material, usually from prepared notes and visual aids.
- \_\_\_\_\_ 3. ROLE PLAY: Participants improvise behavior of assigned fictitious roles.
- \_\_\_\_\_ 4. SMALL GROUP: Participants divide into sub-groups for discussion or exercise.
- \_\_\_\_\_ 5. GAMES: Simulations of real-life situations.
- \_\_\_\_\_ 6. STORIES: Actual or mythical examples of course content in action.
- \_\_\_\_\_ 7. EXERCISES: Various tasks related to specific course content.
- \_\_\_\_\_ 8. DISCUSSION: Facilitated opportunity for participants to comment.
- \_\_\_\_\_ 9. BRAINSTORM: Participants generate ideas on a problem situation.
- \_\_\_\_\_ 10. JOB AIDS: Summaries of key points of course content, for use back on the job.

**Describe why the two methods you ranked best work for you.**

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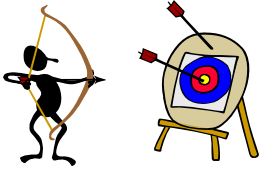
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**Describe why the two methods you ranked least do not work for you.**

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## Strategies to help you meet objectives

### Strategy 1:

To help people understand something by providing information use the following methods:

Articles	Audiotapes
Lectures	Programmed Instruction
Diagrams	Online Internet courses

### Strategy 2:

To help people do something by providing opportunities to experiment with the procedure/practices use the following methods:

Case Studies	Demonstrations
Role Play	Exercises
Video	Worksheets

### Strategy 3:

To help people understand and possibly change their values and priorities by providing methods to inquire and observe by comparing/contrasting old and new ideas use the following methods:

Role Play	Exercises
Films/Video	Self-Analysis
Games	Interviews

### Strategy 4:

To improve learner creativity by helping learners to experience innovation use the following methods:

Mind Maps	Case Studies
Brainstorming	Analysis
Games	



**Huddle up! Determine the best methods to use. Select one or more methods to best achieve the learning objective(s).**

1. List the topics from the course content development worksheet on page 42.
2. List a strategy number and training method from page 47 your group would use for each topic.
3. Briefly describe the advantages of using the methods your group chose.

**Topic** \_\_\_\_\_ **Strategy #** \_\_\_\_\_  
**Method** \_\_\_\_\_

**Advantages**  
\_\_\_\_\_  
\_\_\_\_\_

**Topic** \_\_\_\_\_ **Strategy #** \_\_\_\_\_  
**Method** \_\_\_\_\_

**Advantages**  
\_\_\_\_\_  
\_\_\_\_\_

**Topic** \_\_\_\_\_ **Strategy #** \_\_\_\_\_  
**Method** \_\_\_\_\_

**Advantages**  
\_\_\_\_\_  
\_\_\_\_\_

**Topic** \_\_\_\_\_ **Strategy #** \_\_\_\_\_  
**Method** \_\_\_\_\_

**Advantages**  
\_\_\_\_\_  
\_\_\_\_\_



# Module 10

## Developing Training Aids

Training aids are devices which can be used to clearly, concisely and quickly record and deliver training.

### **Why use visual aids**

- Visual aids help your presentation make things happen.
- Visual aids help you reach your objectives by providing emphasis to whatever is being said.
- Clear pictures multiply the audience's level of understanding of the material presented.
- They can reinforce your message, clarify points, and create excitement.
- Visual aids involve your audience and require a change from one activity to another: from hearing to seeing.
- They tend to encourage gestures and movement on your part. This extra movement reinforces the control that you, the speaker, need over the presentation.
- Visual aids add impact and interest to a presentation.
- They enable you to appeal to more than one sense at the same time, thereby increasing the audience's understanding and retention level.

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# The Pros and Cons of Visual Aids

## The Pros

## The Cons

- Videotapes or films

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- 35mm slides

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- Computer-generated slides

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- Overhead transparencies

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- Handouts

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- Flipcharts or whiteboards

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- Job aids/Props

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- Instruments

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**Mind Meld! Once again review the course content development worksheet and the methods you plan to use for your presentation. Determine at least two training aids that would best motivate learning.**

1. Review the sequence of training topics and methods.
2. Describe the training aid that will best help you present using the methods selected.
3. List the advantages of using the training aids your group chose.

## Training Aids Worksheet

**Method**

**Training Aid**

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**Advantages**

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**Method**

**Training Aid**

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**Advantages**

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**Method**

**Training Aid**

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**Advantages**

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## Module 11

# WRITING LESSON PLANS

Whether you train a subject once, or often, it's important that you develop a lesson plan. It's a valuable planning tool that helps you make sure learners receive all the information they need in order to learn, and it enables you to conduct your training in an organized, professional manner.

The lesson plan is a written record detailing how you intend to actually conduct the training course. It includes the learning objective, training content, sequencing, and the training methods and training aids you will use in teaching the content.

**Your training plan serves different purposes at different points in time, as shown below.**

1. During lesson development it's a planning tool for helping you plan the details of the lesson.
2. Before conducting the lesson it is serves as a preparation guide for rehearsing the lesson.
3. While presenting the lesson it's a roadmap for you to follow.
4. After the lesson it's a document that you (or others) can improve or use as is to present the lesson again.

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## **Sample Lesson Plan**

### **General Industry Outreach Training Program (10-hour)**

#### **Topic: Safety and Health Programs**

#### **Overview**

Introduce trainer and students as appropriate. Describe topics to be discussed, ground rules, facilities, scheduled breaks, emergency procedures.

#### **Step 1: Planning the Lesson**

##### **Instructional Materials.**

1. PowerPoint presentation
2. Instructor notes.
3. Other materials.

##### **Instructional Objectives.**

1. Complete the required topics for the OSHA 10- hour course.
2. Present *Safety and Health Programs* to participants.
3. Incorporate active participation in each lesson.
4. Provide a quiz or short evaluation at the end of the course.
5. Ensure feedback from participants at various points in the training.

##### **Guest Speakers/Presenters and Topics/Responsibilities.**

## **Step 2: Presenting the Lesson**

### **Lesson Introduction.**

Introductory remarks or transition from previous lesson.

### **Learning Objectives/Outcomes.**

Upon completion of the lesson, participants will be able to:

1. Discuss the benefits of an effective safety and health program.

Possible responses.

- Reduces work-related injuries and illness.
- Improves morale and productivity.
- Reduces workers' compensation costs.

2. Name the four elements of an effective safety and health program.

Possible responses.

- Management commitment and employee involvement
- Worksite analysis
- Hazard prevention and control
- Safety and health training

3. Name three methods to prevent and control workplace hazards.

Possible responses.

- Engineering controls.
- Administrative controls
- Personal protective equipment
- Safe work practices

## **Step 3: Evaluating of Student Learning and Instruction**

**Written test and/or skills demonstration**

**Lesson Evaluation and Comments**

Sample Lesson Plan adapted from Brookhaven National Laboratories, U.S. Dept. of Energy



## The Job Hazard Analysis...use it as a lesson plan!

You can use the JHA as your basic training outline. Doing this will ensure:

- training covers safety procedures and practices as well as other operational steps
- safety procedures and practices are consistently taught by all trainers

### SAMPLE JOB HAZARD ANALYSIS WORKSHEET

**Job Description:** Loading an empty trailer with pallets of product.

Basic Job Step	Hazards Present	Safe Job Procedure
1.Ensure that trailer is correctly spotted.	1. Worker could be caught between backing trailer and dock Worker could fall from the dock.	1. Stay clear of the doorway while the trailer is being backed onto the dock. Keep others away from the area. Remove awareness chain or bar from the front of the dock door once the trailer is properly spotted.
2. Chock wheels; place jacks under trailer nose.	2. Work could fall on stairs going to dock well. Head could be struck against trailer. Worker could slip on ice or snow	2. If the truck driver has not chocked the wheels, go down tile ramp/stairs to the dock well and chock the wheels. Use caution when walking on snow or ice. Hold onto hand rails; use ice-melt chemical if needed. When placing the chock, avoid bumping the head on the underside of the trailer. Place jacks under the nose of the trailer. If the dock is equipped with an automatic trailer restraint, push the button to activate the device.
3.Open trailer door.	3. Overexertion opening door. Struck by falling product	3. If the trailer doors have not been opened, stand clear of the doors while unlocking and moving them. The best method is to stand behind a door and stay with it while swinging it open to avoid being struck by falling product. If it is a roll-up door, use your legs while the back is straight to lift the door. Be alert for falling material. Do not lift the door rapidly.

Reference: Job Hazard Analysis, by George Swartz, CSP, Government Institutes Pub.



## Module 12

# DEVELOP EVALUATION METHODS

### **Guidelines for evaluating proficiency**

**OSHA believes proficiency should be evaluated and documented by the use of:**

1. a written assessment, and
2. a skill demonstration.

**Use these guidelines when developing testing methods for your safety training:**

- The assessment and demonstration should evaluate the knowledge and individual skills developed in the course of training.
- The level of minimum achievement necessary for proficiency should be specified in writing (as stated in the learning objectives).
- If a written test is used in combination with a skills demonstration, a minimum of 25 questions should be used for more complex subjects like lockout/tagout, confined space entry and emergency response procedures.
- If a skills demonstration is used, the tasks chosen and the means to rate successful completion should be fully documented.
- The content of the written test or of the skill demonstration should be relevant to the objectives of the course.
- The written test and skill demonstration should be updated as necessary to reflect changes in the curriculum.

The proficiency assessment methods, regardless of the approach or combination of approaches used, should be justified, documented and approved by the employer.

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## Level 1 Evaluation: Evaluates learner reaction

The purpose of this level of evaluation is to get feedback from participants about what they thought and felt about various aspects of the program. Were the participants pleased and satisfied.

- **Process Evaluation** - students describe their reaction to the presentation of the instructor, the quality of the materials, the understandability of the exercises, and so on.
- **Content Evaluation** - students describe their reactions to and satisfaction with the specific content of the training. Students judge instructor knowledge and how much they believe they learned about each specific topic.
- **Methods:** Evaluations, questionnaire immediately after the program. Post-program conversations.
- **Guidelines for evaluating reaction:**
  - ✓ Determine what you want to find out
  - ✓ Design a form that will quantify reactions
  - ✓ Encourage written comments and suggestions
  - ✓ Get 100 percent immediate response
  - ✓ Get honest responses
  - ✓ Develop acceptable standards
  - ✓ Measure reactions against standards, take appropriate action
  - ✓ Communicate reactions as appropriate

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\* Adapted from; Donald Kirkpatrick, *Evaluating Training Programs, The Four Levels*, Berrett-Koehler Pub., 1994



## Some questions to ask

If, after training, it is clear from the evaluation that employees were not satisfied with the content or presentation of training, it may be necessary to revise the lesson plan or some other part of the training program. It may be helpful to ask employees more questions to more specifically understand what the problem is. Here are some examples:

- Was the content appropriate for their level of experience?
  - ✓ Did learners already know the information?
  - ✓ Was it assumed they had experience when they didn't?
  
- What material was confusing or distracting?
  - ✓ Was the content too complicated?
  - ✓ Was the level of language appropriate to the audience?
  
- Was anything missing from the program?
  - ✓ Workbooks, handouts
  - ✓ Media (slides, photos, videos, etc)
  - ✓ Visiting speakers
  
- What did the employees learn, and what did they fail to learn?
  - ✓ Was the topic applicable to their job?
  - ✓ Did they consider the information of little value
  - ✓ Did they think the information would help them personally?
  
- Were learners motivated
  - ✓ Did they understand the importance of the material?
  - ✓ Did they understand the benefits of safety performance?

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# Sample Level 1 Measurement Tool: The Student Evaluation



Course Name \_\_\_\_\_ Date: \_\_\_\_\_ Instructor: \_\_\_\_\_

## ***WE VALUE YOUR COMMENTS!***

Yes No

I supervise other workers or manage programs:

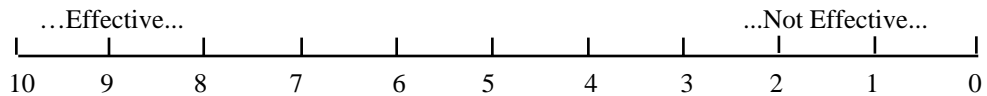
### Agree Disagree **Rate the Course Content**

1. The information presented was easy to understand and useful.

2. The information presented will help improve the effectiveness of our safety committee and/or safety and health program.

3. The course materials provided were helpful.

4. Please rate the overall effectiveness of this workshop in helping you better understand and apply this safety and health subject:



Comments: (Please take the time to explain all "no" or "not effective" responses.) \_\_\_\_\_

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### Agree Disagree **Rate the Instructor**

1. The Instructor provided quality training (relevant, interesting, applicable, etc.) and was knowledgeable about occupational safety and health.

2. The Instructor was able to answer questions adequately or make a referral.

3. The Instructor encouraged participation.

4. Please rate the overall effectiveness of the Instructor in helping reduce your safety and health problems:



Comments: (Please take the time to explain all "no" or "not effective" responses.) \_\_\_\_\_

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## Level 2 Evaluation: Evaluates the Learning.

Level two evaluation involves measuring the learning that took place during the training session. Evaluation occurs immediately after the training is presented. Quantifying the learning that took place by measuring increased knowledge and improved skills.

- Did the participants learn anything as a result of the training?
- This level of evaluation is necessary for most safety training that requires the ability to correctly perform a procedure or practice.
- **Methods:** Classroom performance. Paper-and-pencil quiz. Tests before and after the training program. Demonstration of skill(s).
- **Guidelines for evaluating learning:**



- ✓ Develop a control group if possible. Enlist the help of skilled employees
- ✓ Pretests - Post tests: Measure knowledge, skills, and attitudes before and after the training session
- ✓ Measure all students

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## Sample Level 2 Measurement Tool: The Written Exam

### Before you run...let's review

1. Conditions cause around \_\_\_\_ % of the accidents in the workplace, while behaviors account for about \_\_\_\_ % ?

2. Which of the following is not considered a surface symptom?

- a. An unguarded saw.
- b. A missing MSDS.
- c. PPE training does not contain practice of spill procedures.
- d. A maintenance worker fails to wear eye protection.
- e. A forklift driver speeds around a corner in the warehouse.

3. All of the following are system (root) causes, except?

- a. A staff member fails to review safety rules during orientation
- b. No lockout/tagout procedures in place
- c. A missing training plan
- d. Supervisors are ignoring safety rules
- e. An inspection process does not include machine guarding hazards

4. Engineering controls change \_\_\_\_\_. Work practice and administrative controls change \_\_\_\_\_.

- b. Behavior, things
- a. Objects, behavior
- c. Awareness, attitude
- d. PPE, performance

5. Why is it important to focus on fixing the system, not the blame?

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## Level 3 Evaluation: Evaluates the application

This level of evaluation measures both the learner and immediate safety culture. It gauges how well the learner applied the training. Evaluation at this level may also indicate the degree to which the safety culture supports the training.

- Did the training lead to improved on-the-job performance by the participants?
- This level of evaluation may not be required by OSHA standards, but it's good business policy to help make sure training is effective.
- **Culture.** For training to be truly effective, the safety culture must support the training. A supportive safety culture is most immediately demonstrated by the learner's immediate supervisor. According to Donald Kirkpatrick, there are five supervisor behaviors that affect learner attitudes about safety training:
  - ✓ Preventing. The supervisor does not allow the worker to use the procedures or practices that have been taught.
  - ✓ Discouraging. The supervisor does not encourage behavioral change. They send implicit messages that they want behavior to remain the same.
  - ✓ Neutral. The supervisor does not acknowledge the training received. There is no objection to behavioral change as long as the job gets done on time.
  - ✓ Encouraging. The supervisor acknowledges the training and encourages the worker to use what they learned.
  - ✓ Requiring. The supervisor knows what training was received and insists that the learning is transferred to the job. This response is the most supportive and will be necessary most of the time for effective safety training.
- **Methods:** Before and after comparisons. Questionnaires. Interviews.
  - ✓ Measure behaviors against standards developed by a control group.
  - ✓ Allow enough time after training to make sure behaviors have been incorporated.
  - ✓ Observe students, interview supervisors/coworkers.
  - ✓ Sample an appropriate percentage of trainees. Sample all trainees if appropriate.

## Sample Level 3 Measurement Tool: The Post-Training Survey

Instructions: This survey can be adapted to your own particular training needs. Send the survey to everyone who has completed a given course within the last several months. Allow survey respondents to remain anonymous. You may also want to design a survey for supervisors of course participants.

COURSE TITLE \_\_\_\_\_ DATES ATTENDED \_\_\_\_\_

COURSE OBJECTIVE \_\_\_\_\_ DATE of SURVEY \_\_\_\_\_

Please circle the number which corresponds with your answer.

Very Little=1    Some =3    Very Much= 5

\_\_\_ 1. To what degree did you think that you achieved the course objective stated above?

\_\_\_ 2. To what degree do you now use the skills you learned in the course?

\_\_\_ 3. To what degree has your job performance improved as a result of this course?

\_\_\_ 4. List 3 ways you have used the skills you learned in the course to improve your job performance.

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\_\_\_ 5. Why have you applied the skills you have learned to your job? (Check any items that apply).

\_\_\_ My supervisor discussed with me how my new skills would be used in my job.

\_\_\_ My supervisor required me to use the new skills in my job. I received help from others in my work area to use my new skills.

\_\_\_ I was given the necessary time and tools to apply the skills. The training was timed so that I needed the skills in my job right away.

\_\_\_ The skills I learned applied directly to my job assignment

\_\_\_ Other (please specify) \_\_\_\_\_

\_\_\_ 6. Why have you NOT applied the skills you learned in the course to your job? (Check any items that apply).

\_\_\_ My supervisor did not require me to use the skills.

\_\_\_ My supervisor did not agree with the skills I learned.

\_\_\_ My supervisor was not aware of what skills I learned.

\_\_\_ I was not given the time nor tools to implement the skills I learned.

\_\_\_ There was no one in my work area to help me use my new skills. The skills I learned did not apply to my job assignment.

\_\_\_ The training was not timed right for my job assignment.

\_\_\_ Other (please specify) \_\_\_\_\_



**Evaluate this! Determine the levels of evaluation that will be required to make sure your training has achieved the learning objective(s).**

***Which level(s) of evaluation has been requested, or will be required by the training you have developed and presented?*** (Check all that apply)

Level I

Level II

Level III

***What method(s) will you use to evaluate at each level?***

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***What questions will you include on your training evaluation form?***

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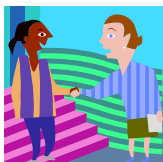
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## How to make the introductions interesting during the Presentation:

- Thank the audience for coming to listen to the presentation
- Establish your credibility - explain your experience, share your interest in the materials being presented
- Present the agenda (the main ideas)
- Set out any expectations from the audience
- Discuss the schedule for breaks
- Give a time frame for your presentation
- Tell the audience what you hope they will learn by the end of your presentation
- Do not come across as arrogant and having all the answers
- Once you've gained attention, transition into the body of your presentation



## Ways to create an interactive, friendly atmosphere during the presentation:

- Familiarize participants with safety/housekeeping items such as location of exits and bathrooms.
- Begin the session on time
- Greet people as they come in the room
- Engage in "small talk" with participants
- Make yourself available during breaks
- Make positive eye-contact
- Having participants fill out name tags so that you can call them by their name
- Listening to the question and then answering - do not anticipate the rest of the question as this will lead to a confused answer for the person asking the question.
- Keeping distractions to a minimum, such as squeaky doors and flickering lights. If you arrive early enough, there is usually time to do something about it.



There are as many presentation styles as there are presenters. The key to effective presentation is in being able to adapt your natural presentation style so that it best fits the needs/wants of the audience. Since you will be training adults, let's take a look at some tips on effective presentation skills.



**Group Exercise: Work this out! Discuss and list do's and don'ts for effective presentations that apply to each element below.**

***Voice***

Do's - \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Don'ts \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

***Pace***

Do's - \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Don'ts \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

***Position***

Do's - \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Don'ts \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**Control**

Do's - \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Don'ts \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**Dress**

Do's - \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Don'ts \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**Attitude**

Do's - \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Don'ts \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**Expertise**

Do's - \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Don'ts \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_



## Asking and Answering Questions

### Asking questions

The two basic types of questions trainers use during a presentation --- open questions and closed questions.

- Open questions require more than a "yes" or "no" answer. Stimulates thinking, discussion. Usually begins with a "what," "how," "when," "why."
- Closed questions only a one word "yes" or "no" answer. Closes off discussion. Usually begins with "is," "can," "how many," "does."



### Listening to questions

- listen to your audience's questions and comments first before thinking of your response.
- welcome difficult questions (or at least appear to welcome them!)
- to build rapport, say, "That's a good question." or, "I'm glad you asked that."
- make direct eye contact with the person
- focus on the person when they are asking the question
- move towards the person
- repeat the question so the rest of the audience can hear it.
- rephrase the question if you are not clear what is being asked



### Answering questions

- Respond initially to the person who asked the question
- then shift eye contact to the broad audience
- answer the question clearly and briefly
- hold your ground and don't back down with hostile questions
- if you don't know the answer, say so
- conclude by transitioning attention back to the person who asked the question
- if appropriate, ask, "Did I answer the question for you?" or "Does that help?"



**Match these! Match the Feelings/Thoughts listed on the left with the non-verbal behaviors on the right.**

**Feelings/Thoughts**

- a. Motivated/Likes it
- b. Bored/Not important
- c. Confused/Doesn't understand

**Behaviors**

- \_\_\_\_\_ Smiling
- \_\_\_\_\_ Frowning
- \_\_\_\_\_ Yawning
- \_\_\_\_\_ Nodding affirmatively
- \_\_\_\_\_ Vacant stare
- \_\_\_\_\_ Scratching head
- \_\_\_\_\_ Shuffling feet
- \_\_\_\_\_ Leaning forward
- \_\_\_\_\_ Direct eye contact
- \_\_\_\_\_ Leaning back in chair
- \_\_\_\_\_ Pursing lips
- \_\_\_\_\_ Looking at clock
- \_\_\_\_\_ Avoiding eye contact

***What should we do if several learners appear to be bored with training?***

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***What should trainers do if several learners appear to be confused?***

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## Handling Problem Situations

They may be rare, but problem situations, in which learning is inhibited due to the behavior of one or more of the learners, may occur.

Problem situations have something to do with the level of participation of individual learners: when learners participate too much or too little.

- Too much participation. Learners may not be able to fully participate in group or class activities when an individual learner is too vocal. Overly vocal learners may be merely the result of an enthusiastic interest in the course material.
- Too little participation. When one participant is too vocal, others may not feel comfortable participating, and remain silent. Their valuable input may be lost from the group. In addition, the trainer may not be able to accurately assess the degree of learning that's taking place when learners are silent. On the other hand, silent learners may just be nervous about expressing themselves in front of others.

Problem situations may occur when learner behavior is perceived by the trainer as inappropriate.

- Hostility. A learner may express hostility towards the trainer, the company, or another learner. Don't assume that such behavior on the part of learners is a reflection of their hostility toward you or your training.



## What to do?

When the learner appears to be overactive or inhibited in some way, there are three important strategies to consider:

- Eliminate or reduce the problem behavior. Resolve the problem to the extent necessary.
- Maintain the self-esteem of the learner causing the disruption.
- Avoid further disruptions. Make sure the learning environment is relaxed and conducive to learning.

## Important strategies for handling problem situations

- Remain emotionally neutral.
- Identify possible strategies you or other trainers have used before in the a similar situation.
- Evaluate alternative strategies against the considerations above.
- Select the strategy that best satisfies the criteria for the situation.





## Module 14

# COORDINATING LOGISTICS

Determine where and when the training will occur. What will classroom set-up be? Who must be contacted to coordinate training? These and other questions are important logistical considerations when planning the training.

***What is generally the best time of day to train? Best day(s) of the week?***

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***What are some tips to remember about coordinating the training with others?***

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***What should you consider when setting up a room for training?***

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## Module 15

# DOCUMENTING SAFETY TRAINING

***Why is it so important to thoroughly document safety training?***

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### **Make sure your documentation is adequate**

Usually, safety training documentation should be more than an attendance sheet. See the sample training certification document on the next page. It represents one possible way to document training. Strong documentation includes:

- The name of trainee(s) and trainer(s)
- The Date of training
- A description of the Subject(s) being trained - procedures, practices, related policies, rules, etc.
- Certification - a place for trainee and trainer signatures
- A trainee statement of understanding and intent to comply
- A trainee statement that he/she was provided opportunity to ask questions and practice.
- A trainer statement that all questions were answered and an opportunity to practice was provided
- A trainer statement that measurement (testing) of knowledge and skills was conducted and that trainees met or exceeded required levels of performance



## Sample Safety Training Certification

(Company Name)

**Training Subject** \_\_\_\_\_ **Date** \_\_\_\_\_ **Location** \_\_\_\_\_

**Trainee certification.** I have received on-the-job training on those subjects listed (see other side of this sheet):

This training has provided me adequate opportunity to ask questions and practice procedures to determine and correct skill deficiencies. I understand that performing these procedures/practices safely is a condition of employment. I fully intend to comply with all safety and operational requirements discussed. I understand that failure to comply with these requirements may result in progressive discipline (or corrective actions) up to and including termination.

Employee Name	Signature	Date
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

**Trainer certification.** I have conducted orientation/on-the-job training to the employees(s) listed above. I have explained related procedures, practices and policies. Employees were each given opportunity to ask questions and practice procedures taught under my supervision. Based on each student's performance, I have determined that each employee trained has adequate knowledge and skills to safely perform these procedures/practices.

Trainer Name	Signature	Date
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Reviewed by:

Safety Coordinator	Signature	Date
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**Supervisor Follow-up Evaluation of Training.** I observed/interviewed the above employees on \_\_\_\_\_ date(s). All employees demonstrated adequate knowledge and skills to safely perform all steps of the procedures/practices presented in this training session.

## Page 2 of certification- Sample Hazard Communication Training Outline

### The following information was discussed with students:

Overview of the hazard communication program - purpose of the program

- Primary, secondary, portable, and stationary process container labeling requirements
- Discussion of the various sections of the MSDS and their location
- Emergency and Spill procedures
- Discussion of the hazards of the following chemicals to which students will be exposed
- Symptoms of overexposure
- Use/care of required personal protective equipment used with the above chemicals
- Employee accountability
- \_\_\_\_\_
- \_\_\_\_\_

### The following procedures were practiced:

- Spill procedures
- Emergency procedures
- Personal protective equipment use

**The following (oral/written) test was administered:** (Or "Each student was asked the following questions:") (I recommend keeping these tests as attachments to the safety training plan and merely reference it here to keep this document on one sheet of paper)

1. What are the labeling requirements of a secondary container? (name of chem. and hazard warning)
2. When does a container change from a portable to secondary container? (when employee loses control)
3. What are the symptoms of overexposure to \_\_\_\_\_? (stinging eyes)
4. Where is the "Right to Know" station (or MSDS station) located? (in the production plant)
5. What PPE is required when exposed to \_\_\_\_\_? (short answer)
6. How do you clean the PPE used with \_\_\_\_\_? (short answer)
7. What are the emergency procedures for overexposure to \_\_\_\_\_? (short answer)
8. Describe spill procedures for \_\_\_\_\_. (short answer)
9. When should you report any injury to your supervisor? (immediately)
10. What are the consequences if you do not follow safe procedures with this chemical (injury, illness, discipline)



## Module 16

# EVALUATING THE TRAINING PROGRAM

To make sure that the training program is accomplishing its goals, an evaluation of the training program can be valuable. Safety training should have, as one of its critical components, a method of measuring the effectiveness of the training, itself, and those presenting the training..

### **ANSI Guidelines for evaluating training programs**

ANSI Z490.1-2001, Accepted Practices in Safety Health and Environmental Training, recommends evaluating three important elements of a safety training program.

**Training program management.** Training works best when it's designed and implemented as an integrated system rather than a series of unrelated training sessions. Elements that should be evaluated include:

- Responsibility, Authority, and Accountability
- Facilities and equipment
- Program Development
- Course Delivery
- Program Evaluation
- Documentation and records

**Training process.** Training should be conducted using a systematic process that includes a needs assessment, objectives, course materials, lesson plans, evaluation strategies, and criteria for successful completion. Areas of emphasis should include:

- Training goals
- Learning environment
- Adequacy of learning objectives
- Effectiveness of the training process

**Training results.** By evaluating the results of training, it's possible to make improvements to existing plans and gain awareness of the need for new training. Items that should be evaluated include:

- The training action-plan
- Long-term strategic planning
- Needs assessment
- Prioritizing training
- Adequate support and funding



## OSHA Guidelines for Training Program Evaluation

The employer should conduct or direct an annual written audit of the safety training program. Program modifications to address deficiencies, if any, should be documented, approved, and implemented by the training provider. The audit and the program modification documents should be maintained at the training facility.

### Suggested Program Quality Control Criteria

Factors listed here are suggested criteria for determining the quality and appropriateness of employee health and safety training.

#### A. Training Plan.

Adequacy and appropriateness of the training program's curriculum development, instructor training, distribution of course materials, and direct student training should be considered, including:

1. The duration of training, course content, and course schedules/agendas
2. The different training requirements of the various target populations, as specified in the appropriate generic training curriculum
3. The process for the development of curriculum, which includes appropriate technical input, outside review, evaluation, program pretesting
4. The adequate and appropriate inclusion of hands-on, demonstration, and instruction methods
5. Adequate monitoring of student safety, progress, and performance during the training

#### B. Program management, Training Director, staff, and consultants.

Adequacy and appropriateness of staff performance and delivering an effective training program should be considered, including:

1. Demonstration of the training director's leadership in assuring quality of health and safety training
2. Demonstration of the competency of the staff to meet the demands of delivering high quality hazardous waste employee health and safety training
3. Clearly defined staff duties including the relationship of the training staff to the overall program
4. Evidence that the training organizational structure suits the needs of the training program

5. Appropriateness and adequacy of the training methods used by the instructors.
6. Sufficiency of the time committed by the training director and staff to the training program.
7. Availability and commitment of the training program of adequate human and equipment resources in the areas of:
  - a. Health effects
  - b. Safety
  - c. Personal protective equipment (PPE)
  - d. Operational procedures
  - e. Employee protection practices/procedures
8. Appropriateness of management controls
9. Adequacy of the organization and appropriate resources assigned to assure appropriate training
10. In the case of multiple-site training programs, adequacy of satellite centers management

### **C. Training facilities and resources.**

Adequacy and appropriateness of the facilities and resources for supporting the training program should be considered, including:

1. Space and equipment to conduct the training
2. Facilities for representative hands-on training
3. In the case of multiple-site programs, equipment and facilities at the satellite centers
4. Adequacy and appropriateness of the quality control and evaluations program to account for instructor performance
5. Adequacy and appropriateness of the quality control and evaluation program to ensure appropriate course evaluation, feedback, updating, and corrective action
6. Adequacy and appropriateness of disciplines and expertise being used within the quality control and evaluation program
7. Adequacy and appropriateness of the role of student evaluations to provide feedback for training program improvement

## **D. Quality control and evaluation.**

Adequacy and appropriateness of quality control and evaluation plans for training programs should be considered, including:

1. A balanced advisory committee and/or competent outside reviewers to give overall policy guidance
2. Clear and adequate definition of the composition and active programmatic role of the advisory committee or outside reviewers
3. Adequacy of the minutes or reports of the advisory committee or outside reviewers' meetings or written communication
4. Adequacy and appropriateness of the quality control and evaluations program to account for instructor performance
5. Adequacy and appropriateness of the quality control and evaluation program to ensure appropriate course evaluation, feedback, updating, and corrective action
6. Adequacy and appropriateness of disciplines and expertise being used within the quality control and evaluation program
7. Adequacy and appropriateness of the role of student evaluations to provide feedback for training program improvement

## **E. Students**

Adequacy and appropriateness of the program for accepting students should be considered, including:

1. Assurance that the student already possess the necessary skills for their job, including necessary documentation
2. Appropriateness of methods the program uses to ensure that recruits are capable of satisfactorily completing training
3. Review and compliance with any medical clearance policy

## **F. Institutional Environment and Administrative Support**

The adequacy and appropriateness of the institutional environment and administrative support system for the training program should be considered, including:

1. Adequacy of the institutional commitment to the employee training program
2. Adequacy and appropriateness of the administrative structure and administrative support

## G. Summary of Evaluation Questions

Key questions for evaluating the quality and appropriateness of an overall training program should include the following:

1. Are the program objectives clearly stated?
2. Is the program accomplishing its objectives?
3. Are appropriate facilities and staff available?
4. Is there an appropriate mix of classroom, demonstration, and hands-on training?
5. Is the program providing quality employee health and safety training that fully meets the intent of regulatory requirements?
6. What are the program's main strengths?



### Other questions to ask about the training program

1. If a job analysis was conducted, was it accurate?
2. Was any critical feature of the job overlooked?
3. Were the important gaps in knowledge and skill included?
4. Was material already known by the employees intentionally omitted?
5. Did the objectives state the level of acceptable performance that was expected of employees?
6. Did the learning activity simulate the actual job?
7. Was the learning activity appropriate for the kinds of knowledge and skills required on the job?
8. When the training was presented, was the organization of the material and its meaning made clear?
9. Were the employees motivated to learn?
10. Were the employees allowed to participate actively in the training process?

Source: Occupational Safety and Health Standards, Subpart: H - Hazardous Materials 1910.120 App E Training Curriculum Guidelines - (Non-mandatory)



## Level 4 Evaluation: Evaluate how training has impacted business results

Determining how the organization has improved: the final results which have come about because of the training program.

- **Safety improves process quality.** Evaluate how the training has impacted the quality (efficiency, effectiveness) of a job.
  - ✓ In Total Quality Management (TQM) circles, "safety" is considered the absence of variation in a process. When safety is effective, a procedure is accomplished the same way every time. Consequently, fewer accidents should result.
  - ✓ Has this form of variation decreased? This level of evaluation is necessary to more thoroughly demonstrate the effectiveness of training.



## Level 5 Evaluation: Evaluate how training has impacted return on investment

- **Training affects the bottom-line results.** Determine how training has improved the bottom line profitability: the return on the investment (ROI) of the company.
  - ✓ ROI is calculated by converting productivity and quality improvements to monetary values. This is the most difficult level of evaluation.
  - ✓ Have accident rates decreased? How as that improved direct and indirect costs?
  - ✓ This level of evaluation may best help training staff justify their on-going training efforts.

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## Questions to ask when conducting program evaluation

John Kirkpatrick considers this level of evaluation the most important, yet most difficult of all. We must determine the final impact training has on the organization's productivity and profitability. The following are some important questions that should be asked:

- How much did accident rates decrease because of the safety training program on safety supervision that we have presented to all supervisors and managers?
- How much did productivity increase because we conducted a program on hazard identification and control for all supervisors and managers?
- What reduction did we get in turnover and scrap rate because we taught our foremen and supervisors Total Quality Safety Management principles?
- How much has training on "creating a culture of consequences" improved the quality of work life?
- What has been the result of all our safety committee training on the safety committee's ability to submit effective recommendations?
- How much has productivity increased and how much have costs reduced because we have trained our employees to identify and report all hazards?
- What tangible benefits have we received for all the money we have spent on leadership training, time management, and decision making?

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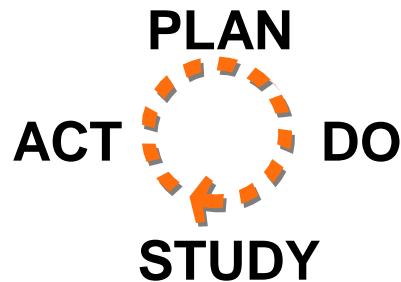
# Module 17

## IMPROVING THE TRAINING PROGRAM

There's always room for improvement in any training program. If it isn't the program itself, it's the culture that supports the training that may need improvement. Ultimately, improving training is all about change management. Effective change management is crucial to long term success. We'll take a look at one proven change model that can be applied to safety training.



The Deming Cycle



### Step 1: Plan – Design the change or test

- **Purpose:** Take time to thoroughly plan the proposed change in the training program before it's implemented.
- Pinpoint specific conditions, behaviors, results you expect to see as a result of the change.
- Plan to ensure successful transition (instructors, supervisors) as well as change.

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### Step 2: Do - Carry out the change or test

- Purpose: Implement the change or test it on a small scale.
- Educate, train, communicate the change in program to instructors.
- Keep the change limited in scope to better measure variables.

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### Step 3: Study – Examine the effects or results of the change or test

- **Purpose:** To determine what was learned: what went right or wrong.
- Statistical process analysis, surveys, questionnaires, interviews

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### Step 4: Act – Adopt, abandon, or repeat the cycle

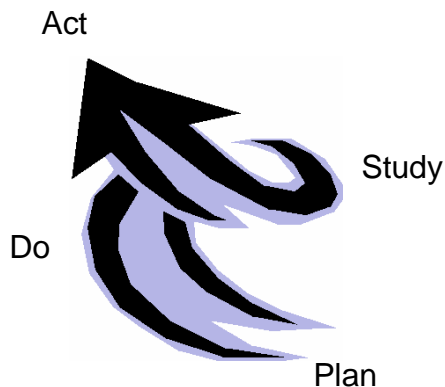
- **Purpose:** Incorporate what works into the system.
- Ask not only if we're doing the right things, but ask if we're doing things right.
- If the result was not as intended, abandon the change or begin the cycle again with the new knowledge gained.

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## Let's review!

1. Education may be thought of as anything that affects our \_\_\_\_\_, \_\_\_\_\_ and \_\_\_\_\_ (SKA's)
  - a. skills, karma, associations
  - b. semantics, knowledge, abilities
  - c. skills, knowledge, altitude
  - d. skills, knowledge, attitudes
  
2. According to the text, the “why” of safety educates about the \_\_\_\_\_ and \_\_\_\_\_ consequences of behavior .
  - a. positive, negative
  - b. employee and employer
  - c. natural, system
  - d. desired, unwanted
  
3. T F Natural consequences are automatic responses to our behaviors/actions. We are punished or rewarded by what we do.
  
4. According to OSHA standards, the employer shall see that workers are properly instructed and supervised in the \_\_\_\_\_.
  - a. safe operation of process and application of practices.
  - b. safe operation of any machinery, tools, and equipment.
  - c. Both a and b.
  
5. Safety committee members should receive training regarding...(Check those answers that apply)
  - a. \_\_\_\_ Employer accountability systems
  - b. \_\_\_\_ Hazard identification in the workplace
  - c. \_\_\_\_ Principles regarding effective accident and incident investigations
  - d. \_\_\_\_ Safety committee operations

6. According to the American Society for Training and Development (ASTD) study, *Models for Excellence*, which of the following roles may trainers perform?
- Evaluator. Identifying the extent of the impact of a safety training program.
  - Group Facilitator. Managing group discussion and group process.
  - Marketer. Selling safety training and development viewpoints, learning packages, programs, and services to management.
  - All of the above
7. A/An \_\_\_\_\_ person is permitted by an employer to be in a regulated area; the term also refers to a person assigned by an employer to perform a specific task or to be in a specific location at a jobsite.
- competent
  - qualified
  - authorized
  - certified
8. The plan should contain elements that are \_\_\_\_\_ and \_\_\_\_\_.
- brief, clear
  - informative, directive
  - authoritative, understandable
  - comprehensive, logical
9. T F (circle one) The first step in the training process is a basic one: to determine if a problem can be solved by training.
10. According to the text, which problem below is least likely to be addressed most effectively by training?
- those that arise from lack of knowledge of a work process
  - unfamiliarity with equipment
  - incorrect execution of a task.
  - lack of attention to the job.

11. According to the text, an effective learning objective contains all of the following, except?
  - a. It states the target learner attitude toward the subject.
  - b. It states an observable behavior/action that demonstrates skills, knowledge, attitudes.
  - c. It states a time limit within which the performance will occur.
  - d. It states a quantifiable level of acceptable performance. Performance can be measured.
  
12. T F In level 2 training, knowledge and skills are measured six months after training.
  
13. Each of the following are basic “strategies” to consider in sequencing the course content in safety training, except?
  - a. Flow content from the general to the specific
  - b. Training concepts should transition from simple to complex concepts
  - c. Training concepts should move from practical to theoretical application.
  - d. On-the-Job training sequence corresponds to the order in which the tasks are performed.
  
14. Adult motivation occurs on four integrated and increasingly more effective levels (M=S+V+V+E)
  - a. Success, violation, consequence, effort
  - b. Success, volition, variety, effort
  - c. Success, volition, value, enjoyment
  - d. Success, violation, variety, enjoyment
  
15. According to a recent study, three days after an event, people retain \_\_\_ % of what they heard from an oral presentation, \_\_\_ % from a visual presentation, and \_\_\_ % from a visual and oral presentation.
  - a. 65, 35, 10
  - b. 10, 35, 65
  - c. 20, 50, 70
  - d. 35, 25, 40

16. The \_\_\_\_\_ is a written record detailing how you plan to actually conduct the training course.
- a. training program.
  - b. lesson plan
  - c. operational objective
  - d. training plan

17. Draw a line from the term on the left to the appropriate phrase on the right.

Introduction	"Tell'm what you told'm"
Body/Module	"Tell'm what you're going to tell'm"
Conclusion	"Tell'm"

18. According to the text, to most effectively relate/connect with the audience, the instructor should be similar to the audience in every respect, except?
- a. Language
  - b. Attire
  - c. Expertise
  - d. Age
19. Which of the two basic questioning strategies will usually result in the transfer of more information?
- a. closed
  - b. open
  - c. flexible
  - d. fixed

20. T F Level 2 training may be documented using the standard attendance roster.



21. For effective Level 3 change to occur after training, the corporate climate must support the training. According to the text, this type of climate will be necessary most of the time for effective safety training.

- a. Preventing.
- b. Discouraging.
- c. Encouraging.
- d. Requiring.

22. Paper-and-pencil quizzes and demonstration are examples of measurement tools for \_\_\_\_\_ training.

- a. Level 1
- b. Level 2
- c. Level 3
- d. Level 4

23. It's most difficult to evaluate the impact of training on the \_\_\_\_\_:

- a. individual
- b. organization
- c. unit
- d. supervisor

24. Which of the sequences below describe W. Edwards Deming four-step change model?

- a. Plan, study, activate, motivate
- b. Compete, cooperate, motivate, graduate
- c. Plan, do, study, act
- d. Cooperate, motivate, cooperate, complete

25. And, last, but not least...always remember that "training without \_\_\_\_\_ is worthless!"

- a. authority
- b. consequences
- c. students
- d. coffee and doughnuts

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