

Tips for Effective Research Presentations

BAE815

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Defining your goal and central message

- Make the take-home message clearly understood. Focus on no more than three key points.
 - Think about how much you remember from a talk last week.
 - Why are you delivering this presentation? Who is your primary audience? If there is only one thing your audience can remember from your talk, what would you like it to be?
- Organizing your points into a few main parts.

Structuring your talk: A top-down approach

Introduction

Define problem, present a “carrot”, capture attention, and give outline

Body

High level summary of key results

Technicalities

More depth into a key result

Conclusion

Review key results, provide a memorable statement, suggest future work

Introduction

- goal 1
- goal 2
- goal 3

Experimental

- experimental set up for reaction
- preparations
- analysis technique 1
- analysis technique 2

Results

- catalyst characterization spectroscopy 1
- catalyst characterization spectroscopy 2
- catalytic reaction
- catalytic reaction at different T
- catalytic reaction at different pressures
- catalyst with promoter

Discussion

- characterization
- catalytic results
- effect of promoters

Conclusions

General Introduction

not too short, is very much appreciated by a large part of the audience

Catalyst & Characterization

- aims
- preparation of catalyst
- principles characterization technique 1
- results + interpretation
- principles characterization technique 2
- results + interpretation
- discussion of catalyst structure + conclusion

Catalytic Reaction

- aims
- experimental set up reactions
- results catalytic reaction
- results catalytic reaction at different T
- catalytic reaction at different pressures
- catalyst with promoter

Conclusions

- catalyst structure
- catalytic properties
- assessment and outlook

Article Structure
not recommended for talks

Presentation Structure

(Source: J.W. Niemantsverdriet, Eindhoven University of Technology, 2000)

The attention curve

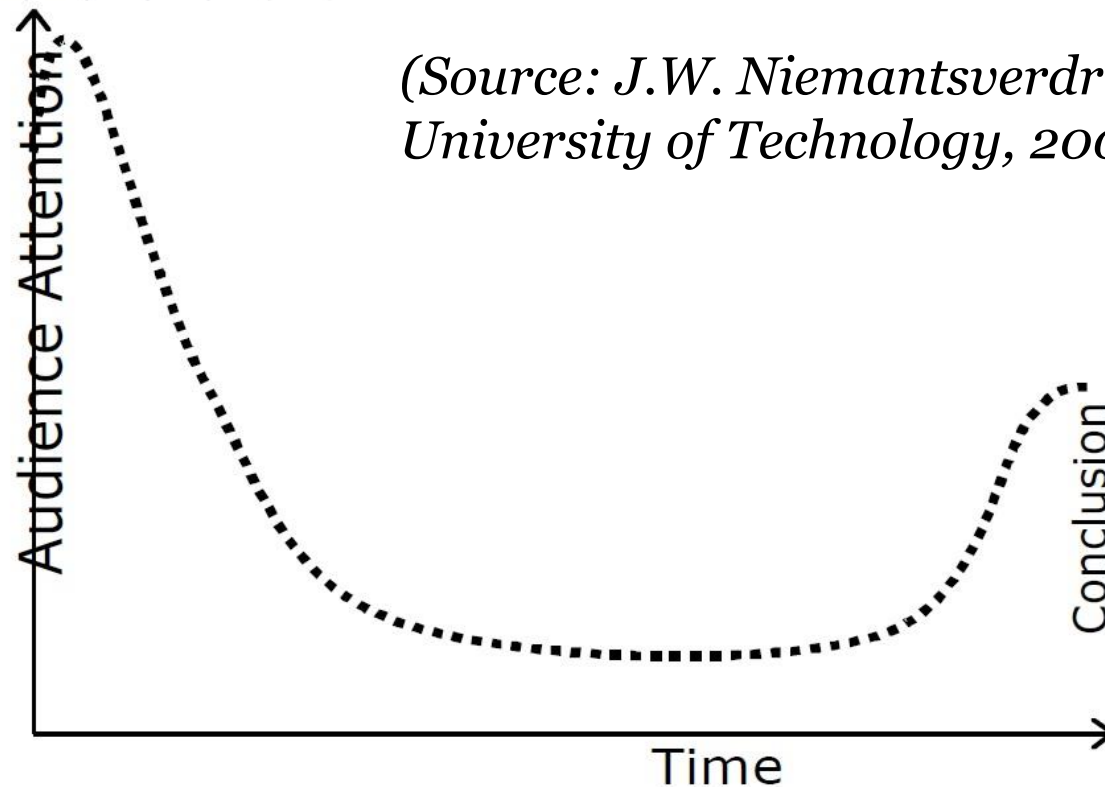


Figure 1 Typical attention the audience pays to an average presentation

Avoid a boring start

- If you bore your audience in the first few minutes, you may never get them back.
- Do not waste time on knowledge that everybody knows. Introductions and background can be boring if not handle well.
- Outline of your talk belongs to your notes, not necessary on you slides.

Types of openings

- Ask a direct or rhetorical question
- Pose a hypothetical situation
- Describe something new or dramatic
- Make a startling statement
 - A “hook” sentence to draw attention and identify what the topic will be about.

Take care of your audience

- There is a difference between reading and listening.
 - Your audience have one chance to hear your talk and can't "re-read" when they get confused.
- Your audience isn't as familiar with the topic as you are.
- Take it slow and use pause.
- Being clear is particularly important if the audience can't ask questions during the talk.

Repeat your key points

There is a rule that says you have to tell your audience something three times before they really hear it.

Tell them what you are going to say



Say it



Summarize what you said

Re-orient you audience

- About a third of the way through, it can be quite helpful to draw breath with a slide which says
“This is what I have discussed so far, and now I’m going to cover these areas ...”
- Allow audience to ask questions if they are lost already.

Advantages for taking questions during your talk

- Interruptions with questions shows that someone has engaged with what you're saying. It can be a good chance to lead audience to the point you want to make with your answer.
- Help to get audience back if they are lost already.
- Two-way conversation is a tension-reducer.

Dealing with difficult questions

- Make sure you understand the question.
 - Ask a question back to see if you understand
 - Repeat the question in your own words to check that you have understood.

Other strategies you may consider

- Delay the answer: “Can I answer that question later?”
- Admit that you are not responsible: “I saw that in the work of...”
- Agree but give an alternative point of view: “I agree with you but there is another way of looking at it.”
- Make a smooth transition from their question to one of the good answers you have prepared: “I don't know the answer to your question, but a related issue that we encountered was...”

Get your audience to help you do your research!

- Avoid the temptation to conceal problems you know in your work.
- If you are open about the difficulties, you may find that someone makes a suggestion which turns out to be just what you need.

What to put on a slide

- Your talk, not the slides, should be the prime focus of attention.
- Slides should not repeat what you plan to say, but they should emphasize it, and help to increase audience attention and understanding.

Keep it simple

- Don't clutter up your slides.
 - Keep to one short idea per slide.
- A picture may be worth a thousand words
- Common Mistakes:
 - Spend too much time on fancy ppt slides but not enough time on the actual talk
 - Include too much details, not audience oriented

Save the details

- Avoid using a diagram prepared for a technical report in your talk. It will be too detailed and difficult to read.
- It is best to present simplified data
 - complexities can be covered in the talk.
- A figure in slides should
 - explains itself (clear title, preferably a conclusion too)
 - contains only relevant information

Backup slides for better timing

- It may be a good idea to prepare a couple of backup slides at the end of your talk, which is usually not counted in your talk total. You can use them when you accidentally finish early.

Elements of a good presentation

- Clear purpose and central message
- Sufficient, but not too much, information
- Talk to the audience, involve them in your talk
- Organized
- Have an attention-getting opening
- Have a memorable closing

A Generic Outline for Conference Presentations

- Title/author/affiliation (1 slide)
- Forecast (1 slide) ————— What is the one idea you want people to leave with?
- Outline (0-1 slide)
- Background
 - Motivation and Problem Statement (1-2 slides) ————— Why should anyone care?
 - Related Work (0-1 slides) ————— Refer people to your paper
 - Methods (1 slide)
- Results (4-6 slides) ————— Main body of your talk
- Summary (1 slide)
- Future Work (0-1 slides)
- Backup Slides (0-3 slides) ————— Optionally have a few slides ready to answer expected questions.

(Source: Mark D. Hill, University of Wisconsin-Madison, 1997)

Evaluation Criteria

A. Organization and Development of Content

- Opening statement gained immediate attention?
- Purpose of presentation made clear?
- Previewed contents of speech?
- Main ideas stated clearly and logically?
- Organizational pattern easy to follow?
- Main points explained or proved by supporting points?
- Variety of supporting points (testimony, statistics, etc.)
- Conclusion adequately summed up main points, purpose?

B. Delivery

- Presenter owned the space and was in control?
- Held rapport with audience throughout speech?
- Eye contact to everyone in audience?
- Strong posture and meaningful gestures?

C. Visuals

- Visuals clear and visible to entire audience?
- Creative and emphasized main points?
- Presenter handled unobtrusively and focused on audience?

D. Voice

E. Comments

(Source: D'Arcy, Jan. 1998. Technically speaking: a guide for communicating complex information)