20 A Presentation to a Small Group

This chapter covers the following:

- The basic principles for preparation
- A Ph.D. oral examination
- A presentation to a review panel, e.g. a design interview, a presentation to a funding organisation
- Checklist

Occasions When You Might Present to a Small Panel

- A Ph.D. oral examination
- A design interview
- A presentation to your funding organisation

Constraints

The meeting is likely to take place across a table and may have no means of projecting visual aids.

Basic Principles for Preparation

1. Visualise yourself and your material through the audience's eyes.
2. Work out beforehand the questions you may be asked.
3. Identify the main points of the work and its strengths.
4. Identify the key weak points and problems, and prepare yourself for questions about them.
5. Think graphically. Clear, graphical visual aids are an effective means of making points and answering questions.

A Ph.D. Oral Examination

1. Allow adequate time to become thoroughly familiar with the material and thesis again. There is likely to be a gap of months between submission and oral, which is enough time for the detail and structural plan of your thesis to become blurred. It may take more time than you might think to become fully refreshed.

Writing for Science and Engineering.
DOI: http://dx.doi.org/10.1016/B978-0-08-098285-4.00020-0

2. **Prepare a summary of the work that you've done and its significance.**
   Keep in mind what you've done, how you've done it, what's new about your research and what's significant about it. After the initial small talk to make you feel more comfortable, Ph.D. oral examinations often start with a request to the student to summarise his or her work. To prepare for this beforehand, you need to be able to stand back from the minute detail and prepare an overview.
   Possible questions: Make sure that, amongst other things, you can answer the following:
   - *What is the significance of your work?*
   - *What skills did you develop?*
   - *If you were to do it again, would you approach it differently?*
   - *Where do you see it leading?*
3. **Make sure you can navigate your way around your thesis without hesitation.** You may need to refer to it to answer questions.
4. **Near to the date of the examination, do a literature search for any new work that may have come out.** The months between submission and the oral exam can mean that you may be unaware of significant new developments. There is an opportunity to impress here: relate the new work to yours, and decide where you want the discussion to go.
5. **During the examination, if you are asked a question that needs deliberation, allow yourself time to think without getting flustered.** Don't let the pressures of the moment force you into a hasty answer. Your assessors will prefer a period of thought followed by a reasoned answer to an unconsidered, hasty one.

A Presentation to a Review Panel

An example of this type of presentation is for an engineering design or a progress report to an outside organisation.

1. Visualise yourself through the audience's eyes.
   You want the audience to listen to your message, understand it and be influenced by it. Keep in mind:
   a. The particular concerns of the individuals in the panel (commercial, academic, etc.) are important.
   b. They may not have very much prior knowledge of your work.
   c. What is obvious to you may not be so to them.
   d. The significance to them of each point you make matters, e.g. impact on part numbers, costs and assembly time without reducing the quality of the product.
   e. Summarise the take-home message. It can be couched in terms of economic feasibility, fixed and variable cost savings, projected break-even points, payback period, etc.
   f. The possible barriers to getting your ideas accepted need to be identified.
   g. Concrete examples, not concepts, are preferred by the majority of the population.

2. Identify the key points. Then prepare a short presentation either by computer/projector or by hard copy.
   a. Identify whether you need a projector. If there is not one in the room, ask whether you can take one. If there is no screen, establish whether you can use the wall to project onto.
   b. Prepare your presentation also as a handout. Make enough copies for all the people on the panel with a few to spare.
   c. Be rigorously selective in what you will present. There is never enough time to say everything.

d. Think graphically: plan the presentation around your illustrations. No review panel will react well to screenfuls of dense text. Scientists and engineers think graphically; they are much happier with schematics, graphs, illustrations, etc.

e. Make sure that the quality of the graphical presentation is excellent.

f. Aim to present all your main material in the first few minutes. Use the same diamond structure as for a conference presentation (see Figure 19.1, Chapter 19: *A Seminar or Conference Presentation*, page 236).
- An initial overview of the main points. Make sure you first present – *very briefly* – the context (background) of the work and the reasons you are doing it (the gap in the knowledge, the motivation).
- The main body of the work.
- The main conclusions.

g. Identify the main points (the take-home messages). Make sure that you clearly transmit them, both in the presentation and in the discussion.

h. In addition to the obvious points of your work in the presentation and handout, make sure that you also include the following:
- **An initial overview slide** containing the main points of your work.
- **A graphic that summarises your approach to the project.**
- **Any key recommendations.** Don't overwhelm people with a large number of recommendations – prioritise, stating the important features.
- **A slide showing the current status of the project**, so that it can be presented at a moment's notice.

Checklist for a Presentation to a Small Panel

☐ Visualise yourself and your material through the audience's eyes.
☐ Work out beforehand the questions you may be asked.
☐ Identify the main points of the work and its strengths.
☐ Identify the key weak points and problems, and prepare yourself for questions about them.
☐ Think graphically. Clear graphical visual aids are an effective means of making points and answering questions.

For a Ph.D. oral examination

☐ Have you allowed yourself adequate time to become thoroughly familiar with the material and the thesis again?
☐ Have you prepared a summary of the work that you've done?
☐ Have you thought about the significance of your work: what you've done, how you've done it and what's new about your research?
☐ Are you sure you can navigate your way around your thesis without hesitation?
☐ Have you recently done a literature search for any new work that may have come out since submitting your thesis?

- ☐ Can you answer the following questions:
  What is the significance of your work?
  What skills did you develop?
  If you were to do it again, would you approach it differently?
  Where do you see it leading?
- ☐ Have you worked out other questions you might be asked?
- ☐ Can you identify the main points of the work and its strengths?
- ☐ Do you know its weak points, and are you prepared for questions on them?

For a review panel

- ☐ Do you know the particular concerns of the individuals in the panel (commercial, academic, etc.)?
- ☐ Do you know how much prior knowledge of your work they have?
- ☐ Can you gauge the significance to them of each point you make?
- ☐ Can you summarise the take-home message of your work?
- ☐ Can you couch it in terms that are meaningful to the panel (economic feasibility, fixed and variable cost savings, projected break-even points, payback period, etc.)?
- ☐ Can you identify any possible barriers to getting your ideas accepted?
- ☐ Have you been rigorously selective in what you will present?
- ☐ Can you present all your main material in the first few minutes?
- ☐ Have you prepared an initial overview of the main points and a final summing up?
- ☐ Will you present the take-home message – the main point – three times: initial overview, the main body and final summing up?
- ☐ Have you included the following information?
  - □ An initial overview slide containing the main points
  - □ A graphic that summarises your approach to the project
  - □ Clearly demonstrated key recommendations
  - □ An ongoing presentation that shows the current status of the project
- ☐ Are your graphics excellent?