

Design and Professional Practice 2

Presentation Skills

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Aims and Objectives

The aim of this session is to provide you with a basic understanding of what is needed to structure and deliver a good technical presentation.

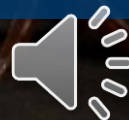


Intended Learning Outcomes

- Understand what makes a presentation effective.
- Be able to construct a clear presentation using the technology available to you.
- Be able to utilise an Assertion-Evidence based approach to provide a strong argument.
- Appreciate how body language and mannerisms can affect the delivery of information

What makes a good presentation

- Think of the best presentation you have seen?
- What made it so good?
- Was it:
 - Exciting / stimulating
 - Entertaining
 - Clear and concise
 - Emotive
 - Visual and memorable



Presentation Checklist

Significance

Structure

Simplicity

Delivery



Significance

Consider things from the audience perspective:

- Why are you talking to us?
- What do you want from us?
- Why does it matter to us?



Structure

Like any story you need:

- Beginning (Introduce the problem)
- Middle (Build the argument)
- End (Supported conclusion)



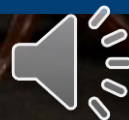
Structure

Repetition vs Signposting

- Avoid tell, tell, tell again
- Use signposting to show your progression through the story

Scalability:

- Tell the story in 5, 15 or 45 minutes



Do not overcomplicate your slides with too much text or information.

Simplicity



Assertion-evidence structure
is more effective than topic/
bullet point ppt default

Garner et al. (2011) ASEE

Simplicity

Assertion-evidence approach:

- One point per slide
- The audience focused on you
- Visuals make the points you make memorable, text does not
- Too much text means:
 - The audience will read and won't listen to you (so no need to talk); or
 - The audience will listen to you so your text is pointless anyway!



Assertion-evidence structure
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Garner et al. (2011) ASEE

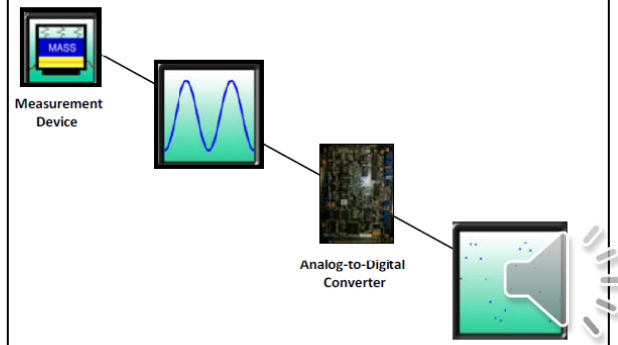
Simplicity

Simplicity

Digital Acquisition System Sampling

- Vibration measured by accelerometer
 - Analog voltage produced
 - Sinusoidal shape
- Analog signal converted to digital signal
- Signal sampled at a specific rate
- Rate → high enough to retain analog shape

A digital acquisition system has to sample at a rate fast enough to retain the shape of the analog signal



Assertion-evidence structure
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Garner et al. (2011) ASEE

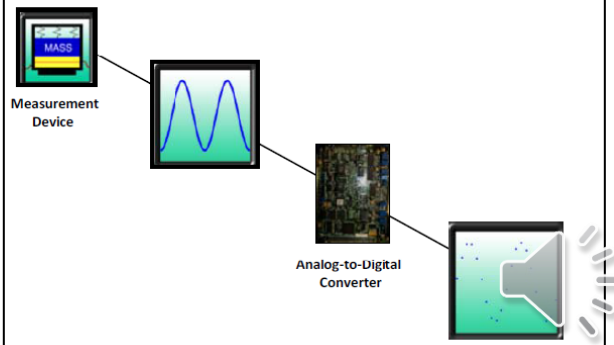
Simplicity

There is however a caveat to this, where possible
you need to consider accessibility for your audience.
For viewers with hearing impairments you need to
provide sufficient text to explain the point.

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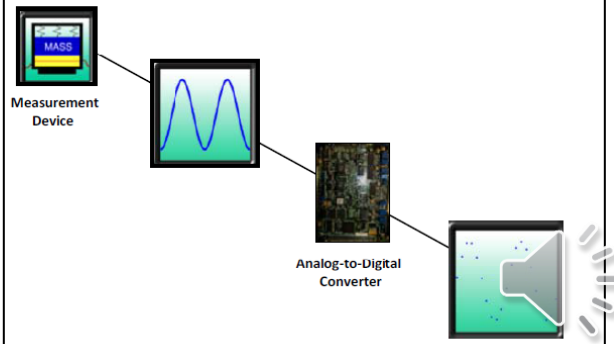
Simplicity

If it is important enough to go on the slide,
then it make sure it is legible.
This includes references, graph labels
and annotation.

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Simplicity

Use technology wisely.
Always check it works.

PowerPoint software helps you to:

- Make things visual
- Show data
- Highlight key points
- Impress (make it memorable)

Look at alternatives:

- Prezi
- Canva



When students were asked what made a good presentation one of the most common responses was.....

confidence

Delivery



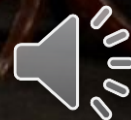
Prepare / Rehearse out loud

- Be comfortable with what you are saying
- Practice in front of others

Check room and AV in advance

- Do links and animations work
- Are videos embedded and functional

Delivery



Feedback

You

PPT

Audience

Delivery

Performance

- Engage with your audience
- Look at them and not at your slides or notes
- Make eye contact
- Be enthusiastic



Significance

Structure

Simplicity

Delivery

- Consider the audience
- Structure your narrative to support your message
- Keep things neat and simple
- Engage with the audience to keep their attention

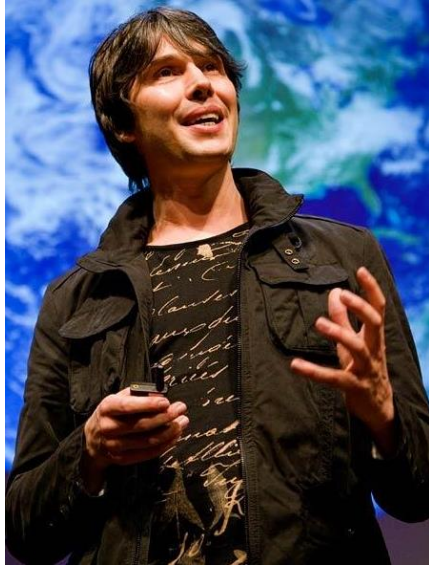


In brief:

- 15 minutes pre-recorded video
 - 1 video for each group
- You need to cover:
 - Project brief
 - Requirement specs
 - Background research
 - Preliminary designs / prototypes
 - Detailed final design
 - Manufacturing plan
 - Evaluation plan



Some good examples



Brian Cox
CERN's supercollider



Eythor Bender
Human exoskeletons – for war
and healing



Hugh Herr
Bionics

