

# How to give a talk (best practices)

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Translation and adaptation of a talk by  
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# Why give talks at all?

## Talks can serve various purposes

- **Critical discussion**
  - Convey knowledge (Lecture)
  - Present one's own research (Talk at a scientific conference)
- **Conviction/persuasion**
  - Campaign for a position (Political speech)
  - Advertise a product (Sales presentation)

## Why this seminar and why this talk?

What you gradually should learn [*Apel 2001*]

- Distinguish essential from inessential facts / data
- Distinguish basic and specialized knowledge
- Reveal relationships and present them concisely
- Explain arguments convincingly before a group
- Read and present scientific opinions with healthy criticism

This seminar gives you the opportunity to exercise this!

This presentation will show you, what is important!

# What makes a good presentation?

Criteria for a comprehensible text/lecture: [*Langer et al. 1999*]

- **Simplicity**: simple illustration; short, simple sentences; common words; technical words explained, concrete, vivid.
- **Organization – order**: structured, logical, clear, thread, step by step.
- **Brevity – conciseness**: balance between too short/too long, significant/insignificant, terse/epic, on target, concentrated/digressing, to the point/extensive
- **Stimulating add-ons**: stimulating, interesting, varied, personal.

## Issues:

Content, structure, tools, language, body language, ...

## The presentation is just **one step** of many:

1. Set goals and define a schedule
2. Search literature
3. Select and organize content
4. Create/select presentation materials
5. Practice, practice, practice, . . .
6. Present
7. Answer questions

## What do you learn in the following?

1. Preparation: Defining the scope
2. Familiarization with the theme: Become an expert
3. Content preparation: Spoiled for choice
4. Slide design: The eyes also listen
5. Presentation style: Talk to the audience
6. Discussion: Deal with questions

## Defining the scope

### Audience:

- Whom is the presentation addressed to?
- What does the audience expect?
- What previous knowledge is available?

### Presenter:

- What do I want to achieve with the lecture?
- What should the audience take home?

### Space & time:

- What is the nature of the lecture room?
- What technical aids are available?
- How much time is available?

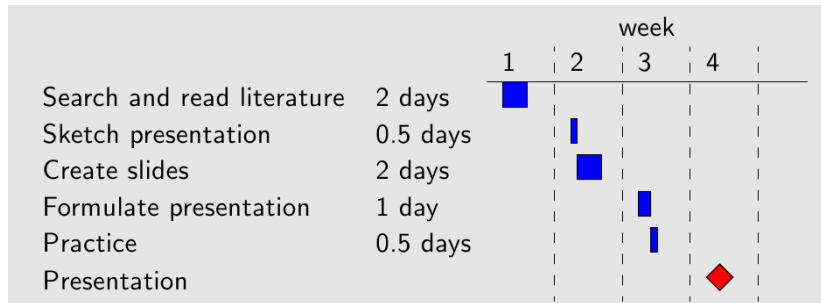
### Key question:

- How to satisfy the audience and how to achieve one's own goals under the given conditions?

## Time table

The time to prepare a presentation is often underestimated!

A schedule can help to preserve the overview:



In general: plan generously!



## Where are we?

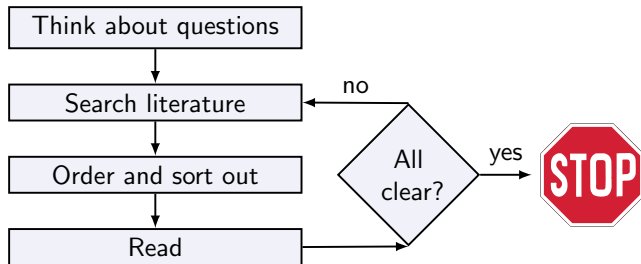
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## What is a literature research

### Goals:

1. Get overview of the subject
2. Acquire the necessary knowledge for the lecture

### Procedure:



**Important:** Don't lose focus!

## Ask the right questions

### Understanding:

- What is the idea behind it?
- How does it work?
- What is it used for?

### Cross- references:

- How is it similar to other approaches?
- How is it different from other approaches?

### Assessment:

- What is it good for?
- What is it not good for?
- What are the pros and cons?

## Search for literature

### What?

- Websites
- General print media (News papers, journals)
- Teaching aids (Books, lecture notes)
- Professional publications (Conference proceedings, journals, books)

### Where?

- Internet
- Wikipedia
- Library

## Read literature purposefully (goal-oriented)

Two procedures: top-down and branch-and-bound

top-down

1. Gain an overview  
(Print media, websites)
2. Acquire basic knowledge  
(Teaching aids, basic publications)
3. Clarify questions of detail  
(Teaching materials, professional publications)
4. Think outside the box  
(professional publications)

branch-and-bound

1. What appeals to me, is interesting and clearly written?
2. How is that relevant to the lecture?

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# The art of selecting and arranging

## What is important?

- Select the key objectives of the lecture
- Arrange things in a “common thread”

## Possible method

1. Gather ideas
2. Group items
3. Determine a sequence
4. Repeat points 1–3, one level down

**Result:** Sketch of the lecture

## Collect ideas

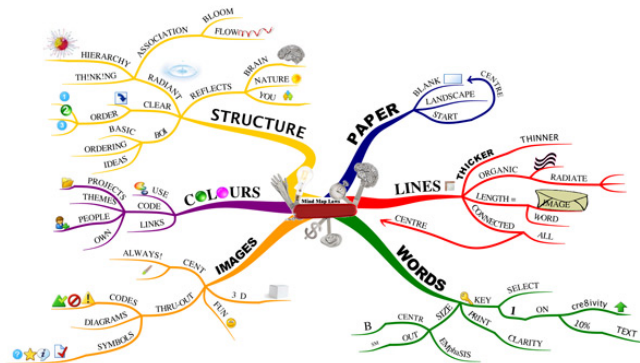
...write down everything that comes to mind...

### Important

No structure or selection yet.

### Methods

- Lists
- MindMaps
- Semantic nets
- ...



From <http://www.tonybuzan.com/>





# Sort

Structure is

Logic

+

Entertainment

The basics:

Bring items in a logical sequence  
Spin a common thread

The art:

Build up tension  
Tell a story

- One after the other
- From concrete to abstract
- From simple to difficult

- Arouse questions in audience
- Do not anticipate everything
- Connect beginning and end

# Basic structures

## Scientific lecture

- Overview: what is it about?
- Background: what you need to understand the problem
- Problem: what is the question, why is it important?
- Other approaches: what has been done, why wasn't the problem solved?
- Solution idea: what is the concept?
- Solution: how does it work?
- Assessment: does it really work?
- Discussion: what are pros and cons?

## This CSE seminar

- Overview: what is it all about?
- Motivation: why was it developed?
- Background: what do you need to understand the approach?
- Basic idea: what is the essence of the approach?
- Method: how does it work in detail?
- Examples: where is it used?
- Discussion: what are advantages and disadvantages?

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## Why slides and other tools?

### Tools are used

- to appeal to several senses at the same time,
- to easier follow the “common thread”,
- to present the spoken words in another form,

### and not

- to repeat the spoken words,
- to convey more content.

Tools should be used to help understanding, not to distract!

## Use tools selectively

### Slides

- targeted preparation at home
- less time spent
- time-consuming to adapt

### Blackboard / flipchart

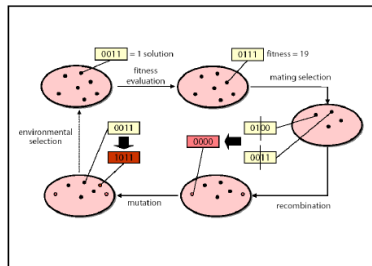
- develop something (formulas)
- asides
- questions
- simple to adapt

### Video

- good for loosening up
- only for longer lectures

# Style: Simplicity

## Pictures, pictures, pictures



- |         |   |
|---------|---|
| Step 1: | Generate initial population $P_0$ and empty archive (external set) $A_0$ . Set $t = 0$ .  |
| Step 2: | Calculate fitness values of individuals in $P_t$ and $A_t$ .  |
| Step 3: | $A_{t+1}$ = nondominated individuals in $P_t$ and $A_t$ .<br>If size of $A_{t+1} > N$ then reduce $A_{t+1}$ , else if size of $A_{t+1} < N$ then fill $A_{t+1}$ with dominated individuals in $P_t$ and $A_t$ . |
| Step 4: | If $t > T$ then output the nondominated set of $A_{t+1}$ .<br>Stop.   |
| Step 5: | Fill mating pool by binary tournament selection with replacement on $A_{t+1}$ .   |
| Step 6: | Apply recombination and mutation operators to the mating pool and set $P_{t+1}$ to the resulting population. Set $t = t + 1$ and go to Step 2.  |

There is always a trade-off between cost and time ...

## Style: structure / order

### Contents:

- One thought per slide
- Build up step by step!
- Embed summary slides (“Where are we?”)
- But caution at the beginning (“I tell today first ..., then ...”)

### Formalities:

- Clear slide layout (titles, colors, structure, character set, graphics)
- Sufficiently large fonts ( $\geq 22$  pt)
- Sufficiently large line spacings
- Group things that belong together



## Style: brevity / conciseness

### What is necessary, what is superfluous?

- No bells and whistles (wallpapers, logos, ...)
- Bullet points, not complete sentences
- Striking presentation, avoid details
- Use colors, fonts, etc. sparingly and selectively

## Style: stimulating additives

### ... can be

- Colors, graphic elements, etc.
- Cartoons
- Animations (limited use)
- Photos
- Anecdotes
- Quotes

### ... can

- help loosening up if used properly
- but may have a negative effect if used excessively (gimmickry)

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## Presenting: the A and O

### Voice:

- Speak slowly
- Crisp, clear pronunciation
- Simple sentences with few technical terms
- Vary volume and rhythm

### Gestures and facial expressions:

- Watch the audience, not the film, the wall or the ground (eye contact!)
- Appear relaxed (do not cramp hands in pockets!)
- Some(!) facial expressions and gestures spur the presentation

# Time

<b>Bad:</b>	lecturer overruns time limit ...
<b>Better:</b>	lecturer finishes early ...
<b>Optimal:</b>	lecturer keeps the scheduled time ...

## Therefore:

- Rule of thumb: Reckon about 2 minutes per slide
- Exercise the lecture previously
- During the lecture, check the time and respond flexibly

## Exercise, exercise, exercise

Preparing slides is one thing, presenting them another!

Therefore:

- Formulate the lecture in written in extensive or sketchy form
- Practice in realistic conditions
- To consolidate: go through lecture mentally based on notes

## Stage fright

... Everybody has it from time to time.  
So how to deal with it?

### Recipe

Be well prepared	⇒	be sure
Be a few minutes early	⇒	adapt to environment
Watch the people individually	⇒	get used to the audience
Prepare notes/formulations	⇒	check when blackout
A glass of water	⇒	take unnoticed breaks

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## Responding to questions

means ...

- take every question seriously
- repeat or maybe check the question  
(large audience, unclear question, ...)
- answer the question briefly and succinctly
- admit open questions

## Final remarks

The perfect presentation does not exist!

Find your own style!

Observe the others!

## References

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