

Effective Training Guidance



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1 INTRODUCTION

Ineffective environmental, health and safety (EHS) training can result in non-compliance with regulations, and can result in injuries and illnesses. Ineffective training can also be a waste of resources since on average companies spend up to \$1,229 and 34.4 hours per employee annually on training¹. These figures do not account for the time spent by the trainers and money spent on training materials.

The following case study illustrates how one of the simplest EHS training topics we encounter, putting an earplug, can be improved:

“In a study of 192 noise-exposed workers at a steel mill, employees who received a very brief personal tutorial on how to properly insert the earplugs achieved, on average, 14 decibels (dBA) more protection from their earplugs than prior to instruction”².

This case study illustrates several effective training techniques:

- Classroom training is not always the best training method and hands-on training should be considered.
- Measuring the effectiveness of the training is important. In this case, instead of a test, the employees need to show they can insert an earplug.
- The most efficient method is not always a classroom or video. The one-on-one training only took a few minutes.

This document discusses these methods and other methods for improving your training effectiveness.

2 WHAT MAKES TRAINING INEFFECTIVE

A number of factors can affect the effectiveness of training including:

- Lack of relevancy
- Too much information in one presentation or too much training all at once
- Same training each year
- Too much classroom lecture and not enough exercises and practice
- Poor presentation materials

The following sections provide more information on these issues.

3 HOW DO YOU IMPROVE EFFECTIVENESS

3.1 Make It Relevant

If the audience does not understand how the presentation could affect them or their job, they are less likely to pay close attention and retain the information. One method of making the presentation more relevant and interesting is to use stories and examples as explained by [Donald Clark](#) in [his post](#).in, which he notes that effective training needs context: a real-world scenario, or a problem to be solved.

In the guidance “Making Presentations That Stick”, the authors note:

¹ Association of Talent Development, State of the Industry website (https://www.td.org/Professional-Resources/State-Of-The-Industry-Report?_ga=1.155955640.2035814770.1463423809)

² Michael, K. and C. Bloyer, Hearing Protector Measurement on the End User: A Case Study. Presented at National Hearing Conservation Association, Feb 1993.

“..The presenter ... talks at a high level about the big picture, but gives no concrete details that might make the big picture understandable and plausible. He may sprinkle in a few stories or examples, but they are treated like garnish. Most people communicate with, say, 3 parts exposition to 1 part example. That's exactly backwards. In a compelling presentation, examples aren't garnish, they're the entrée.”³

This document emphasizes that stories and examples should be the building blocks of the presentation (i.e., not bullet points).

3.2 Keep It Short

The length of the presentation, and the amount of information that you are trying to convey can affect the ability of the audience to understand and retain the information. The common analogy for this type of training is asking the audience to drink from a firehose. This type of training may be more common amongst grain elevators because:

- Seasonal activities require training a number of temporary employees just before harvest
- A facility will take advantage rainy days to catch up on training

Although this may seem to be an efficient training method, you risk employees:

- Not comprehending or remembering the information
- Zoning out or falling asleep

An alternative to this option is to conduct numerous short presentations avoiding some of the pitfalls identified above⁴.

3.3 Improve Presentation and Presentation Materials

Presenters rely on presentation materials to help guide them, ensure they cover the appropriate materials and do not forget what they want to say. Unfortunately, this sometimes results in poor presentation materials that can detract from presentations and remove focus from the key concepts that we want to get across. Here are some general rules to improve presentations and presentation materials”

- Use
 - Dynamic introductions or openings to get attention
 - Illustrations instead of words where possible
 - Emphasis on key concepts
 - Examples and case studies
- Avoid
 - Slides with lots of words
 - Reading from slides
 - Regulatory citations
 - Unnecessary decorations
 - Telling them what you are going to tell them and telling them what you told them

³ “Making Presentations that Stick” by Chip and Dan Heath, <http://heathbrothers.com/member-content/making-presentations-that-stick/>

⁴ David Oliver, Supervisor of Health and Safety, General Motors, Detroit, at the National Safety Council 2011 Congress, Injury Prevention and Cost Control Alert

3.3.1 Dynamic introductions or openings to get attention

Some adult education training guidance recommends starting presentations with an overview of what you intend to cover and recommend the

- Tell them what you are going to tell them
- Tell them, and
- Tell them what you told them.

Other presentation guidance notes that this is an overly structured training method and not necessary⁵. If you watch dynamic presentations (e.g., [TED Talks](#), Steve Jobs), you will note that the presenters do not use this method. That does not mean presenters should not emphasize or review key points and concepts.

An alternative to the “Tell them what you are going to tell them” method of opening the presentation is to open with something dynamic and/or attention grabbing. Examples include:

- A relevant case study
- Photo or video that introduces the concept
- A pertinent group question or discussion

3.3.2 Presentation Slides

Presentation slides are a common tool for training, but they are often poorly used. A common mistake is too much text on the slides. Using too many words causes the audience to read the slide instead of listening to the presenter⁶. Excessive words can also tempt the presenter into reading from the slides, which should be avoided. If the presenter wants the audience to read something or if they want them to have information they can reference later, consider providing handouts or other materials to the audience.

If the presenter needs the text to help them remember the information, they should use written notes. If you are using newer versions of Microsoft® PowerPoint, it has a feature that allows the presenter to have notes on their computer screen and the slides on the projected screen.

Clip art and photos can also detract from the presentation and are not necessary⁷. However, if the image helps illustrate a point, use it especially if you can use it in lieu of text.

Other technical information, such as definitions and regulatory citations should be avoided. As stated above, if the audience needs this information, you should provide it in a handout or reference document.

3.4 Participatory Teaching Methods

“Tell me and I forget, teach me and I remember, involve me and I will learn”
- Benjamin Franklin

The learning pyramid is often cited to illustrate learning retention rates. Although the validity of this learning pyramid has been called into question⁸, the bottom of the pyramid, which has the highest

⁵ “Making Presentations that Stick” by Chip Heath and Dan Heath, page 1 <http://heathbrothers.com/member-content/making-presentations-that-stick/>

⁶ “Ten Things the Best Speakers NEVER Say” by Jeff Haden <https://www.linkedin.com/pulse/ten-things-best-speakers-never-say-jeff-haden>

⁷ “Making Presentations that Stick” by Chip Heath and Dan Heath, page 3 <http://heathbrothers.com/member-content/making-presentations-that-stick/>

estimated retention rates, uses participatory teaching methods that are considered the most effective⁹. Participatory teaching methods include:

- Group Discussions
- Practice and Exercises
- Teaching Others

3.4.1 Group Discussion

Seasoned presenters have days when they feel like they have to pull teeth to get employees to participate in training. You may be able to overcome this resistance by using group exercises since some people are more likely to talk in a small group. For instance, divide the class into small groups of two or three persons and provide them with a case study relating to the topic being covered.

Using questions to get audience interaction can also start group discussion. Even if the audience does not interact, posing questions that do not go answered can peak the audience's interest¹⁰.

3.4.2 Practice and Exercises

As illustrated in the earplug case study in the Introduction, actively implementing a health and safety or environmental control measure can increase the training effectiveness. Practicing the implementation (e.g., an emergency action plan measure) improves performance and allows for corrections and modifications.

[Donald Clark](#) provides some good insight on exercises, practicums and rehearsals:

“To facilitate this kind of learning, we frequently encourage our clients to reduce the amount of seat time they allocate to eLearning and classroom training. In its place, we recommend that they create practice scenarios and problems, then provide well-structured information repositories where learners can find the resources they need to work through the exercises.”¹¹

3.4.3 Teaching Others

The benefits of having employees teach a topic are summarized well in this excerpt from an article by Joe Mlynek in [Grain Journal Magazine](#):

“I once worked with a CEO who told me, “If you truly want to learn something. teach it.” He was right. In order to instruct on a topic, you have to know it inside and out. Consider the teaching-others method for your training. The possibilities for having employees instruct on certain topics are endless. In fact, I would argue that in many instances, operations employees are more knowledgeable on how to work safely than the instructor is. Consider having your employees instruct or demonstrate some of the practice activities that were referenced earlier. You may even

⁸ “Why the Learning Pyramid Is Wrong”, by Valerie Strauss, The Washington Post, March 6, 2013, <https://www.washingtonpost.com/news/answer-sheet/wp/2013/03/06/why-the-learning-pyramid-is-wrong/>

⁹ “The Learning Pyramid”, by the Peak Performance Center (<http://thepeakperformancecenter.com/educational-learning/learning/principles-of-learning/learning-pyramid/>)

¹⁰ “Making Presentations that Stick” by Chip Heath and Dan Heath, page 2 <http://heathbrothers.com/member-content/making-presentations-that-stick/>

¹¹ “40 Techniques to Massively Increase Retention” by Donald Clark, May 28, 2010, <http://donaldclarkplanb.blogspot.com/2010/05/10-techniques-to-massively-increase.html>

want to have them cover a particular example or real-life experience during classroom training. This can influence their coworkers greatly and increase their retention and awareness”¹².

Employees conducting training also achieve employee engagement in environmental, health and safety (EHS) activities, which is a key component of strong EHS culture¹³.

3.5 Use Multiple Training Mediums

The VARK or Visual, Auditory, Read/Write, Kinaesthetic model is used to show how people learn differently. Although people can learn using each method, generally a person will have one or two methods that are better. Explanations and examples of each method area:

- Visual: Information in a graphical form (diagrams, charts or symbols)
- Auditory: Information in a spoken form (listening and speaking)
- Read/Write: Information displayed as words (reading and note-taking)
- Kinaesthetic: Information through experiences (hands-on, tactile activities)

When conducting training, it is important to keep this concept in mind. We created this document in addition to a training presentation so people who learn better through reading would have an alternative to listening to the presentation. The section on practices and exercises is designed for employees who learn better through kinaesthetic methods.

3.6 Don't Dilute the Message

Some presenters with intricate knowledge of a topic can unfortunately provide too much information and dilute the message they need to get across. When preparing a presentation identify the key points that the audience needs to walk away with and focus the training on those topics. In “Making Presentations That Stick”, Chip and Dan Heath discuss resisting the temptation to include lots of other information:

“Let your main points hog the spotlight: If you say 10 things, you say nothing. ... You've put a ton of research into your presentation—you've done the research, you've analyzed the data, you've struggled with the conclusions. All of it seems important. Cutting that third bullet point on slide 17 feels like a wound. But it shouldn't. Think about yourself as the director of a play, and you're allocating speaking parts among your main points. You can create a great monologue or a great dialogue, but if you've got 22 characters speaking, you haven't developed any of them properly. So don't dwell on the pain of cutting the bullet point on slide 17, think about the extra attention you've allocated to your main characters.”¹⁴

3.7 Measure Competency

Evaluating employee understanding and retention through quizzes and tests allows the presenter to determine the effectiveness of the training. Taking it further, you can give pre and post-training tests to differentiate between what is learned in the training versus what the audience knew before the training.

¹² “The Learning Pyramid: Methods That Maximize Information Retention Among Employees” by Joe Mlynek, Grain Journal Magazine.

¹³ [Creating a Culture of Safety in Your Organization - Part 2: Employee Engagement](http://blog.nsc.org/creating-a-culture-of-safety-in-your-organization-pt-2) Posted by [National Safety Council](http://blog.nsc.org/creating-a-culture-of-safety-in-your-organization-pt-2), December 18, 2013 at 10:00 AM, <http://blog.nsc.org/creating-a-culture-of-safety-in-your-organization-pt-2>

¹⁴ “Making Presentations that Stick” by Chip Heath and Dan Heath, page 2 <http://heathbrothers.com/member-content/making-presentations-that-stick/>

Another option to consider is to measure employee retention in-between repeated training courses. This not only evaluates employee retention, but may also identify the need for refresher courses.

3.8 Seek Feedback

Although it can be difficult to accept criticism, seeking feedback on the effectiveness and usefulness of training can improve your training program. In an article “Is Your Training Effective? Have You Asked Your Trainees?”, Jennifer Busick identified a number of questions that you can ask to improve your training program:

- Was the training useful?
- Are employees using the training?
- If employee are not using the training, why not?
- Was the training relevant to their position?
- Is anything impeding their ability to implement the training.¹⁵

Taking this criticism constructively can help presenters update, improve and focus the presentations to achieve training that is more effective.

¹⁵ “Is Your Training Effective? Have You Asked Your Trainees?” by Jennifer Busick, EHS Daily Advisor, BLR December 29, 2015, <http://ehsdailyadvisor.blr.com/2015/12/training-effective-asked-trainees/>