1.1 Forward

NASP was founded by safety professionals who sincerely wanted to reduce the terrible reality of workplace deaths and injuries. We developed a multi-pronged attack designed to contribute new and better means of protecting employees. An important component was the realization that although workplace safety regulations were lacking in many areas, those regulations that did exist were often ineffective because employees did not retain the safety information that regulations required.

One of the principal goals established at NASP's inception was to find a new way to present workplace safety training that would help employees to remember what they were taught and then teach that training methodology to those trained employees. It was a time when almost all safety training came in the form of relentless and tiresome lecture or a series of videos both of which lose the attention of the adult learner very quickly. Employees simply did not remember much of what they heard in those classes. NASP was founded with a deeply-held desire to help reduce deaths and injuries in the workplace. It was obvious that one way to do that was to make safety training more effective by finding a way to help employees remember what they were taught.



1.1 Forward

Most workplace safety training involved little or no evaluation of what the employees actually learned and remembered, and when there was a test it was given at the end of a class and anyone making 70% or higher "passed." Somehow, an important fact evaded these employers. Most regulations requiring training did not state that employees needed to know 70% of what was required in that regulation; it required that employees know everything the standard said they should know, meaning 100% knowledge. Neither was there much consideration of the fact that the employees would quickly forget the things that they did retain at the end of the class.

As the president of the newly formed NASP, I began to research and travel to gain an understanding of just how adults learn and retain information. I found a lot of great information existed, but it was not well known. I visited Universities and delved into countless research projects. There was a great deal of research available, but I had to dig deeply to find it. I found that

the subject was studied as far back as the 1800's in Germany, but somehow there had been a disconnect between the studies over the previous century and implementation of the knowledge gained. There were volumes of information about how adults absorb information and the difference between the way adults learn and the way children learn. Most training at that time was based on the same methods used for children. I realized that NASP had discovered an important way to improve workplace safety training in the United States. We had to adapt safety training to take advantage of the way adults learn best. We had to find how to present safety information in a form and format that matched the means of learning and memorization naturally used by adults.



1.1 Forward

The result was the first use of modern adult training methodology in workplace safety training in the United States. There was some trial and error and a great deal of help and advice from our students before we finally reached a true, cutting edge course on workplace safety training. Word spread quickly and we soon had representatives of other safety training organizations attending our courses which included a "how to train" component and making use of the adult training methods they learned. Soon, a number of OSHA employees attended our courses and before long, OSHA began to incorporate this training methodology into their training. We were thrilled to see this new approach take root and grow in the United States.



Today, there are many sources from which to learn how to present safety information to employees in a way that will help them retain it. This NASP CSM course is the result of continually updating our original "how to train" course. Learn this methodology and always employ it in your training. The more your students retain from your classes, the safer they will be.

Thomas F. Hardin, Founder of NASP

-More is caught than taught.

1.1.1 Introduction

Training or teaching adults is a challenge. It should not be taken lightly. The method of information delivery makes all the difference in the world. Simply talking about a topic is not teaching. Successful training is not dependent on the amount of information covered; it is dependent on the amount of information retained by students.

Prominent learning theories have been developed, passionately defended, or largely debunked for centuries. Applied educational psychology and derivative methods of instruction have been debated throughout most of recorded history. Some of the theories were keenly original, while many were either "rehashing" of earlier work or highly negative reactions to a "new" proposition. But two constants have proven true throughout time. The first is that we tend to teach in the same way we were taught as children. The second is that children and adults learn differently. From this, we conclude that when we train adults in the same way we learned as children, we are using ineffective methods.





1.1.1 Introduction

Most learning theories generally identify with one (or perhaps more) of these theory groups:

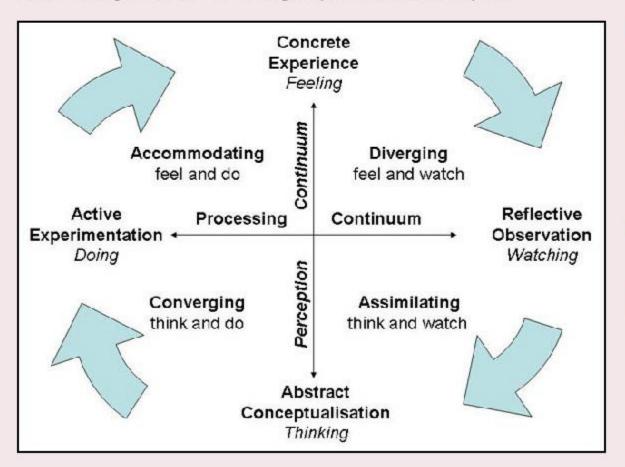
- Behaviorist-based learning (focusing always upon observable behavior): conditioning where specific stimulus generates a specific response (e.g., Pavlov's dogs)
- Cognitive-based learning (learning is a process of the mind- neurological): includes constructive concept of knowledge by the learner among other arguably related concepts
- Humanist-based learning (learning depends upon emotions and affect)
- Socially-based learning (activities within a group make the best learning experiences).



1.2 Learning Styles of Adults

In addition to the theory groups above, the learning style of adults can typically be broken into four categories of learning experiences.

Four Categories of Learning Experiences or Styles



- Doer: Likes to be actively involved in the learning process, wants to know how he or she will apply learning in the real world, likes information presented clearly and concisely.
- Feeler: People-oriented, expressive, focuses on feelings and emotions, thrives in open, unstructured learning environment.
- Thinker: Relies on logic and reason, likes to share ideas and concepts, analyzes and evaluates, enjoys independent work.
- Observer: Likes to watch and listen, tends to be reserved, will take his or her time before participating, thrives on learning through discovery.



1.3 Development of an Effective Training Methodology

When adult learning became systematized early in the 20th century, pedagogy (derived from the Greek words ped meaning "child" and agogus meaning "leader of") was primarily the only known means to train. Pedagogy was used to train children because it was specifically designed for training children. Therefore, it was created for passive learners with few life experiences who are dependent on their trainer to make all of the decisions on which their training was based. The teacher determined what the children would learn and how it would be taught.

As a general rule, we all tend to teach in the same manner we were taught; therefore, adults were taught using pedagogy also. After a while, people began to realize that adults did not learn well when taught in this fashion. With this realization, they began to look for alternative methods for training adults. Among the early alternatives were principles developed in Germany in the late 19th century.

Two books written in the 1920s began to change adult learning—Edward Thorndike's Adult Learning (1938) and Edward C. Lindardan La Magning of Adult Edward in (1936)

(1928) and Eduard C. Lindeman's The Meaning of Adult Education (1926). With one paragraph, Lindeman's book captures the essence of learning:

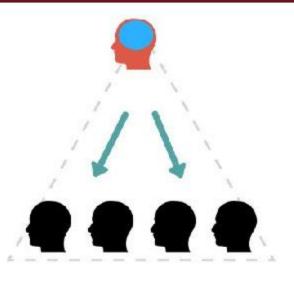
"In this process, the teacher finds a new function. He is no longer the oracle who speaks from the platform of authority, but rather the guide, the pointer-out who also participates in learning in proportion to the vitality and relevance of his facts and experiences."

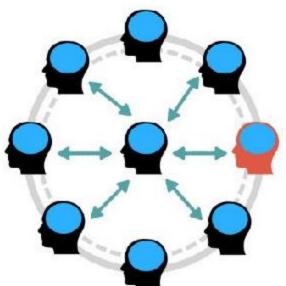
THE
MEANING
OF
ADULT
EDUCATION

EDUARD C. LINDEMAN



1.4 Andragogy vs. Pedagogy





Learning theory has sometimes been propelled forward (arguably) by instruction theory variants that at first appeared to be innovative and exclusive. With regard to adult learners, specifically contrasted against the teaching strategies for children, the idea of "andragogy" distinct from "pedagogy", rose to prominence largely under the leadership of Malcolm Knowles in the 1980s.

These terms will be used to contrast the two different forms of training- pedagogy meaning training children and andragogy meaning training adults. In reality, the delineation is not that definite, as there are times when children learn better through andragogy and adults learn well with pedagogy. Applying the methods of both may be appropriate at diverse times and circumstances regardless of the age of the student.

It was in the 1950s that European educators started using the term "andragogy", from the Greek word "anere" for adult, and "agogus", for the art and science of helping adult students to learn. They wanted the ability to discuss the growing body of knowledge about adult learners in parallel with pedagogy.

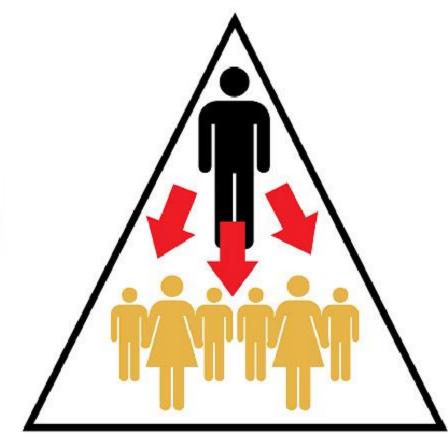


1.4 Andragogy vs. Pedagogy

In pedagogical training, the teacher is the authoritarian and the students are completely under the teacher's command. The teacher makes all of the decisions and is assumed to know what the children need to know. The teacher informs the students what they must learn and tells them what they are expected to remember. In the past, such trainers often stood on platforms when they lectured in order to increase the student's perception of the teacher's superiority. The teacher issued orders and the students submitted to them. In addition to the course content and delivery, the teacher decided when and where the teaching would occur and for how long. The student was totally dependent on the teacher for everything.

In adult training, development is based upon a process design:

- Design and manage a process for facilitating the acquisition of content by the learners.
- Serve as a content resource.
- Provide leads for other content resources (e.g. peers, supervisors, specialists).

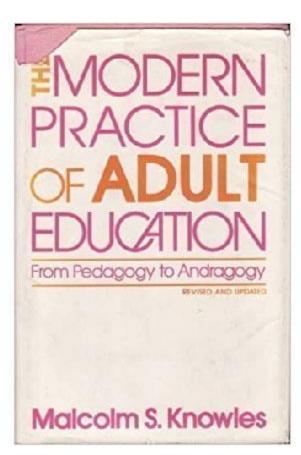


Pedagogy



1.4 Andragogy vs. Pedagogy

Knowles wrote a book titled, In the Modern Practice of Adult Education; From Andragogy to Pedagogy (1980), in which he states that andragogy's key assumptions sometimes apply to children, pointing out that the important differences include that children have fewer experiences to draw on and pre-established beliefs than adults and thus, have less to relate to. Therefore, he explained that andragogy should be thought of as learner-focused and pedagogy should be thought of as teacher-directed.



The purpose of this class is not to justify pedagogy as the best training method for children, but instead to use pedagogy as the example of the way most of us were trained as children and andragogy as an effective training method for adults. It is a simple fact that most of us train as we were trained because that is our experience.



1.5 Adult Training Basics

Adult training methodology is not any one thing. If it were, that one thing would be that it must be a variety of different things. An important key to training adults is to avoid boredom by changing the presentation method often. Even the most effective and exciting presentation method will grow old and lose the attention of students if used for too long. Adult training must be dynamic and often change the method employed to cause the students to learn.





1.5.1 The Group

One important method employed is based on the knowledge that adult training methodology must be flexible and make use of group training activities. The students learn from each other through discussions and group exercises. A student will retain an answer that he discovers many times longer than one you tell him. The students learn best from the trainer through participatory lecture and facilitation.

The three main points of effective adult training methodology are that everyone participates, the course is a cooperative effort between all of the students and the trainer, and everyone interacts with others. This conflicts with the old methods where the trainer is the "general" and the students are subordinates with little or no input- simply following orders.





1.5.2 The Trainer of Adults



The andragogic teaching style is one of high-energy and must be offered in an enjoyable atmosphere. Adults learn when they are enjoying themselves. The enthusiasm and energy of the trainer will pass to the students just as a lack of enthusiasm or poor demeanor will pass from trainer to student.

The adult trainer must be an actor. When they feel bad or tired, they must act the opposite in front of the students. When they have taught the same class numerous times for different groups, they must maintain the same level of energy with the last class as they did the first. They show enthusiasm and appear quite pleased to be just where they are. They show every sign of believing in the importance of the training and being excited about its life-saving effects. The trainer must be very personable

A student with a smile on their face is learning. A student who respects the instructor will learn.

Never complain to the students about anything. If you begin a class with something like, "Look, I don't want to be here either", how credible does that make you? If you seem like you do not want to be there, then students will not want to be there either and they certainly will not learn.



The following table is a good synopsis of the differences between how adults and children learn.

	Children	Adults
The Learner	The learner is dependent upon the instructor for all learning. The teacher/instructor assumes full responsibility for what is taught and how it is learned. The teacher/instructor evaluates learning.	The learner is self-directed. The learner is responsible for his/her own learning. Self-evaluation is characteristic of this approach.
Role of the Learner's Experience	The learner comes to the activity with little experience that could be tapped as a resource for learning. The experience of the instructor is most influential.	The learner brings a greater volume and quality of experience. Adults are a rich resource for one another. Different experiences assure diversity in groups of adults. Experience becomes the source of self-identity.
Readiness to Learn	Students are told what they have to learn in order to advance to the next level of mastery.	Any change is likely to trigger a readiness to learn. The need to know in order to perform more effectively in some aspect of one's life is important. Ability to assess gaps between where one is now and where one wants and needs to be.
Orientation to Learning	Learning is a process of acquiring prescribed subject matter. Content units are sequenced according to the logic of the subject matter.	Learners want to perform a task, solve a problem, and live in a more satisfying way. Learning must have relevance to real-life tasks. Learning is organized around life/work situations rather than subject matter units.
Motivation for Learning	Primarily motivated by external pressures, competition for grades, and the consequences of failure.	Internal motivators: self- esteem, recognition, better quality of life, self-confidence, self-actualization.

The best training classes take advantage of the following characteristics of adult learners:

- Adults are self-motivated
- Adults expect to gain information that has immediate application to their lives
- Adults learn best when they are actively engaged
- Adult learning activities are most effective when they are designed to allow students to develop both technical knowledge and general skills
- Adults learn best when they have time to interact, not only with the instructor but also with each other
- Adults learn best when asked to share each other's personal experiences at work and elsewhere





When adults encounter a new piece of information, they compare it to every experience they've had previously. This determines whether the adult will accept or reject the new piece of information. As an adult, our decision-making process is based upon our accumulated reservoir of life experiences. The child has a limited reservoir of life experiences and so accepts new information more readily.

The adult is motivated by the need to know. Adults should feel like they have a need for the information they are presented, or they won't be motivated to remember it. Do not waste an adult's time by teaching them information for which they have no need to know. If they need to know it, then explain to them why.

As mentioned, pedagogy is what most of us are used to from childhood. It uses the traditional classroom style setting with the

authoritarian teacher. The students have no input into the material to be learned. There is limited participation from the students and limited group interaction between them. Pedagogy is rigid in form.



Adult training is flexible and lends itself well to group training activities. The students learn from each other through discussions and group exercises. They learn from the trainer through participatory lecture and facilitation. As an analogy, let's use a banquet as our example. In a pedagogical banquet, the trainer would determine the menu, prepare the food, determine where everybody sits, and make sure everybody cleans their plate. In an andragogic banquet, the trainer would lead the group as they determine the menu. The seating arrangements would be designed for groups of 4 to 7 people and the participants would determine where they sit. Everyone would participate in preparing the meal and each individual would determine what they eat and how much they eat.

The three main points of the Adult Training Methodology are that:

- Everyone participates
- The course is a cooperative effort between all the students and the trainer
- Everyone interacts with the others



1.7 Teaching vs. Facilitating

Some may wonder, what is the difference between teaching and facilitation? The following is a list of these differences:

Teaching means:

- · Starting out with your own knowledge
- Often involves following a pre-set curriculum
- · Lecturing from the "stage"
- Providing information in one direction
- That one believes teaching in a traditional sense the right answer
- Having a formal relationship with his pupils
- Involves telling other people instead of letting people figure out from themselves
- Answering questions yourself, instead of listening to your participants' answers

Facilitating means:

- · Starting by assessing the group
- Considering issues identified by group and new ideas
- Using practical, participatory methods
- Making sure information flows in all directions
- Encouraging and valuing different views
- Considering participants as being "equal"
- · Asking instead of answering questions yourself

1.8 Three Types of Trainers



As a general rule, there are three types of trainers. They include:

- 1. The Facilitator, who is a(n):
 - a. Encourager
 - b. Motivator
 - c. Coach
- The Participatory Lecturer, who:
 - a. Asks questions
 - b. Encourages participation
- 3. The Non-Participatory Lecturer, who
 - a. Information dumps

1.8.1 Facilitation

The **facilitator** maintains a very loose control of the classroom. He or she simply tries to keep the class on a reasonable track and timeline. Facilitation is an excellent way to teach, but it sometimes may not lend itself well to technical topics like safety. The true facilitator is not necessarily looking for right or wrong answers; instead, they let the group determine their own answers. When it comes to safety, there often are right and wrong answers. Use facilitation to whatever extent you can effectively. Group projects with appropriate input from the trainer is a form of controlled facilitation that will work well for you. For example, a good group exercise may include how to properly motivate employees to become involved in safety. This allows teams to form ideas as a group and learn from one another.





1.8.2 Participatory Lecture

The participatory lecturer presents information, but also creates a great deal of interaction with and between the students. The participatory lecturer will often ask questions of the students and use other measures to encourage participation. This form of training works quite well in the safety arena. It's also an ideal means to make certain students are focused and paying attention.





1.8.3 Non-participatory Lecture

The **non-participatory lecturer** presents information but discourages feedback from students. This is often accomplished by failing to encourage questions and comments or reacting negatively to questions and comments. This form of training is extremely ineffective. You have probably sat through some of this training yourself. The instructor speaks in a dull,



monotone voice — perhaps reading regulations from a Code of Federal Regulations or simply reading PowerPoint slides verbatim. This is often called "information dumping" and shows a total disregard for employee safety since it is completely worthless at allowing adults to retain information.

2.0 Student Engagement



It is probably not surprising that one of the most consistent findings in educational research demonstrates that the more time students spend engaged during instruction, the more they learn; however, not all student engagement can be productive to the classroom. In this section we will discuss how to handle problems while keeping your cool, as well as provide an overview of the types of students you may have in your training.



Handling problem students requires great patience. We will discuss the common types of problem students that we all encounter and ways to deal with them. We must maintain the perspective that a student only becomes a problem when they are hindering the learning process for others in the class or for themselves. When a student is creating a disruption that draws the attention of other students away from the learning process, then action is required by the trainer. Wasted time is an enemy of all safety trainers since our time is often severely limited by our employers.



Efficient use of time means more retention of life saving facts by our students. Therefore, the goal of the trainer handling a problem student is to end the disruption as quickly as possible and return the class to the learning process. We do not want any student's mind wondering from the subject we are presenting, including the mind of the problem student.

Objectives in controlling problem students:

- Don't embarrass them
- Always keep your cool
 - O "Just because someone pulls your chain doesn't mean you have to flush"
- Put the good of the class first
 - O Disruptions that cannot be controlled must be expelled from class
- Control the student without alienation, if possible
 - O Don't lose control of class
- Use subtle tactics at first





Most students who cause a disruption in your class do not realize they are causing a problem. There will be a few who seek to undermine you, but most who cause a disruption, do so unintentionally.

Often, eye contact will solve the problem. The student will quickly realize that you do not desire them to do whatever they are doing, and they will often stop.

If you can't catch their eye or if eye contact doesn't work, move toward them. An energetic adult trainer is not one to stand behind a podium and moving about the room is normal for them so to move toward the disruptive student should not embarrass them. At some point as you get closer, they will likely figure out why you are moving toward them, and the disrupting behavior will cease.



Another good tactic is to ask them a question. But your objective is not to embarrass them so if you ask them about what you just said, you will surely embarrass them and likely appear a little confrontational yourself. It is important to ask them a question that you are sure they can answer. Once asked and answered, they will likely return their attention to the subject at hand.

A not so subtle tactic is to check your watch while they are looking at you and smile. They will probably get the message and get back on track.







The means herein discussed to end such disruptions will not always work. The trainer must give every reasonable effort to winning the support of the problem student and returning to an atmosphere of learning. While your touch should be light, the students must know that you are in control. When someone is causing a disruption try to handle it subtly without embarrassing the person. If it becomes apparent that nothing will stop the disruption, the only means of recovering the learning atmosphere is to remove the problem student from the class. This should never be done without fair warning to the problem student. Once you conclude that you cannot end the disruption amicably then have the class take a break and talk to the problem student privately during the break. Be totally honest and straightforward but kind in explaining that you have no recourse but to remove them from the class if they can't stop the disruption. Explain exactly what it is they are doing that causes the disruption. Do not argue or debate with them and make it clear that if you have to remove them they will not be allowed back in that class and their supervisors will be informed that they have not gained the knowledge required to be imparted by that course. If they pledge to stop the disruption, then treat them as if nothing ever happened. But if they do not agree to stop or continue to disrupt if allowed back in the class then remove them at once. Many times the other students will be keenly aware of what has happened and will want to talk about it. Allow them to do so for a short time and then return to the course.

Problem students are challenging because they may disrupt the learning environment, make your job more difficult than it has to be, or just plain frustrate you and the other students. In this section, we will discuss the various types of problem students that you may encounter while conducting training and how to mitigate their distractions.

Side Conversations

In some training styles, side conversations are always considered bad. We've all heard the instructors say, "would you like to share that with the class" or "the action is up here." In adult training, we must recognize that the side conversation may very well be a discussion of the topic you're currently teaching and therefore a participatory event that you seek. A side conversation is not necessarily bad; it is only bad when it distracts other students. Simply asking one of the students a question that you know they can answer will stop the problem without embarrassment. But if you are sure they are on subject then ask them to share with the class. It may be a great opportunity for students to learn from students remembering that the trainer is not the only person who should help others in the class to learn.



Problem students are challenging because they may disrupt the learning environment, make your job more difficult than it has to be, or just plain frustrate you and the other students. In this section, we will discuss the various types of problem students that you may encounter while conducting training and how to mitigate their distractions.

Clash Between Students

A clash between students is the most volatile of all problem student situations. A verbal disagreement can very quickly become physical. It is of utmost importance to act quickly to quell such a clash. This is one case where it is difficult to act subtly. It is much more likely that you will have to react openly and call those involved down in front of the class. This will embarrass them and possibly add to their ill feelings. The best way to handle a clash between students is to pretend like it's time for a break and send the class on break while you talk to the two individuals involved. When you talk to these individuals, tell them in a very straightforward fashion that their actions will not be tolerated, and they will be kicked out of class if they continue. If there is any indication that this is not going to work, then kick one or both out of the class. If you let such a clash continue, it often will divide the class and you will have a very difficult time regaining control of the class.





CLICK THE SEVEN STUDENTS TO SEE MORE INFORMATION

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The Challenger/Obstinate/Angry

The student who constantly challenges you, is obstinate, or is angry is a difficult type of student with which to deal. You must first check your own emotions and show no sign of anger. We can't help what we feel, but we can help what we show. The way to handle this person is to talk to him during a break in class and tell him exactly how you feel about what he's doing. You will often learn that he is not angry at you, but is instead angry at a supervisor, a coworker, or family member. Whether it's you that he is mad at or not, you must make it very clear to him that his disruptive actions must cease completely or he will be kicked out of the class. This person will sometimes do a complete turnaround and become your biggest supporter in the class.





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The Over Talkative or Rambler

This person gives you a problem maintaining your timeline. As an adult trainer, we go to great effort to encourage students to speak up so we need to be careful how we handle one that talks too much. Don't do anything that would make the rest of the students hesitant to speak up. Subtle ways to deal with this type of person include giving him or her the recognition, which they are seeking. Use them as a type of assistant to pass out papers for you, keep the score during games, and other things that put them in the limelight. If nothing else works, then you must talk to them during a break and explain to them that so much input from them is keeping others from having the opportunity to speak and is wreaking havoc with your timeline.



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The Definitely Wrong

When a person gives an answer or makes a point that is obviously wrong, handle them with care. Remember, you don't want to embarrass them. Sometimes you can find something in their statement that is true and lock on to that portion. However, we cannot let the other students in the class believe that some safety point is correct when it is actually wrong. One tactic that has worked is to take a break and explain the situation to the student during the break and give him the chance to give the correct information to the class after break as if it is something he looked up during break.





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The Dominator

The dominator either knows or thinks he knows a lot about the subject. You can use different measures to try to take the conversation from him to other students in the class, such as asking a question of another student. If you cannot handle him subtly, then talk to him in a straightforward way during a break.



Problem students are challenging because they may disrupt the learning environment, make your job more difficult than it has to be, or just plain frustrate you and the other students. In this section, we will discuss the various types of problem students that you may encounter while conducting training and how to mitigate their distractions.

The Shy/Won't Talk

The shy person that just won't speak up is a particular problem in a class where you're dependent upon student input for participatory lecture. Ask this person frequent questions but be absolutely sure they are questions that he or she can answer.



2.3 Applying the Principles of Participatory Learning

The trainer standing in front of the class presenting information is only one way to train. Another way that adults learn well is in small groups. In NASP classrooms, students are seated in groups who often work together on a learning exercise. These groups are comprised of from three to seven students with three to five groups comprising a class. Participatory learning occurs as the students work together toward a specific goal and again while they report their findings to the entire class.

Case Studies

A case study is a written exercise that can be completed by a small group. Case studies take time to develop. It is important that you design them in a way that will lead the group to discovering the information you are trying to impart without making it obvious. You want the group to have to work and think together to discover the information. Excellent case studies may include a review of an accident which has occurred at your facility and a thorough investigation that has been conducted. If there have not been incidents on a particular type of accident that you still which to teach, NIOSH has a FACE website (Fatality Assessment and Control Evaluation) that is a great resource for case studies.





2.3 Applying the Principles of Participatory Learning

Instruments

Instruments are tests that don't look like tests. Tests are intimidating to some students and may affect them in a way that keeps you from seeing what they truly are learning. Instruments take much of the stress and fear out of test-taking.

Games

Games are always loved by students when properly done. Games used by NASP trainers include "Jeopardy", "Who Wants to Be a Millionaire?", "Are You Smarter Than a Fifth Grader?", and others. It is difficult and time-consuming to design a game, but the effort is worth it. It is exceptionally difficult to design a game that presents new information. However, a great use of games is to review information or test to see if the students are retaining information sufficiently.



Puzzles

Puzzles are used to cause students to discover information rather than having to tell them.

Reverse Points Exercises

Reverse points exercises are a fun way to break monotony in an exercise. Having a group of students list the best ways to keep something from happening will show how to truly make that something happen and give them a few laughs while doing it.



2.3 Applying the Principles of Participatory Learning





Role Playing

There's a little actor in all of us. Skits are a fun way for students to present information to the class as a whole. Coupled with other activities such as case studies, a skit can present the discovered information to the rest of the class in a way they will remember. It can also be combined with a reverse points exercise.

Film/Video

Film and video are one of the most misused training methods in workplace safety. The employers that sit employees in front of a video for a specified length of time and then pronounce them "trained" are the epitome of the employer whose only concern is to skirt past OSHA and cares little about the welfare of their employees. Watching a video without the opportunity to ask clarifying questions of a knowledgeable person is not even acceptable to OSHA. A video rapidly loses the attention of students, so their use should be limited in time. Short video clips, emphasizing a point and then followed by discussion, works well. Even unrelated funny video clips work well from time to time to keep up the spirits of the class.

Learn by Doing

There is no better way for an adult to learn than by actually performing a task they are trying to learn. Whenever hands on learning can be applied, it is good to use it. In fact, some standards (e.g., HAZWOPER) recommend that at least a third of your training should be hands-on practical. This is especially important for training such as Lockout Tagout, Emergency Response, and Confined Space Entry and Rescue.

2.3 Applying the Principles of Participatory Learning

Ice Breakers

Ice breakers may or may not be relative to the subject matter of the course. They are used to focus the attention of the class. After a break, a tasteful joke or story will cause students to stop talking between themselves and settle back into the classroom routine without you having to order or cajole them. If you find the class getting tedious, just stop and present an ice breaker to give the students an opportunity for a quick mental break and a refocus.

Self-Study

Self-study is a great way to make the most of the classroom time allotted for your class. Let students do preparatory studies at night before the class or during some other break, when possible.

Others

Methods of participatory learning are limited only by the imagination. Always search for methods that will help avoid "information dumping" and engage your students' interest.





2.4 Communication

Opening this section in the classroom version of this course, we always play the video of Abbott & Costello's "Who's on First." It is a great humorous way to make the point that what we say is not always what the listeners hear. Watch and enjoy.

I always ask the question here "which is more important, speaking effectively or listening effectively?" After some discussion, the groups always come to the conclusion that they are equally important for a trainer. He must listen effectively to gauge the interest of the group and the effectiveness of your training. Speaking effectively is important in being sure that you are communicating what you intend to communicate.



Each of these indicates a potential trap for the trainer. We will talk about each of them.



2.4.1 Semantics

Semantics or the way in which your students understand what you are saying is dependent upon their frame of reference. If you're talking to politicians, running is going to indicate running for office. If you're talking to athletes, running is going to indicate running around the track. In the classroom, "right" would indicate correct, while with driving, "right" would indicate the opposite of left.





2.4.1 Semantics



Example: Is OSHA Good or Bad?

Whether your students think that OSHA is good or bad will depend upon their frame of reference. Those who have had good experiences with OSHA will say they're good. Those who have had bad experiences with OSHA will say they are bad. Also, those who have been taught to fear OSHA by unscrupulous marketers will think OSHA is bad.

In speaking to your class, keep these things in mind. Your frame of reference might differ from your students, so in some cases they may hear something very different than what you intended. In order to avoid this, try restating important points in varying ways, asking frequent questions of the students, and using plenty of examples.

Beware of push-button words. Push-button words may be different for different people. Especially avoid words that could indicate racial or sexual descriptors. One instructor once said to a class "okay, guys, let's take a break." Late a woman came up to him and said, "I am not a guy, I am a girl." From his frame of reference the word "guy" means everyone, not just men. Obviously, her frame of reference was different. Your voice inflection can betray you when you feel anger or frustration as can your body language.



2.4.2 Absolutes



"The length and specificity of one's answers is inversely proportionate to his/her intelligence level."-Marilyn Vos Savant

Meaning one who goes on and on and one who is always absolute in their answers will be judged harshly. When we go to great extremes to defend an uncertain point or say something always or never is, we put our integrity on the line. In safety, some things are absolute and it is necessary to defend them. With many things, there may be multiple acceptable ways to do something. When a trainer is unyielding too often, students will begin to doubt him. If you present some point as always or never and a student comes up with an exception, your credibility will be damaged.



2.4.3 Statistics



Statistics often make good illustrations and can be excellent at giving perspective to a point. However, they can be dangerous for the trainer who leans on them too heavily. Statistics are gathered along sometimes arbitrary guidelines and may be easily skewed. It is necessary to understand the perspective from which statistics were gathered in order to understand what the numbers really mean. It is not unusual to quote statistics in the safety field and have a student quote disagreeing statistics from a different source. When one leans too heavily on such numbers, it can be costly to credibility.



2.4.4 Inflexibility

Inflexibility here refers to the trainer who is so sure of his own facts that he doesn't consider others presented to him by students. When a student possesses some new or alternative fact not yet known to the trainer, the trainer should receive it with an open mind. Your students don't expect you to know everything, but they do expect you to be honest so saying that you don't know something but would like to learn is a good move. You can always postpone taking a final position overnight

while you do some research. Use terms like "almost always," "in the vast majority of cases," or "the vast majority of the time" instead of speaking in absolutes. Then, when you have a point that truly is an absolute, it is very influential.



2.4.5 Reality Based

You will be teaching people who use the information you teach day after day. When they tell you that something will not work "in the real world," you should show interest and listen very closely. Telling them that OSHA says they must do it any way is a very bad idea. If you, instead, seek a way for them to perform the function safely and comply with OSHA too, you will win their respect.



Also, when you're teaching blue-collar workers, they see their world (or their frame of reference) as the real world. If you speak over their heads or if you fail to consider the problems they encounter in their work, they will see you as being from the ivory tower. They will then discount most of what you say.



2.4.6 Preparation

The extent of your preparation will be obvious to your students. A class that flows smoothly requires much preparation. A class that is properly designed to achieve maximum retention by the students requires tremendous preparation, but it is well worth the effort. Use of the training methodology in the course will show your students just how much you care about their safety. Course materials that are well designed will heavily influence your students' opinion of you and your course.



3.0 The Effective Trainer

Being a safety trainer is not your typical nine-to- five job. It requires a dedication much greater than the average job. It requires a genuine concern for your fellow man that transcends other concerns in your life. It means going the extra mile to assist employees in need of help. It requires sacrifice and a great deal of dedication. If your heart is not invested in the safety of the employees and therefore invested in your safety training, your students will know it and they will not learn effectively. If you don't truly have the heart for it, you owe it to the employees to give up the job.

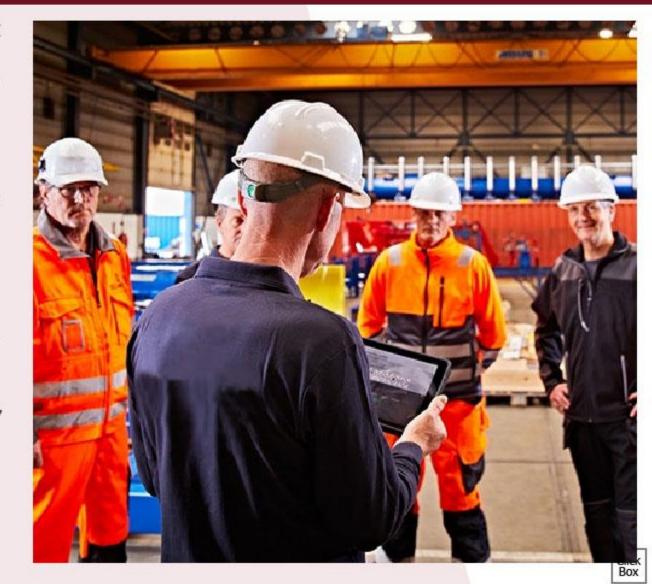




3.0 The Effective Trainer

Remember what we said before: If you are enthusiastic about safety training, your students will be too. The effective adult trainer is an actor. When they go before the class, they are an actor going on stage. When they feel bad, they act like they feel good. When they have other pressing matters, they act like they don't. When their patience wears thin, they react with calm dignity. When a student just doesn't "get it," they stay after class and help that student, even when their dinner is getting cold. They are ever mindful that their performance as a trainer could save the lives of their students.

Qualifications for safety trainers can be viewed from several different perspectives. Here, we will discuss how OSHA, ANSI, the Courts, and your own requirements affect safety trainer qualifications. Your qualifications in the eyes of your peers initially will be determined by your professional qualifications, so your NASP Certification(s) will be very valuable. Once you have taught for a while, your qualifications, in the eyes of students, peers, and employers, will be largely dependent on your demonstrated effectiveness as a trainer.



OSHA says, "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."



We can break this paragraph down into the following elements that are required of an Instructor:

- Deemed competent
- Possess previous documented experience in their area of instruction
- Successfully complete a "train-the-trainer" program
- Have an evaluation of instructional competence by the Training Director

- Maintain professional competency by participating in:
 - O continuing education
 - professional development programs
 - o an annual refresher course
 - o an annual review by the Training Director





A specific range of skill, knowledge ability to do something successful being adequately or well qualified the condition of being capable of to meet demands, requirements



Each required aspect of the instructor's qualifications must be "documented." With OSHA, the courts, and most employers, "if it isn't documented, it didn't happen."

OSHA defines "competent" as possessing the "skills, knowledge, experience, and judgment" to perform assigned tasks or activities satisfactorily. Documentation of the possession of the "skills, knowledge, experience, and judgment to perform assigned tasks or activities satisfactorily" means two things:

"Skills, knowledge, and judgment" would be documented by the result of properly designed and administered tests. The credibility of the documentation increases with its objectivity, which is why third-party testing and certified documentation is the most credible. This is provided as part of the awarding of your certification.

"Experience" can be documented is several ways. Exactly what is meant by "experience" is discussed later, but documentation of experience may be a written statement from a competent person verifying your activity which constitutes the "experience" requirement, or documented proof of employment along with an official job description that indicates the particular experience was gained. The credibility of such documentation increases with its third-party verification, which is performed as part of the awarding of your certification.

OSHA's statement regarding instructor qualification also says, "Instructors should be deemed competent on the basis of previous documented experience in their area of instruction." "Area of Instruction" means a specific topic or task, not a general category or what we will call a "course," meaning something made up of different "topics."

Some examples:

- A non-safety example would be an English "course" which consists of "topics" like creative writing and poetry.
- In defining safety topics, we could use "HAZWOPER" as an example of a "course" with "Spill and Leak Control," "PPE," "Incident Command," and "Decontamination" as a few of the "topics."
- Another example could be, "Confined Space Entry and Rescue" as an example of the "course" with "Atmospheric Monitoring," "PPE," and "Technical Rescue" as a few of the "topics."



In other words, taking a HAZWOPER course doesn't meet the requirement for teaching a HAZWOPER course. Instead, the instructor must have "experience" and be "competent" in each topic he/she teaches within the HAZWOPER course. This "experience" can only result from actually performing the tasks the instructor is teaching. This "experience" must come from hands-on experience in the application of the principles of the specific topic or task. For example, if you desire to teach lockout/tagout you must first actually perform lockout/tagout well enough and often enough to become proficient at its proper performance. It is not necessary that this experience be in actual circumstances. It may, instead, be under simulated circumstances (training) under the review of a qualified person.

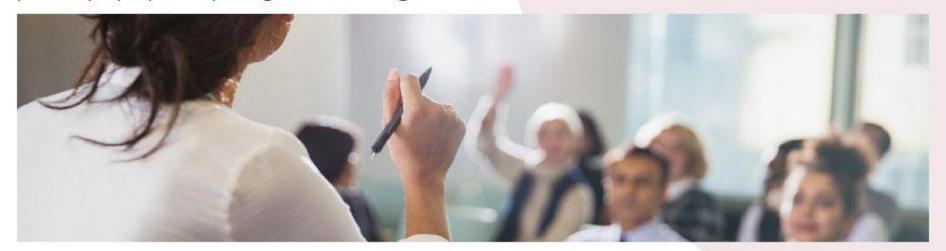




OSHA's statement regarding instructor qualification further says, "Instructors should be deemed competent on the basis of... successful completion of a "Train-the-Trainer" program specific to the topics they will teach." Many courses are called train-the-trainer courses but only provide information needed by the trainer to present to his or her students. Many of these classes present excellent information but do not provide viable "how to train" information.

OSHA's statement regarding instructor qualification requires an "evaluation of instructional competence by the Training Director." The "Training Director" should preferably be someone certified to that level. In the absence of a certified Training Director, this requirement should be met by having someone with superior qualifications to your own and should evaluate your training technique annually. The evaluation should include written documentation and a discussion of strengths and weaknesses with the evaluator.

OSHA's statement regarding instructor qualification also requires that an instructor "should be required to maintain professional competency by: "participating in continuing education."





3.2 The Court's Expert Witness Qualifications



If you find yourself in civil or criminal court after an employee injury, you will find the prosecution employing expert witnesses to claim your training or planning was somehow inappropriate and therefore contributed to the death or injury. Only if you also qualify as a professional witness in that specific area will your credibility and testimony be of equal stature with that of your opponent.



3.2 The Court's Expert Witness Qualifications



Whether or not you qualify as a professional witness in a certain topic area is completely within the discretion of the judge hearing the case. So, in order to determine how we could qualify as an expert witness, we must turn to the guidelines used by judges to decide whether or not to consider us an expert witness. First, we should consider that we are much more likely to achieve expert witness status in a specific "task" area than in a broad and general category. For example, a judge would accept you as a Confined Space Rescue expert witness because of the proper specific Confined Space Rescue training and experience, but not because you have a degree in industrial safety.

To begin our review of the guidelines used by judges to determine qualification of expert witnesses, we begin with Federal Rule of Evidence 702 which reads "if

scientific, technical or other specialized knowledge will assist the trier of fact...a witness qualified as an expert...may testify thereto in the form of an opinion." The US. Supreme Court ruled in Daubert v. Merrell Dow Pharmaceuticals, Inc., that Rule 702 imposes a special obligation upon a trial judge to ensure that expert scientific testimony is not only relevant, but reliable.

In his treatise, *Guidelines for The Expert Witness*, Judge Timothy T. Daley tells us that "the expert witness has special knowledge or skill gained by education, training and experience." Specific education, training, related experience, and current knowledge are essential ingredients to being certified as an expert witness. A precise curriculum vitae, available to the court before attendance, may lead to the uncontested declaration of the witness as an expert." The "American Institute for Expert Witnesses" says, "The fundamental characteristics needed by the Expert Witness are the abilities to be able to demonstrate both competence and credibility.

3.3 ANSI

ANSI's Voluntary Instructor Qualifications Z490.1 says that trainer criteria shall include subject matter expertise and training delivery skills. It specifically calls for:

- 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.





4.0 Safety Management System Education and Training

We discussed in the previous topic "Understanding Workplace Safety", that there were six elements to an effective Safety and Health Management system. We discussed five of those six elements in great detail. Education and training is one of those key elements and it seemed appropriate to discuss it more extensively now.



What is the difference between education and training? When presented with this question in one of our classroom CSM courses, one student jokingly said this: "The difference between education and training is this. If you had a 15-year-old daughter, would you want her to go to a sex education class or a sex training class?". Point well taken. Likewise, would you want that same child to go to a driver education class or a driver training class? Both education and training are important; however, there is a distinct difference. Training refers to an act of developing specific skills in a person. Education is all about gaining theoretical knowledge. Training includes hand-on (psycho-motor) skill while education is typically linked with reading about or discussing material in a classroom or online. This CSM course you are currently taking is primarily education.



4.0 Safety Management System Education and Training

Training and education provide all employees with the knowledge and skills required to perform their work safely and meet the organization's safety and health goals. An effective education and training program:

- Ensures that employers, managers and supervisors, and employees have the knowledge and skills needed to work safely and avoid creating hazards that could place them or others at risk.
- Enhances awareness and understanding of workplace hazards, and how to identify, report, and eliminate or control them.
- Provides specialized training, where needed, to employees whose work involves particular hazards or to those with specific roles in managing or operating the safety and health management system.
- Includes periodic checks to assess whether training is effective, timely, up-to-date, and applicable based on the current roles and responsibilities of managers, supervisors, and employees.



4.1 Why Safety and Health Management System Education and Training is Important



An organization that does not adequately train its workforce can encounter significant costs as well as an assortment of business risks, including an unsafe workplace. Inadequate education or training is frequently a root cause of workplace accidents, incidents, and injuries. Ensuring that employees—including supervisors and managers—have the knowledge and skills to work safely helps the organization minimize the possibility of incidents that can lead to injury, illness, damage to equipment and facilities, loss of production, and lost time. Training can help spread knowledge about safety and health across the workforce and gives employees the tools they need to identify and address potential problems before they arise.

4.1 Why Safety and Health Management System Education and Training is Important

Training can bring breakthroughs in understanding that, in turn, lead to improvements in safety and health performance as well as better processes, products, and productivity. By training employees in safety and health management system processes, programs, and procedures, an organization will be better able to ensure that they are:

- Aware of the organization's safety and health goals.
- Familiar with individual roles and responsibilities under the safety and health management system.
- Capable of recognizing, controlling, and mitigating hazards found in the workplace.



Education and training provide tools that make the safety and health management system work more effectively. Employees and managers receive training that maximizes their ability to take a systematic look at safety and health within their organization and to work toward eliminating on-the-job injuries, illnesses, fatalities, and other costs associated with poor health and safety performance



4.2 What Safety and Health Management System Education and Training Involves

Some education and/or training is essential for everyone in the workplace, including managers, supervisors, and nonsupervisory employees, contractors, and temporary employees, and even visitors who may encounter hazards during their time spent on site. To promote workplace safety and health:

- Supervisors need to understand workplace hazards and controls to assist them in the enforcement of safe work practices.
- Managers need to understand their responsibilities for implementing and running the safety and health management system.
- Managers, supervisors, nonsupervisory employees, contractors, and temporary employees all need to understand their roles and responsibilities in the safety and health management system.
- Contractors, temporary employees, and visitors may need instruction related to the hazards or risks they could encounter during their time in the workplace and the necessary protective measures to be taken.





4.2.1 Awareness Training

All employees need overview training on the organization's safety and health policy, goals, basic operations and functions of the safety and health management system, hazard recognition and avoidance techniques, and emergency response procedures. All employees should know and understand the principles behind the system, their roles and responsibilities

under the system, and the means used to communicate safety and health-related information in the workplace. The frequency and timing of training will vary based on the size and nature of the organization. This training should also be provided to contractors and temporary employees.



4.2.2 Role Training





Some employees have specific roles in the safety and health management system, such as inspecting the workplace for hazards, conducting safety audits, selecting and instituting hazard controls, and investigating incidents. These employees must know how to carry out their responsibilities and follow any internal or external (that is, legally mandated) procedures. Their training should emphasize how their actions directly impact the effectiveness of the safety and health management system. For example, an employee who is designated to receive reports of hazards must know what to do with those reports and how to respond to them. In many cases, this employee would also need to know who should be assigned responsibility for instituting control measures. As a safety and health management system evolves, a more formal process may be instituted for determining the training needs of employees responsible for developing, implementing, and maintaining the safety and health management system.

4.2.3 Hazard Identification and Controls Training

Through training, employees should be made aware of and able to recognize the hazards they may encounter while at work. These include hazards specific to their job as well as more general workplace hazards. Employees should also understand the measures that the employer has taken to control those hazards, why these controls are important, and why they must remain



in place and be obeyed. For example, if employees are not made aware of the hazards of noise exposure (e.g., on the work floor or in a compressor room), it is unlikely that they will use a control (e.g., hearing protection).

4.2.4 Job-Specific Training

In an effective safety and health management system, efforts are taken to define training needs for specific jobs and to ensure that these needs are met. Job-specific requirements can be satisfied through a combination of education, experience, and training. After training, employees should be observed as they work to ensure that the safe work practices and other required procedures are consistently carried out. Regardless of the type or size of the workplace, the goal is to give employees the training, knowledge, and skills they need to implement the safety and health management system and perform their jobs safely. Employers should make sure to recognize the training needs of employees who have English as a

second language, physical limitations, or other special needs, and adjust the training materials or delivery methods accordingly. Education and training needs, training methods, and the content of training programs differ from workplace to workplace. Choices depend on the distinct features of an organization's safety and health management system, the type and complexity of the work performed, the type and extent of hazards in the workplace, and the characteristics of the employees themselves.



4.3 Developing Courses for Adults



There are many ways to develop instruction, and educators have frequently debated which ways are the most effective. One practical approach that works well with adult learners shifts the thinking about developing instruction from "what will you teach," to "what do the students need to learn?" This change of perspective will help the development process immensely. To get started, you first need to be able to answer several key questions.



Who is the Target Audience and What are Their Learning Needs?

It is your responsibility as an instructor to find out who will be in the audience and what kind of training they have already received. It is also helpful to write a short description of your target audience. You can use this when disseminating information about your course. Try to at least learn the answers to these three questions:

- Who are you going to teach? Get names and titles of your attendees, or at least the names of their places of employment.
- What is their background? If you can determine the students' educational backgrounds, this will help in determining the
 depth of information to cover in your class.
- Will some people need more training than others? In cases where there are extreme differences in skill levels, you might
 consider holding several sessions at different levels of expertise; for example, for frontline workers versus managers.



Ideally, you should conduct a needs assessment prior to taking on a training project. This helps to identify gaps in learning and further targets the training for your audience.



What are the Learning Objectives?

Your purpose should meld the key components of your audience, its training needs, its skill and knowledge deficits, and what you want to accomplish in your course. Think through what you want participants to learn as a result of your training. They should leave the training with new information and/or skills that they didn't possess prior to taking it.

Learning objectives serve as a type of contract with your audience and help put the purpose of your training in concrete, measurable terms. If participants know the objectives from the beginning, they know what they are expected to learn. Objectives also clearly focus on the desired outcomes.



Before you start developing your learning objectives, it's important to determine the kind of learning your students will be gaining. Identifying the type of learning, whether it will be knowledge, skills or attitudes, will help you develop more specific learning objectives. For example, if your students' learning involves knowledge retention and the development of intellectual skills, it is considered knowledge-based. If your students' learning involves physical movement, coordination, and motor skills, it is considered skill-based. If your students' learning deals with motivation and values, it is considered attitudes-based.





Developing Learning Objectives

Developing effective objectives that get to the purpose of your training is not easy. However, you can do it by following a few simple steps. Objectives should be written from the participants' point of view. They should emphasize what you want students to value, understand, or do with the information or skills being taught.

The simplest way to start writing learning objectives is by answering these questions:

- What will participants be able to do as a result of the course, training, or class?
- What are the conditions or circumstances where the participants will perform this activity, and what knowledge or materials do they need to do this effectively?
- What level of proficiency is needed to perform the task or skill successfully or apply this information?



There are several different models that have been created to help in designing learning objectives. For developing practical objectives, you might consider the SMART Model.



CLICK THE LETTER S M A R AND T TO SEE WHAT IT MEANS BELOW

For considering objectives that may relate more to behavior change, you might consider the A- B-C-D Model for behavioral objectives.

A B C D

A: Audience.
State the learning audience within the objective.

For considering objectives that may relate more to behavior change, you might consider the A- B-C-D Model for behavioral objectives.

A B C D

B: Behavior.
State the behavior you wish to see exhibited.

For considering objectives that may relate more to behavior change, you might consider the A- B-C-D Model for behavioral objectives.

A B C D

C: Condition.

State the conditions where the behavior will occur.

For considering objectives that may relate more to behavior change, you might consider the A- B-C-D Model for behavioral objectives.

A B C D

D: Degree.

To what degree will the learner be enabled?

What Kind of Training Should I Develop?

Developing training materials involves writing, creating learning exercises, and working with content experts and trainers. It is the most time-consuming phase, but it is also key to making sure your training is successful. Well designed, direct materials help drive your training and reinforce your learning objectives and outcomes.

Remember, the ultimate goal is effective safety training that leads to changing behaviors. Be creative and determine the proper content for the type of audience to which you will be training. Having your students embark on the learning process as it pertains to safety will be rewarding for both you and them.





You may have your draft materials reviewed by several people, and they may go through a number of revisions. Make sure the materials match the learning outcomes you identified, based on your assessment of the needs of your learners.

A basic way to pull together materials and/or related activities is to use your own experience as a learner. Complete the process below for each of your learning objectives for the course or training:

- Identify one of your clearly-stated learning objectives.
- Determine what kind of learning domain the outcome involves (knowledge, skill, or attitude).
- Choose an instructional method (activity, hand-out, team project, etc.) This helps participants accomplish your stated learning objective by doing.
- Explain how this learning experience will help your students meet the learning objectives you have identified.





What Method Should I Use?

There are a number of instructional methods to choose from when designing your materials. Thoughtfully choose the instructional method by which method works best with the topic.

How Do I Pull It All Together?

You have learned about your audience, assessed their needs, developed learning objectives, determined the type of training, and developed training materials. Now it's time to pull it all together in a course.

Follow these simple steps:

- Prepare a course outline including delivery methods with what needs to be learned and the time allotted. Clearly name the content (knowledge, skills, or attitudes) and learning objectives. Make sure your learning is sequenced, with easier learning first, building to more complex learning.
- Determine work-related professional competencies, capabilities, or standards your course addresses, if applicable.



- Develop how learning will be evaluated. Will you include an assessment of some type? Examples include a quiz, test, or final project.
- Develop a trainer's manual or instruction sheet for yourself and a syllabus denoting what the class will cover for your students. Provide this to participants in advance, if possible.
- Make your course design flexible, providing options for assignments, to help meet different learning styles.
- Set up activities that ensure the inclusion of all participants.
- Provide follow-up to reinforce learning, such as resources, books, contact names and numbers, and websites.

