

Engineering an Effective PowerPoint Presentation

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Overview

Most of the rules for successful written communications also apply to oral presentations. The most important thing to master is audience analysis. The speaker who follows this advice will be recognized as a professional—someone who is prepared. Understanding the needs of your audience and being sensitive to those needs will make you a credible communicator. This tutorial provides guidelines on developing and delivering effective presentations.

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1. Basics of Communication: Audience, Purpose, and Problem

Three keys to an effective presentation are knowing the *audience* (or context), the *purpose*, and the *problem* addressed by your presentation. These elements will vary each time you give a talk.

- When considering your *audience*, ask yourself, “For whom am I presenting or writing?” Be aware that speaking to your fellow engineers does not mean that they will understand all technical explanations. You still need to carefully explain your subject matter.
- When considering your *purpose*, ask yourself, “Why am I writing this document or making this presentation?” Think beyond the obvious answer—“Because I have to.” Why is the subject matter of your presentation or paper important? It is vital that you believe in the importance of your talk.
- Finding a clear overall purpose is often the most difficult part of a presentation. Students often succeed in their talks in describing how a technology operates, but they do not present a clear and concise purpose for their presentations. The broader point of your paper could relate to issues or trade-offs in design choice, trade-offs among competing products, or social issues and trade-offs that might result from the introduction of the technology. Having a broader point will help your audience to make sense of the technical information that you present and ensure that your paper is more than an “information dump.”
- When considering your *problem*, ask yourself, “Why is there a need for my paper or presentation?” What specific problem or angle on my technology am I tackling? What unresolved issue am I addressing? The angle that you take will make your paper relevant and interesting to your audience.

Gauge the amount of technical information that you include in your talk by its *audience* and *purpose* and by the *problem* you are addressing.

Presentation DOs and DON'Ts

DOs

- **DO** remember to whom you are talking/presenting.
- **DO** remember your overall purpose or main point.
- **DO** introduce your topic and make it interesting to your audience.

DON'Ts

- **DON'T** emphasize excessive amounts of technical information without clear explanation. It's easy to lose even an audience of your peers.
- **DON'T** assume your listeners know as much about your technology as you do, and don't assume they share your interest/enthusiasm for it. Explain why it is important.

2. Basic Power Point Design

The design of your presentation is key to making an effective impression on your audience. The way to do this is to make sure your slides are well organized and visually interesting.

- *Titles* are important. Be sure the title of your presentation fits your talk. It should accurately cover the major content and ideally raise your audience's interest.
- There are several ways to *emphasize text*, such as italics, underlining, varying font sizes, block lettering, type styles, and spacing. These help to separate headers from text and to inform your audience of what you think is most important. As a rule, keep the use of text simple and consistent.
- Information on slides is organized into *bullet points* rather than sentences for brevity and clarity. When using bullets, be sure you have the right level of detail—don't overwhelm your listeners. While there is no rigid rule, three to four bulleted items per slide is a good guideline to follow. You can place sub-bullets underneath these, but be careful of overloading your slide with text.
- Remember to use *parallel construction* for all your headings and bullets. This means that the titles of all the slides in your talk, and all the bullets on a single slide, should be in the same format.
- Watch for *proper capitalization* of all your headers and bullets. Proofread carefully.

Some Helpful Tips on Giving Effective Presentations

DOs:

- **DO** include a title slide, an overview slide, a conclusion slide, and a slide for questions.
- **DO** make sure each slide has a title header.
- **DO** number your slides, as you would with page numbers.
- **DO** place more space (i.e., double space) between bulleted items than you do between sub-bullets within those items themselves. Otherwise, your listener cannot tell your main headings apart.

DON'Ts:

- **DON'T** cram your slides full of information.
- **DON'T** make your type so small that it cannot be read in the back of the room.
- **DON'T** use an outline of your talk or lists of items on your slides because they rapidly lose audience interest.
- **DON'T** put your name and section on every slide.

Advanced Power Point Design

- A key to a highly effective presentation is the use of visually stimulating material.
- Choose your *background* carefully. While there is not single rule, and different authorities will give you different opinions, it is generally a good idea to avoid a plain, solid-colored background. At the same time, avoid the use of a background that is too visually busy and will distract from your presentation. Cool and dark colors, such as royal blue, work best.
- Incorporate *visual aids*, such as photographs, graphs, charts, etc. These illustrate your point, condense information, and provide balance for your presentation

3. Giving an Effective Oral Presentation

- Work on the *organization* of your presentation beforehand. On slide one, give the title of your talk and a brief summary of your main point(s). On your second slide, provide an overview of the presentation in a short table of contents. Summarize your main points in a "conclusion" slide. End with a "questions" slide.
- First impressions matter. Your *dress* conveys your first message to your audience, so think carefully about it. In the past, students have commented that when they "dress for success" by preparing for their talk, they feel more professional and perform better. At a minimum, avoid wearing hats because they can imply casualness.
- Be aware of your *posture* while you speak. Keep your back straight and avoid slouching. Make sure you face the audience at all times by keeping your shoulders squared. Keep your hands out of your pockets; if you need to, place them behind your back.
- Develop *contact* with your audience. Do this by facing them at all times and maintaining constant eye contact.
- Control the *positioning* of your body. When doing a PowerPoint presentation, stand midway between the computer and the screen and take one step toward your audience
- Control your *movement*. Remain stationary on the platform. When you do move, do so with purpose—i.e., to point out an item on the screen or change a slide.
- Watch your *delivery*. Maintain the right *pace*—not too fast or slow. Watch your *diction* and *enunciation*—be sure to speak clearly. Watch your *intonation*—vary your voice pattern. *Project* your voice loudly enough so that a student sitting in the back of the room can hear you.
- The single most important key to the success of your presentation is *practice*. Practice as often as you can. Try to assemble an audience of one or two friends. Practice may not make you perfect, but it will help you achieve excellence.

Some Helpful Tips on Giving Effective Presentations

DOs:

- **DO** introduce your presentation at the beginning and summarize it at the end.
- **DO** follow the sequence of your slides closely—do not run ahead of your slides, skip items, or change their order. This confuses your audience.
- **DO** use *note cards* if you need to. Practice with them, but avoid reading them during the presentation and keep them from being too conspicuous.
- **DO** explain all charts, graphs, and visuals.
- **DO** make sure your voice can be heard in the back of the room.

DON'Ts:

- **DON'T** stand behind the computer or next to the overhead projector. This prevents you from developing contact with your audience.
- **DON'T** block the screen with your body when using an overhead projector. With PowerPoint, do not step into the light of the projector on the screen.
- **DON'T** fidget, rock, or pace on the platform.
- **DON'T** read a prepared script. This distracts from your interaction with your audience.
- **DON'T** use "*filler words*" (such as umm, er, like, whatever, etc.). Have a friend listen to your talk or tape record yourself and count the number of filler words.

4. Sample PowerPoint Slides

[link to PowerPoint file]