

**Dublin City University**  
**School of Computing**

**MSc in Software Engineering (MSE)**

**MSc in Security and Forensic  
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**CA640: Research Skills**  
**Speaking and Presentations**

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## Introduction

- Spoken and written communication are key skills for scientists.
- They are often required to give formal technical presentations describing their work.
- The effectiveness of these presentations can have a significant impact on the way they are perceived by their managers, colleagues and peers:
  - people can be much more influenced by your 20 minute presentation than by your 20 page paper or the 20 weeks you spent generating the results.
- There are various forms of presentations: e.g. internal departmental research seminars, updating your supervisor on progress, defending a thesis, job interviews, technical sales, media interviews.

## Introduction

- People are often uncomfortable speaking in public.
- Fears and nervousness can largely be overcome, and the quality of presentation improved.
- The key to improving as a speaker is really simple: you must decide that you *want* to be better.
- Various techniques can help to improve presentation, but largely speaking is something you learn by *doing*.
- It is not something you learn once and then use: rather the improvement of your presentational skills is an ongoing active process. Reflect:
  - What could have been better about my last presentation?
  - What went really well?

## Observation

One of the best sources for learning effective presentation is to observe other presentations:

- What is being done well?
- What could be improved?
- Is the material well organised?
- Do the visual aids support the message?
- Has the speaker chosen clear language?

You can learn from every speaker.

## Preparation

One of the key elements in delivering a successful presentation is the preparation beforehand.

This can help direct your energies away from worrying about yourself (“stage fright”) and towards giving something useful to the audience:

Concentrate on

- Material to be covered;
- Audience;
- Time available;
- Visual aids.

## The Audience

- Who is your audience?
- What brings them together?
- How knowledgeable/technical is the audience?
- What does the audience want from this presentation?

## What do you want to accomplish?

- Identify your objective - aim to be able to summarise this in a single clear sentence.
- Avoid the temptation to tell everything you know on a subject.
- Identify the *key points* and your *take-home message*: concentrate on getting these across to your audience.
- If the point is not clear the audience will ask themselves what is the point of this talk,
  - and there will be annoyance, boredom, bewilderment...

# Presentation Organisation

Standard presentation structure:

- Introduction
- Body
- Conclusion

“Tell them what you’re going to tell them, Tell them, Tell them what you’ve told them”

## The Introduction

- Grab the audience's attention!
- Know exactly what the first few sentences will be - introduce the exact topic of the presentation.
- Set the work in context - why are you doing  $x$ ? what application might it have? What existing theory are you building on?
- Remember your audience: provide enough background that they will be able to follow the talk but don't bore them.

## The Body

- Usually takes up the largest portion of your available time.
- Tells a story about the purpose of your work.
- Experimental results, positive or negative, can illustrate the story, but they are *not* the story.
- Explain *what* experiments you did, *why* you chose them, and *what* you learned from them.
- Progression of the story should be logical, but it is often effective to discuss mistakes and surprising results. Explain how your thinking developed based on these results.
  - Research experiments where you always know the results in advance are boring...

## The Conclusion

- Cement the key points in the minds of the audience.
- Recall the issues raised in the Introduction and point out how your work has addressed these.
- If you find yourself short of time **do NOT** cut from the conclusion; omit or condense material from the body of the talk.
- Do not ever introduce new material in the conclusion: it looks disorganised and it will confuse the audience.
- Complete the talk with a strong memorised sentence which captures the message of your talk. If appropriate invite questions. Then stop talking.

## Planning

- Plan the structure of your presentation: Introduction, Body, Conclusion.
  - List the points to be raised in each section.
  - Assess them carefully: are they all required ? is the order logical ? is anything missing? Always always think about the expected audience for this particular talk.
- Timing: know how much time is available for the presentation. Find out how much time is expected to be reserved for questions. Plan to spend about 5% on the Introduction, 5% on the Conclusion and 90% on the Body. **DO NOT OVERRUN** the time available.

## Planning

- Speak your presentation out loud in rehearsal: this tells you
  - how long you need to speak to get through the material in this form,
  - whether you can clearly express your ideas. Understanding something is not enough: you need to be able to explain it in clear language to an audience unfamiliar with the idea.
- Revise, Revise, Revise until you are happy...

## Visual Aids

- The role of the visual aid is to *illustrate* and to *emphasise*.
- Good visual aids can increase the audience's retention of what you say.
- Poor visual aids are worse than no visual aids.
- Visual aids are not a script: your talk should NOT be reading the slides
- Too much text will mean that the audience is reading instead of listening, and that you may be reading instead of looking at your audience: overall contact between speaker and audience is lost.

## Visual Aids

- Keep slides simple
- Use key points, not full sentences.
- Choose a plain *sans serif* font,, NOT times roman. Try it out: see which looks better from the back of the room!
- Use *italics* and **bold** for emphasis, but sparingly: otherwise they lack emphasis and become annoying.
- Consider choice of colours carefully: consider issues of contrast between text and background, how well your preferred colours project, possible colour blindness issues for your audience.
- Use only **simple** tables of results: where possible use **simple** graphs instead.

## Body Language and Gestures

- Your Body language gives an impression of your talk: try to appear enthusiastic from the start.
- Be aware of your appearance to the audience.
- Look at the audience: not the floor, not the ceiling, not your notes, not your slides, not the back of the room.
- Make eye contact with members of your audience.
- Try to be aware of mannerisms - shaking keys, brushing hair etc - and try and reduce them: they are distracting.

## Group Presentations

All of the above applies to Group Presentations, but they introduce further issues:

In a Group presentation,

- Decide who should speak when. Try and balance the amount of time each person speaks for.
- Try for a smooth progression between speakers: maybe one person can run the presentation, inviting others to speak at suitable points; alternatively the time can be divided up with one person following another.
- Try to ensure consistency in style of delivery. prepare the slides together so that their appearance is consistent, and check carefully that all the necessary background is introduced by somebody, and that the technical level of delivery is consistent.

## Further Reading

Scientists must speak - bringing presentations to life

D. Eric Walters and Gale Climenson Walters

Routledge 2002

18.45 euro