



# Presentation Skills for Engineers

An Online Continuing Education Course for Engineers

**Course Number: PD-1002**

**Credit: 1 Hour / 1 PDH / 1 CPD**

# Presentation Skills for Engineers

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## Introduction

Engineers are often asked to give presentations to either internal or external audiences. Sometimes giving presentations is a normal part of the engineer's position but is usually only an occasional occurrence. Though well versed in the technical nature of a subject, engineers are often not prepared to give effective presentations. Most engineering degree programs concentrate on the skills to ensure competency in the numbers. This leaves little time to teach speaking and relational skills. This course will help the engineer become a better presenter by learning some techniques which will lead to presentation skill improvement. Improvement in presentation skills will enhance knowledge transfer.

It is all too often that a good message is lost because of poor delivery. That is a disappointment since much work has usually gone into the message. No matter if you are preparing your first presentation or you've given hundreds, this course will offer something to improve your skills. In this training, great performances are divided into three components: Planning and Organization, Delivery, and Closure with Questions and Answers.

This course is about the packaging and delivery of the message more so than the message itself. The message is where you are the expert. The objective of this class is to help you deliver it more effectively and convincingly.

## Planning and Organization

### Planning

So, you have been asked or have volunteered to give a presentation. Don't be concerned if you are nervous. You will find that as you become more prepared, the nervousness will fade. Planning builds confidence and knowledge which stifles the fears behind most

nervousness. Remember that even the greatest message coupled with a poorly prepared speaker will always yield undesired results. You can prevent that with proper planning.

The first step in planning is to answer a series of questions that will allow your presentation to be both appropriate for the audience and accomplish your objective. Thorough planning is a step too often taken lightly, but it is the key to elevating the quality of the presentation.

We begin with a series of questions that need to be answered before the development of each presentation:

1. Will the presentation be delivered internally or externally?

Internally, presentations are made to advance an idea within a company. Perhaps a new product or service needs to be approved before offering to the public. Maybe it's a project to reduce cost or replace equipment. Whatever the case, the idea must be well presented to move forward. Internal presentations are usually less formal and delivered to a familiar audience. This pretense can change somewhat in a larger company. In a larger company, more due diligence must be performed to understand the audience and their expectations. This is because in a large company there is often less interaction between the multiple levels. Even though it is presented to a familiar audience, the presentation deserves the same preparation diligence as one delivered externally.

External presentations are usually to sell a concept to an audience. The concept may be to buy your product, service, or idea. In some cases, it is simply to inform the public. Even though it is for informative purposes, a positive outcome is still desired. Occasionally, persons are offended by the use of the term "sell" because it leaves the connotation of something being forced or coerced on someone. In all reality, we are always selling to others whether it is our ideas or ourselves. To be successful in this effort, the audience must be thoroughly understood. For that reason, external presentations require more preparation time to understand the audience than do internal ones where the audience is more familiar.

## 2. Should the engineer do the presentation?

Occasionally the person who has crunched the numbers and performed all of the technical legwork may not be the best person to do the presentation. It is not uncommon for a team approach to be used where a speaker with more refined presentation skills delivers the message accompanied by the technical person to answer the questions. Better use of resources is to do this only on a limited basis and eventually, develop the skills of the team members such that each person is comfortable delivering the message.

## 3. What is the objective of the presentation?

It may be hard to believe, but this question is sometimes not completely answered. In all cases, the purpose of your presentation needs to be crystal clear. This begins with writing down the objective in one well-focused statement. This is the backbone that the meat of the speech is built around. Everything needs to build upon and support this objective. The ability to meet or not meet this objective is the measure of the presentation's success.

Some examples of objective statements are: "To get the council to accept the proposal," "To inform the concerned citizens why the bridge needs to be widened," "To secure funding to replace the #3 packaging line."

## 4. Who is the audience?

Answering the question "Who is the audience?" will determine the proper tone and verbiage for your presentation. Try to surmise the overall tone of the audience in one word such as hostile, supportive, indifferent, curious, etc...

The presenter must understand why the audience is there and what they hope to gain. A good method to understanding this is to get the names of several audience members if you don't already know them. Next, call them and find out what they hope to learn from the presentation. Be sure the presentation answers their concerns and questions. This step also portrays you as a speaker who is truly concerned about the audience's needs. Also, this often uncovers hidden issues you may not have been aware of.

The presenter must also learn the demographics of the audience. Recognize that the technical content in your presentation must be understood by the least technical person in the audience. If you must use technical terms beyond your audience's knowledge level, be sure to define them. Never assume they are understood.

Be aware that members of the media may be in attendance at your presentation. If the media is present, anything you say could become a news snippet. The presence of the media should not be viewed as a negative, but as an opportunity for your message to reach a broader audience. If possible, offer to meet with media personnel one-on-one after the presentation to give them a chance to clarify any information they may wish to address.

#### 5. Are there known or hidden emotional issues?

These are the issues that distract from the facts but are often perceptions that can drive decisions. Emotional issues need to be addressed early in any presentation. They come up most often in civic projects (especially those involving tax increases), environmentally significant projects, and any project where people feel something is being forced on them. Concentrate on the positive aspects that most of the audience can agree on. In other words, try to find one point that unifies. This does not mean to ignore the divisive issues, but rather make the audience aware of some common ground.

## 6. Will audio-visuals be used?

Visual aids include such items as presentation software, posters, banners, maps, etc.

They are used to enhance a presentation but should not become the presentation. If the presentation can be done exclusively through audiovisuals, then the presenter is not necessary. There are few items as wasteful as a slide presentation that is read verbatim and is the entire presentation. Slides are not a substitution for the program. Slides should simply reinforce key ideas or help visualize complex processes. They are also a good method to use if an animation is necessary. Remember the speaker is the messenger and the message, not the audiovisuals. Also, it is a good idea to put a blank slide between key ideas. This directs attention back to the speaker and away from the audience reading the slides either before or after the information has been covered.

It would help if you also were sure that the audio-visual fits the location of the presentation. You would not want a small monitor playing a video in a large room. Just be sure that your audio-visuals are properly selected for the venue.

The use of posters can be appropriate in some cases. Posters are effective for understanding complex processes, mapping of an affected project area, and to share details on action items such as future meetings or contact information.

## 7. Are there any problems with the location?

If at all possible, visit the location before your presentation. The layout of the room is important as to where you will stand, the location of the receptacles (if needed and if an extension cord is required), and whether a microphone is needed. If the room needs to be darkened for the presentation, check to see if there are windows that have shades. As mentioned above, the size of the room will also affect the type of audiovisuals. A flip chart would be more appropriate in a board room setting than in a very large auditorium.

8. Are other speakers on the agenda?

If other speakers are on the agenda, are they offering competing ideas or proposals? If you end up on the agenda with competing speakers, try to go last. It offers an opportunity to present your ideas in light of the competition. Also, tying your introductory remarks into something a previous speaker has said allows for continuity between presentations.

9. What are the time constraints?

If you want to make an audience fidget, go beyond your allotted time. Unless your presentation can engulf their interest and attention, they will be finished listening when your time is up. This is even more important when there are others after you on the agenda. Be aware of how tight the schedule is.

10. Will there be any handouts or leave-behinds?

Handouts can either enhance or distract from a presentation depending on how they are used. The main concern with handouts is that they distract the audience from reading and concentrating on the handout instead of the presentation. A handout idea that usually works well is to provide a handout that gives the listener space for the listener to take notes. Another idea is to provide a handout that is reviewed is to project it onto a screen and allow the audience to read ahead. You can always have a handout for those who want them.

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## Organization

### Outline of Ideas

A presentation should have a few main points. One of the main reasons speakers fail is that they try to deliver too much information which leads to rambling. With an overabundance of information, the main point is often lost.