

Lecture 2: Listening, speaking, and reading skills

2.1 Speaking skills (scientific presentations)

2.2 Listening skills

2.3 Reading skills

2.4 Exercises



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Timetable

Week	Date	Topic	Who and where
1	6 Oct 3-4pm	Introduction	All in GU01
2	13 Oct 3-5pm	Listening, presentation and reading skills	All in GU01
3	20 Oct 3-5pm	Writing skills	All in GU01
4	27 Oct 3-5pm	Library skills Presentation practice	WCM/HDR in 103 AM in GU01
5	3 Nov 3-5pm	Library skills Presentation practice	AM in GU01 WCM/HDR in 103

Note: library skills session to be given by Sue Egleton in Main Library

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What can go wrong in a presentation?

- Inaudible – too fast, too quiet
- Invisible – can't see images/text
- Too much material (poor selection)
- Unclear message (none or mixed)
- Poor explanation (e.g. jargon)
- Run out of time or finish too early
- Mental block – embarrassing silence
- Poor response to questions

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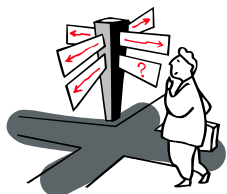
2.1 Presentation skills

- **Aim** – what message do you want to convey?
- **Audience** – who are they? what do they know?
- **Medium** – media involved in oral presentations
- **Content** – what should be included?
- **Structure** – logical framework for content
- **Style** – visual conventions
- **Practice** – how to prepare for the big day
- **On the day** – how to deal with nerves and body etc.
- **Feedback** – did the message get through?

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Aims

- Why am I making this presentation?
- How will I judge whether it is a success?
- When and where will it take place?
- What would I like the audience to take away?



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Audience

- Who are they exactly?
- What do they know and don't know already?
- How big is the audience?
- Small group or big venue?
- What would they like and not like to hear?



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Medium

- Voice (loud, clear, slow, and deep)
- Body (relaxed and confident)
- Visual aids
 - Plastic overheads/transparencies/viewgraphs
 - Powerpoint slides – make sure you have a backup!
 - 35mm slides - expensive; reduces eye contact with audience
 - Chalkboard/whiteboard - good for building up an argument
 - Flip chart - more portable than whiteboard but doesn't work well with large audience
 - Handouts - provide helpful summary; can distract if given out before the end

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Visual aids

- Allow about 1-2 minutes per slide
- Make sure you are familiar with the equipment before the talk
- Have a backup of your talk on viewgraphs in case of equipment failure



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Content

- Be very clear about the message you want to get across
- What is your key message? How can you simplify it?
- Don't be too ambitious – focus on a few (<4) main points – Keep It Short and Simple
- Distinguish between opinion, facts, ideas
- Be accurate and honest about your facts
- Cite sources of information
 - (Source: www.noaa.gov/enso)
 - Sugarbabes et al., 2003: J. Climate, 20, 1-50

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Selection of material

- Think of a good story line e.g. questions, experiment, answers
- Choose the most important material that tells your story (KISS!)
- Use visuals – 80% of learning is achieved visually
- Decide whether to discuss shortcomings and difficulties
- Avoid irrelevant material and jargon

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Structure

- Use a simple logical structure:
- Introduction:
 - Say who you are if necessary
 - Attention grabber (Important fact, joke, cartoon, picture,...)
 - Plan of talk (tell them what you are going to tell them)
 - Aims/objectives of the study
- Background – motivation for this work
- Main body, e.g. Methods and Results
- Summary/Conclusion – tell them what you've told them and end if possible with a bang

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Visual style

- Use a horizontal (landscape) frame for each slide
- Avoid distracting backgrounds – white works well (paper!)
- Use large sans serif letters (e.g. Ariel 14 point and larger)
- Use dark font for letters (e.g. black)
- Use images and colours to keep attention and emphasise points
- K.I.S.S. – less than 10 lines per slide and less than 10 words per line
- Make sure figures are legible, including title, axis labels, contour labels, key, ...
- Make images and text as large as possible (the foot test)
- Number all your slides

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Some examples of poor style

This slide contains a ridiculously small picture

The background is horrible

This text is way too small

The font is not sans serif e.g. Arial or Tahoma



An inscrutable title and as for labels? Who needs them!



I am still at kindergarten and I like pastel shades

Don't take me seriously!

This style is not appropriate for scientific presentations!!

Practice (makes perfect!)


- Make notes of what you want to say, e.g. on cards or post-its
- Do not write out a script to be read word for word
- Rehearse. Check the timing and refine what you will say. Less is better than too much!
- Make some material optional so that you can include it or drop it depending on how the timing goes on the day
- Check the room and visual and equipment beforehand to be sure how it works

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On the day: nerves and confidence

- It's normal to be nervous. Don't worry about it!
- Physiological problems: fear → adrenalin reaction
- Establish eye contact (e.g. person at back) and smile!
- Be confident and enthusiastic (but not over-confident!)
- Dress smartly and comfortably
- Monitor your audience – try and get some feedback from them

"There are two types of speakers: those that are nervous and those that are liars".
- Mark Twain



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Voice

- Project your voice louder than normal – but don't shout
- Speak slower than normal
- Use pauses for emphasis and to help calm your nerves
- Speak to the audience, not to the screen or notes
- Drink water before and after speaking – avoid alcohol

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Other things to do ...

- Keep an eye on the time; leave time for the Conclusions; be flexible if necessary.
- Point SLOWLY to items on the screen using a pointer (e.g. graph axes)
- Explain all of your points and figures fully and clearly; define technical terms and mathematical symbols
- Try to keep viewgraphs in neat piles for used and unused

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Feedback after the presentation

- Feedback is good
- Anticipate likely questions
- Listen carefully to each question
- Repeat the question if necessary; rephrase difficult questions to check understanding
- Reply to the whole audience, not just the questioner. Speak loudly
- Avoid aggressive confrontation
- Don't be afraid to say you don't know
- If a question is inappropriate then suggest you speak to the questioner afterwards
- If questions are slow to come at the end of the talk then just smile and wait

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Types of question

- Closed type – only one answer e.g. “Are you finding this useful?”
- Open type – many possible answers e.g. “How useful are you finding this?”
- Open usually start with “Who, what, why, where, when, or how?”
- Paraphrasing “Is what you’re saying ...?”

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Answering questions

- Don’t answer immediately
- Did you understand the question?
- Ask for clarification if you didn’t understand
- Don’t say too much – use short answers
- Don’t be afraid to say you don’t know
- Think about all possible questions in advance

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2.2 Listening skills: Obstacles

- We are not trained to listen
- Speed of thought (we think faster than we talk)
- Outside distractions
- Making inferences, interpretations, judgements
- Wanting to speak and therefore interrupting
- Preparing a reply whilst the other person is talking
- Hearing what you expect to hear rather than the intended message
- Different backgrounds, cultures, experiences
- Wrong/inappropriate language, e.g. jargon
- Inconsistency between words and (non-verbal) behaviour
- Fear of being exposed, shown up
- Heard it all before – switch off

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How to listen better

- Take notes or draw mind maps to aid retention
- Listen now – report later. Plan to tell someone what you heard
- Be present: avoid the tendency to daydream
- Be a whole-body listener
- Build a rapport by pacing the speaker – approximate their gestures, expressions, and voice patterns
- Control your emotions
- Avoid distractions
- Critical listening: identify and evaluate line of reasoning, evidence, conclusions, consistency

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2.3 Reading scientific articles

- Quickly identify the main ideas by reading the title, abstract, introduction, conclusions
- Highlight the main points (marker pen)
- What is the main message? Is it new?
- What has been done exactly?
- What evidence has been presented?
- Is the line of reasoning correct? Weaknesses?
- The Good, The Bad, and the Interesting
- Relation to previous studies

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Title and abstract exercise

- Pair up
- Read partner’s talk title and abstract
- Is the title informative?
- What are the main points?
- Weaknesses?
- Dead wood – unnecessary words?

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Example of abstracts (Turk and Kirkman, Effective Writing 1988)

Descriptive abstract

The report describes an apparatus built to measure the resistance to the flow of heat through various thermal-insulating reactor-vessel jackets, under conditions simulating those obtaining in practice. The effects of a variety of thick, and thin-film materials were studied, and the decrease in thermal resistivity of foam due to ageing was quantified. The relative resistance of thicker foamed polymers and glass fibre blankets is shown and the cause of enhanced resistivity of glass-fibre combinations is suggested. Observations confirm a significant improvement in thermal resistance by placing thin-layer materials on top of polystyrene.

Informative abstract

Thermal-insulating reactor-vessel jackets were tested on an experimental 50 litre vessel, kept at 500K internally, and atmospheric temperature externally. Foamed polymers and glass-fibre in layers of 5 cm gave resistivities of about 2.7. Thin films of aluminium foil and PVC gave resistivities of about 1.3. With foam, ageing reduced resistivity by about 7% per year. Thicker glass-fibre blankets, up to 15 cm, were about 17% better than the same thickness of foamed polymers. We think this is because the multiple irregular surfaces within the glass-fibre blanket trap more air. A thin layer of aluminium foil on the outside surface increases the resistivity of polystyrene by up to 30%.

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Example: excessive use of acronyms

In section 4 the RDF-LGR technique (SPW) is used to estimate the rate at which small-scale features in the PV field are produced. The RDF-LGR calculation can be interpreted as an estimate of the contribution of the dissipation to the MLM mass budget. This estimate is compared to the actual contribution of SSD to the MLM mass budget. The agreement is good in a number of respects. The RDF-LGR results are also compared to the results obtained from the same model data by PWP using the CA-CG technique.

ALL acronyms should be fully defined at first use!

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Literature review

- Read selected parts of relevant books
- Key word search of bibliographic databases
- Keep an electronic list of all articles you read
- Obtain articles and try and write a few summary sentences on each of them
- Find articles cited by these articles
- Make sense of literature by ordering in time or by grouping by theme
- Try to be as comprehensive as possible

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2.4 Exercises

- Visit the links on the module web site: www.met.rdg.ac.uk/courses
- Prepare your presentation on plastic overheads (aim for 5 minutes talk + 2 minutes for questions)
- Look at the MSc dissertations in the Department of Meteorology library – think of questions to ask about the format, style, etc.
- Read at least one scientific article this week and try and isolate main points, etc.

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