How (Not) to Make a Dissertation Presentation

Communicating Your Research Clearly and Professionally

MCB 2026/2027

How (Not) to Make a Dissertation Presentation

- Principles of effective scientific communication
- Common mistakes and how to avoid them

What Is the Purpose of a Proposal Presentation?

You are not presenting results.

You are presenting:

- a problem,
- a knowledge gap,
- a research question,
- a plan to answer it.

A presentation is not your proposal spoken aloud.

The audience should leave thinking:

"This is an interesting question, and the student has a realistic plan to answer it."

The Three Questions Your Audience Will Ask

Every proposal presentation must answer:

- **Why?** Why is this topic important?
- **What?** What exactly are you trying to discover?
- **How?** How will you answer the question?

Everything in the presentation should contribute to one of these three questions.

A Good Proposal Presentation Structure

- Research area
- Problem statement
- Knowledge gap
- Research question(s)
- Objectives
- Methodology
- Timeline
- SDGs / societal relevance
- Conclusions

Start With the Problem, Not the Topic

Weak opening:

"My dissertation is about agrivoltaics.“

Stronger opening:

"Renewable energy expansion can conflict with biodiversity conservation. Agrivoltaics have been proposed as a potential solution, but their ecological impacts remain poorly understood."

Always begin with the problem.

Explain the Knowledge Gap

A proposal exists because something is not yet known.

Show:

- What is already known?
- What remains uncertain?
- Why does this gap matter?

A gap should emerge naturally from the literature review.

Common mistake
Listing papers without identifying the missing knowledge.

Presenting Research Questions

The audience should understand the question immediately.

Bad

Long, complex paragraph.

Better

Research Question

"How do agrivoltaic systems affect pollinator diversity in Mediterranean ecosystems?"

Follow with 2-4 specific objectives.

Research Questions and Objectives Must Align



Research Question	Objective	Method
RQ1	O1	M1
RQ2	O2	M2

The Scope Problem

Too Broad

"Assess all sustainability impacts of agrivoltaics."

Better

"Assess impacts of agrivoltaics on pollinator diversity in Lisbon-region farms."

A narrower project is often a stronger proposal.

Using Figures Effectively

Proposal presentations benefit from:

- conceptual diagrams,
- study area maps,
- workflow diagrams,
- research frameworks.

Less useful:

- large tables,
- lengthy text,
- screenshots from papers.

The Methodology Diagram



Whenever possible, include workflow figure.

One figure can often replace three slides of text!

Common Proposal Presentation Mistakes

❌ Spending half the presentation on background
❌ Unclear research question
❌ Too many objectives
❌ Unrealistic scope
❌ No timeline
❌ No clear contribution

Elevator Pitch Exercise

Explain your dissertation proposal in **two minutes** using only:

- the problem,
- the research question,
- the methodology,
- the expected contribution.

If you cannot do this, the proposal is probably not yet sufficiently focused.

Commons mistakes for ALL presentations

Too Much Text

Bad slide

- 150-300 words
- Full sentences
- Dense paragraphs

Better slide

- Short phrases
- Keywords
- Visuals
- Maximum 4-6 bullets

"Could somebody understand this slide in 10 seconds?"
If not, there is probably too much text.

Font Size Crimes

Common mistakes

- ❌ Font size 10
- ❌ Font size 12
- ❌ Footnotes impossible to read
- ❌ Tiny figure labels

Recommendation

- ✅ Minimum 20-24 pt text
- ✅ 28-36 pt preferred
- ✅ Larger for titles

Rule: If the person at the back cannot read it, it should not be on the slide.

Too Many Font Sizes and Styles

Bad slide

- 5 different font sizes
- Bold everywhere
- Italics everywhere
- Multiple colours

Better

- One font
- Two font sizes (title + content)
- Use emphasis sparingly

Visual consistency makes presentations look professional.

Missing Slide Numbers

Why slide numbers matter

During questions, examiners often say:

"Can you go back to slide 15?"

Without slide numbers:

- Navigation becomes difficult
- Discussion becomes inefficient

Tables Are Usually a Bad Idea

Problem

Large tables require:

- reading,
- searching,
- interpretation.

The audience cannot do this quickly.

Better

Convert tables into:

- graphs,
- diagrams,
- highlighted key results,
- summary statements.

Unreadable Figures

Common issues

❌ Screenshots from papers
❌ Tiny axis labels
❌ Complex legends
❌ Excessive colours
❌ Figures copied directly from software

Better

✅ Simplify
✅ Increase font size
✅ Remove unnecessary information
✅ Highlight the key finding

Every figure should answer a question.

Too Much Information Per Slide

Symptoms

- Several figures
- Large table
- Multiple paragraphs
- Conclusions all together

Better

One slide = one message

Ask:

"What is the single takeaway from this slide?"

If you need several answers, split it into multiple slides.

Excessive Animations and Effects

Avoid

- ❌ Flying text
- ❌ Rotating objects
- ❌ Sound effects
- ❌ Fancy transitions

Use only when needed

- ✅ Simple appearance animations
- ✅ Progressive disclosure of content

Poor Use of Colour

Common mistakes

- ❌ Red, green and yellow together
- ❌ Bright backgrounds
- ❌ Low contrast text
- ❌ Colour carrying all information

Better

- ✅ Limited colour palette
- ✅ High contrast
- ✅ Colour used deliberately
- ✅ Information understandable even without colour

The "Everything I Know" Problem

"I spent months reading these papers, so I should show everything."

The audience wants:

- What is important?
- What is relevant?
- What supports your proposal?

Select. Do not dump information.

The Seven Deadly Sins of Scientific Presentations

1. Too much text
2. Fonts too small
3. No slide numbers
4. Unreadable figures
5. Large tables
6. Too many colours, fonts, and animations
7. No clear story

