Checklist for your research presentations

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The goal of this document is to give structure to presentations. Benefit for you: avoid my comments by following these guidelines.

Make a deliberate choice for the medium for your presentation (white-board/slides). This document assumes that slides are used, if not, you will have to extrapolate yourself.

Motivation	**Content**	**Form**	**Analysis**
M1 Goal	C1 1 slide 1 topic	F1 Too much	A1 Exps answer Q
M2 Audience	C2 Less=More	F2 No TOC	A2 Limitations
M3 Refresh	C3 Self-contained	F3 Layout	A3 Peer review
M4 Unburden	C4 Define Terms	F4 No Sentences	
	C5 No Guessing	F5 Animate	
	C6 Multi-modal	F6 Complete Figs	
		F7 Number slides	

Motivation of your presentation

M1. What is the goal? What you want to get out of it. There is a reason for giving your presentation: What is it? (and, no, it is not: 'it is my turn' or 'they told me to'). It may help to share this reason with the audience.

M2. Audience. Whom are you presenting for? What do you want the audience to take away? What is their background and what are they looking for? Help your audience find it. Avoid Jargon.

M3. Refresh. Always start with 1 or 2 slides (re-)introduction. Do not assume your audience will remember anything from your last time; there may also be new viewers present. If it is important: briefly repeat it.

M4. Unburden the audience. If the audience misinterprets the message it is the fault of the presenter. Its the responsibility of the presenter to reduce the understanding effort. Prof Freeman: *The most dangerous mistake you can make is assuming that the reviewer will understand the point.* Audience understanding can be validated by asking them.

Content of the presentation

C1. A single slide has a single topic. A slide has a title to scope the topic. It has a concluding phrase that makes the main point of the topic.

C2. Less is more. Every word/figure/image should have an explicit reason to exist. Do this test: *Can I safely remove it yes or no?* Presenting concisely takes time and effort; it enhances understanding.

C3. Self-contained. The audience has not memorized the full presentation. Remind the audience of definitions or symbols when defined 'a long time ago'.

C4. Define terms. Define all symbols/terms. Use a defined symbol/term consistently and uniquely.

C5. No guessing. Never expect the audience to do inference. If the viewer has to guess, the guess will often be not what you had in mind. Always explicitly write what the viewer is supposed to see/conclude.

C6. Multi-modal. There are various people in the audience whose preferences range from visually, formulas, auditory. Be sure to present a mix.

Syntax, layout and form

F1. Do not present too much. A rough guideline: at least 1 minute per slide.

F2. Do not use a table of contents. Avoid the default toc of "•intro, •method, •exps, •conclusion". Another form (e.g.: visual abstract) can be useful.

F3. Good layout eases the viewer's effort. Use the full screen. Be consistent. Not too much info in a slide.

F4. Do not write long sentences. Use bullet points with one phrase per point. One phrase fits on a single line. Correct grammar is secondary, e.g., there is no need for complete sentences with a subject, a verb, etc.

F5. Only use animations IFF they add value. For example, to emphasize, or to prevent overload by iteratively making more content appear.

F6. Figures are complete. Label all axis, show the units on the axis, use a legend with clear differences between entries and add a title to each (sub)figure so that the reader can directly see what is shown. Do not use too thin lines or too small of a font: It has to be seen from the back of the room. Add the conclusion you would like the viewer to draw.

F7. Number your slides. so that viewers can refer to them.

Presenting analysis

A1. Experiments answer a question. If you present experiments, note that every experiment starts with a question. Write the question on the slide. The experiment should answer that question. Write the answer on the slide.

A2. Limitations. If applicable: What are the limitations of your method. No method will always be the best. Showing insight where it fails is strong. The goal of research is understanding.

A3. Peer review. Find a peer to review each others presentations. Check if their presentation follows these guidelines. Keep in mind that if an honest viewer did not understand it, it is the mistake of the presenter.