Effective Scientific Presentation

Tips and Tools

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Why Give A Presentation?

Three Main Purposes

1. Inform
2. Persuade
3. Educate

Definitions

Presentation

- “Something set forth to an audience for the attention of the mind “

Effective

- “…producing a desired result”

1. Watch the Experts

- Watch clips from great public speakers and find out what they do right.
- Pick up on their posture, tone, volume, hand gestures, eye contact, attire, any audio/visual aids, message, and more!

2. Dress to Impress

- Be sure to look the part.
- Know your audience and don’t fall short of their expectations.
- If it is a formal event, be sure to look the part.
- Remember it is always best to overdress than to underdress.

3. Visit the Space Before Presenting

- Get to know the space that you will be presenting in.
- Test out any audio and visual aids that you will be using.

4. Know Your Material

- Be sure to have a strong knowledge base for the material that you are covering. This will be helpful if a question arises about the topic.
- Also, know your presentation! Know the content and order of your slides.

5. Content

There are 3 C’s to consider:

- clear
- concise
- concrete

Tip:
Try to share one thing no one knows

6. Body Language and Personality

Watch yourself in the mirror when you are practicing or record yourself on camera.
Be aware of your body language, what is it conveying to your audience?

7. Practice, Practice, Practice

Run through your presentation on your own. Pay attention to your:

- Voice- Tone, inflection, volume, speed, pauses
- Filler Words- ‘um,’ ‘you know,’ ‘like’
- Areas of difficulty in your presentation

8. Get Feedback

- Share your presentation with a friend, classmate, professor, or anyone who is willing to give you feedback.
- Adjust your presentation with their feedback and then get feedback again.

9. Prepare for the Unexpected

Are you ready for:

- No Internet
- Lost PowerPoint
- Cell phone ringing
- Late entrance
- Different size audience than expected

10. Do’s and Don’ts

Do:

- Always repeat audience questions
- Give audiences something to walk away with
- Respect your audience’s time

Don’t:

- make excuses
- read your slides or verbatim from notes
- defer answering questions
- overload your slides

Your Turn!

Take your next presentation and practice in front of the mirror. Implement some of the suggestions from this presentation and improve your public speaking skills!

Planning

- Why are you doing the talk? Be clear about your purpose
- Find out how big your audience is likely to be & what sort of group
- Make notes about your subject
- Don’t write your talk word for word
- Use small pieces of paper and number them
- Powerpoint has a notes & timing feature which may help
- Time your talk & practice it
- Then practice it again

Think of Threes

- Tell people what you're going to say
- Tell them
- Tell them what you've said

Do’s

- Take a deep breath
- Speak clearly
- Make small cards to remind yourself of topics (number them!)
- Be aware of where your audience is - are you facing all of them?
- Smile, have fun
- Be yourself and project your personality
- Remember - no-one knows how you feel or what you think
- Remember - The audience is on your side!

Don’ts

- Rush what you’re trying to say – SLOW DOWN
- Read off a sheet of paper word for word
- Fiddle with things - its irritating!
- Use inappropriate language for your audience
- Panic

Techniques

- Pace of delivery
- Vary style
- Move about
- Vary pitch
- Use notes
- Avoid annoying habits
- Use props, but don‘t overdo it

Structure Your Presentation

A common structure

• Title page	~1 min
• Agenda	~1 min
• Background (optional)	~1 min
• Problem statement	~2 min
• Objective & scope	~1 min
• Methodology	~2-3 min
• [Research Implementation]	~6-8 min
• Results & analysis	~6-8 min
• Conclusion	~1 min
• Future research (optional)	~0.5 min
• Final slide – Q&A	N/A

Total: ~20 min

Title Page

- You can't make a first impression twice
- Title page elements
  - A concise and meaningful title
  - Your name and affiliation
  - Presentation date

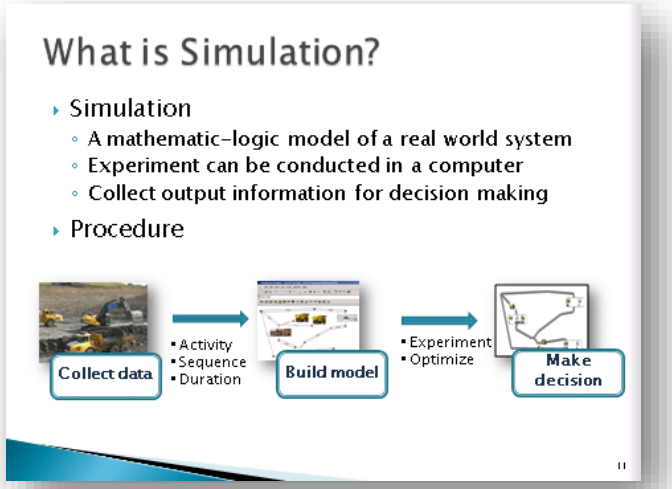
Agenda

- Use agenda to clarify the structure of your presentation
  - Make the presentation appears more organized
  - Audience feel comfortable when they know where you will go
- Use short phrases
- Briefly explain the agenda, don’t just skip it
  - I’ll first … then …
- “House rules”
  - Due to the time limit, ask the audience to keep their questions to the end, tell them you have a Q&A session

Background (Optional)

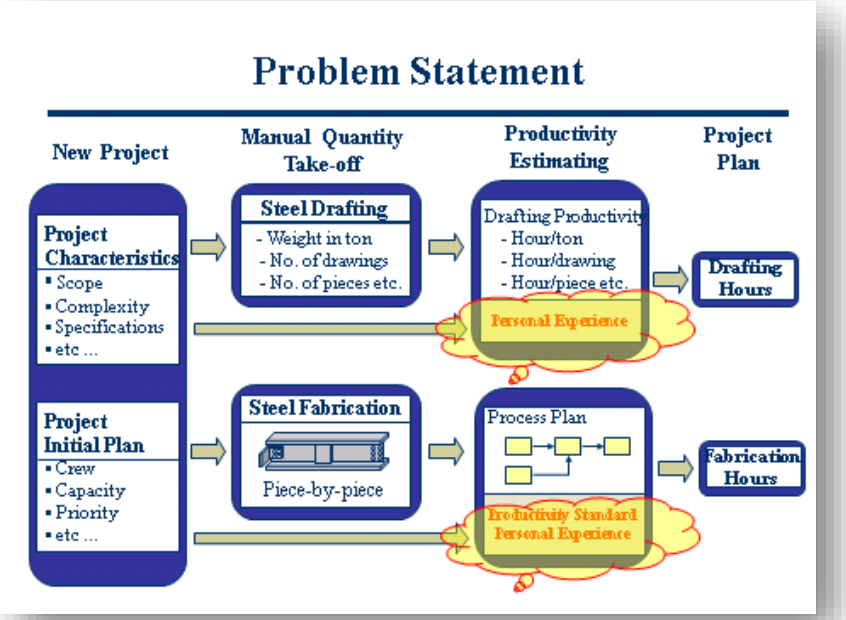
- Justify why your research area is important
  - Consider using numbers/charts/facts quoted from credible sources to support your argument
- Prepare your audience
  - Assumption: audience with basic CM knowledge, but not in-depth knowledge in your particular research area
  - Explain use simple language the significance of the research area and necessary background info.

Note: Background slide may be ignored, if the research area is well-known, you can skip it and go to "Problem Statement"



Problem Statement

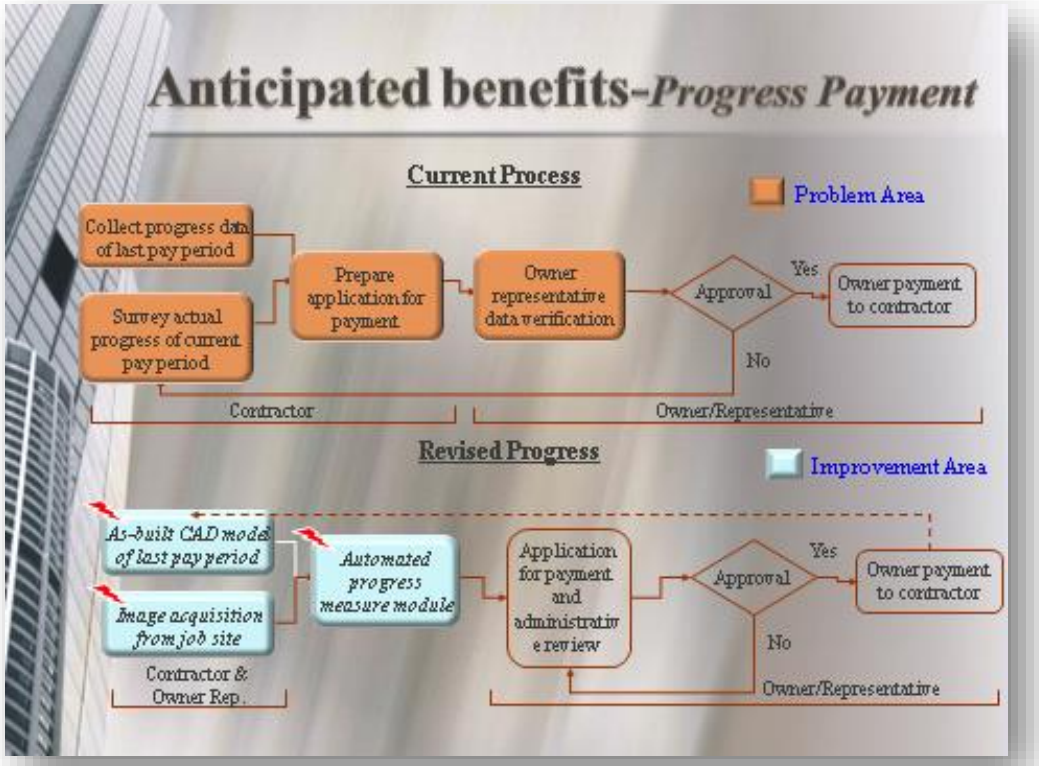
- Describe the exact research problem
  - Focus on the specific problem addressed by YOU only
  - Avoid statements that may be confusing/offensive unless you have adequate supporting data
    - E.g. “the construction industry fails totally to ….”
    - Construction managers do not understand …”
  - Briefly state literature review results (I’m not reinventing the wheel …)



Visual aids (diagram, photos…) may help to highlight problem areas

Objective & Scope

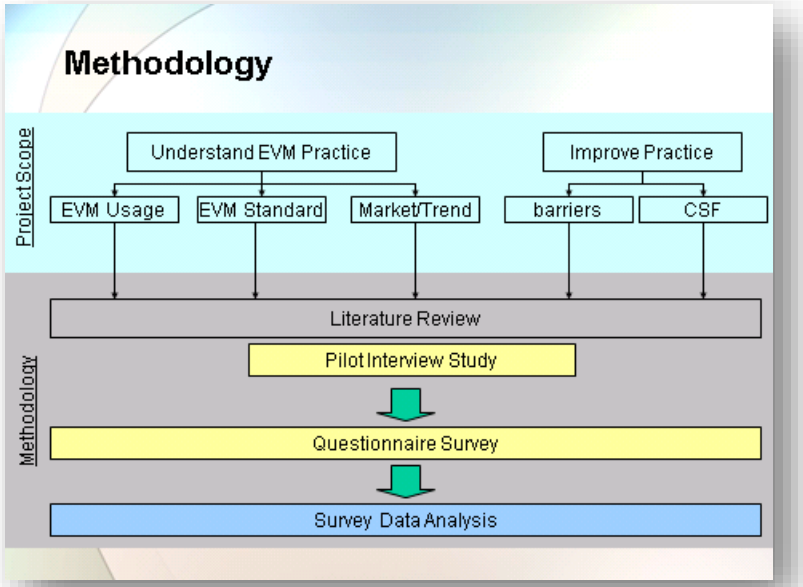
- List your objectives and sub-objectives
  - Your objectives must match to your problem
  - Try to visualize the objective using visual aids, if possible
- A brief statement of scope, if necessary



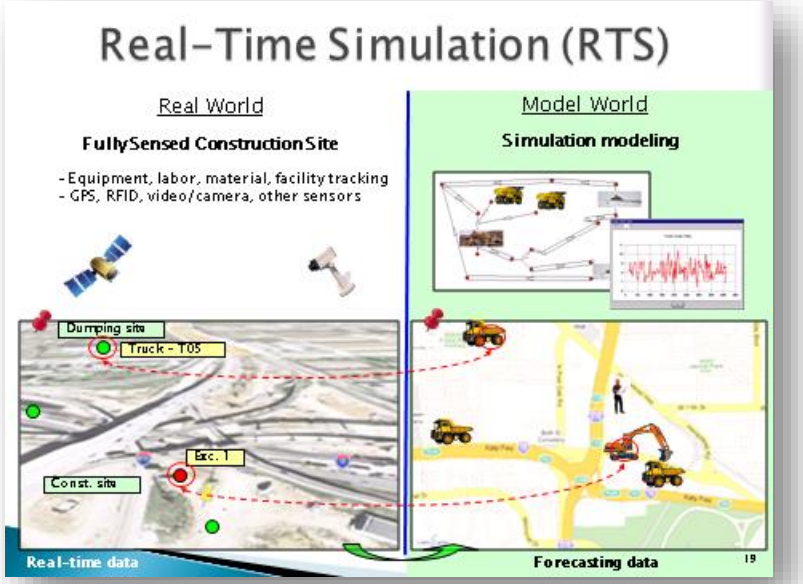
Visual aids may help to highlight both problem and improvement (objective) side by side for better understanding

Methodology

- A global view of research steps and logic
  - Use visual aids as much as your can
  - Explain each major research step briefly, don't miss any



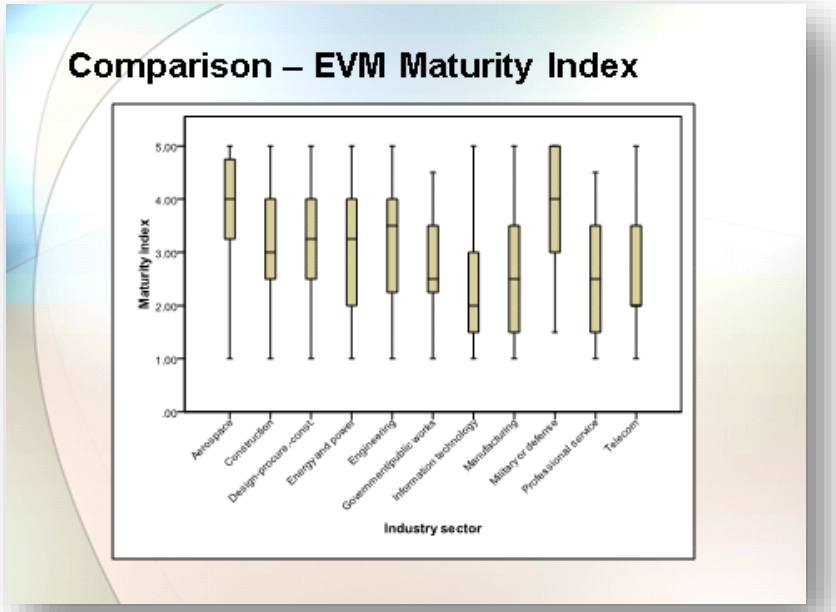
Flow chart is usually better than texts in explaining research steps

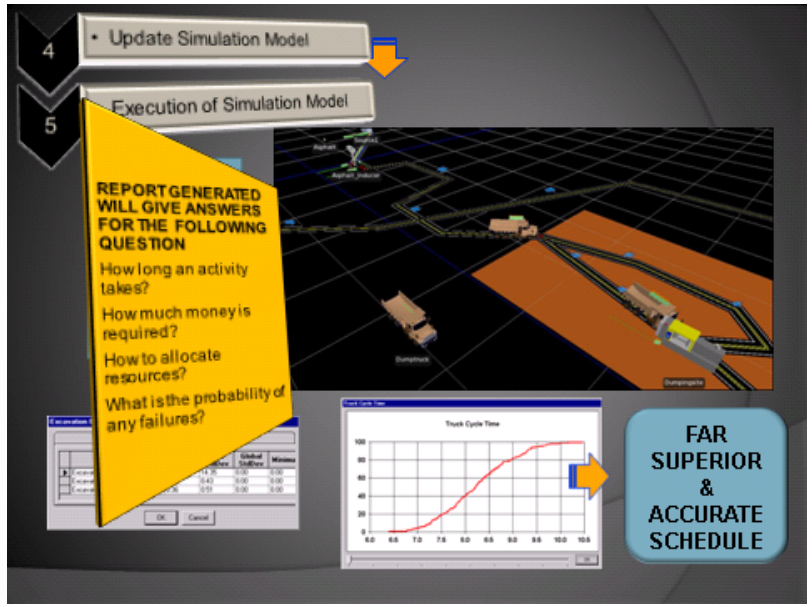


Photos, diagram, animation can help to explain complex research ideas

Results

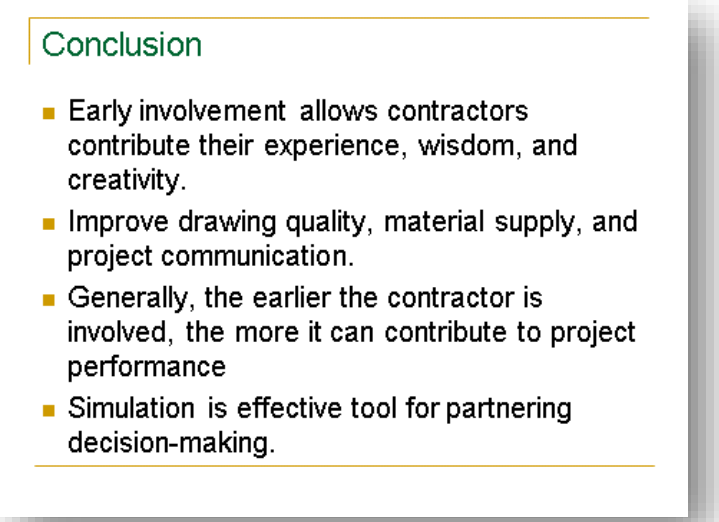
- A description of results/deliverables
  - Allocate adequate time to present
  - Don’t sell yourself short!
  - Visualize your results using visual aids or live demo!
  - Deliverables must match to your objectives

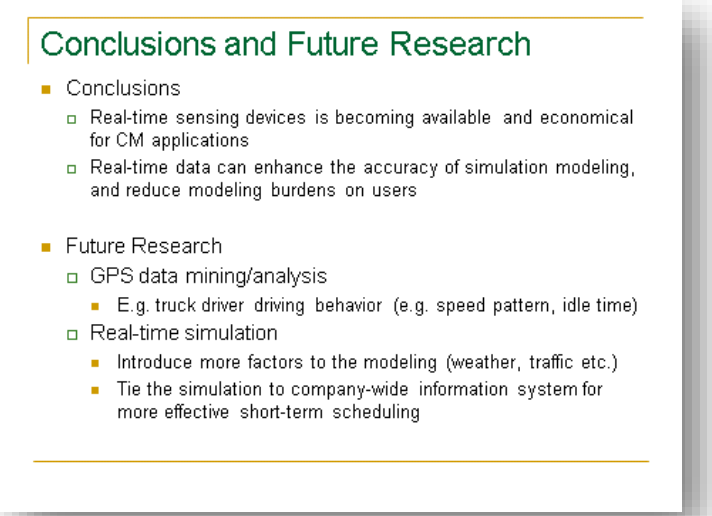




Conclusions

- A concluding remarks …
  - A quick reflection of your research problem
  - A quick summary what you have done
  - Highlight your achievements
    - Reassure the audience your academic & practical value of your research
  - State lesson learned, if any





Dealing with Podium Panic

- Audiences are forgiving
- Nervousness is usually invisible
- Be yourself
- Practice deep breathing/ visualization techniques
- Begin in your comfort zone

Dealing with Podium Panic

- Check out the room in advance
- Concentrate on the message
- Begin with a slow, well prepared intro; have a confident and clear conclusion
- Be prepared and practice

Eye Contact

- Never let them out of your sight.
- Looking them in the eye makes them feel that they are influencing what you say.
- Eye contact allows the presentation to approximate conversation—the audience feels much more involved.

Body Language

List of NO's

- Lean on or grip the podium
- Rock or sway in place
- Stand immobile
- Use a single body language repeatedly
- Examine or bite your fingernails

Body Language

List of NO's

- Cross your arms in front of your chest
- Use obviously practiced or stilted gestures
- Chew gum or eat candy
- Click or tap your pen, pencil or pointer
- Answer a mobile ☺.

Body Language

List of NO's

- Lean into the microphone
- Shuffle your notes unnecessarily
- Tighten your tie or otherwise play with your clothing
- Crack your knuckles
- Jangle change or key in your pocket

Voice

- Voice Intelligibility
- Articulation
- Pronunciation
- Vocalized pauses
- Substandard grammar
- Voice Variability
- Rate of speech
- Volume
- Pitch or tone
- Emphasis

Do not read the presentation

- A sure sign of an ineffective presenter is when he or she looks at the screen and reads off every last word up on the slides
- Loses eye contact with the audience
- You also don’t want the audience to have to look at your backside all the time
- Practice the presentation so that you can speak from bullet points
- The text should be a cue for the presenter

Preparing Content

3 A's

- Analyze your **AUDIENCE**.
- Define what **ACTION** you want them to take.
- Arrange your **ARGUMENT** to move them.

Analyze Your Audience

- What are their names, titles, backgrounds, reasons for attending, etc…?
- What are their big concerns?
- What are their objectives, fears, hot buttons, and attitudes?

Analyze Your Audience

- What is their perception of you and your institution?
- What are their questions likely to be?
- What is personally at stake for them?
- How much detail do they need?

Define What Action

- What action do you want the audience to take?
- Define it in terms of the audience.
- What will they feel, believe, and do after hearing your talk?

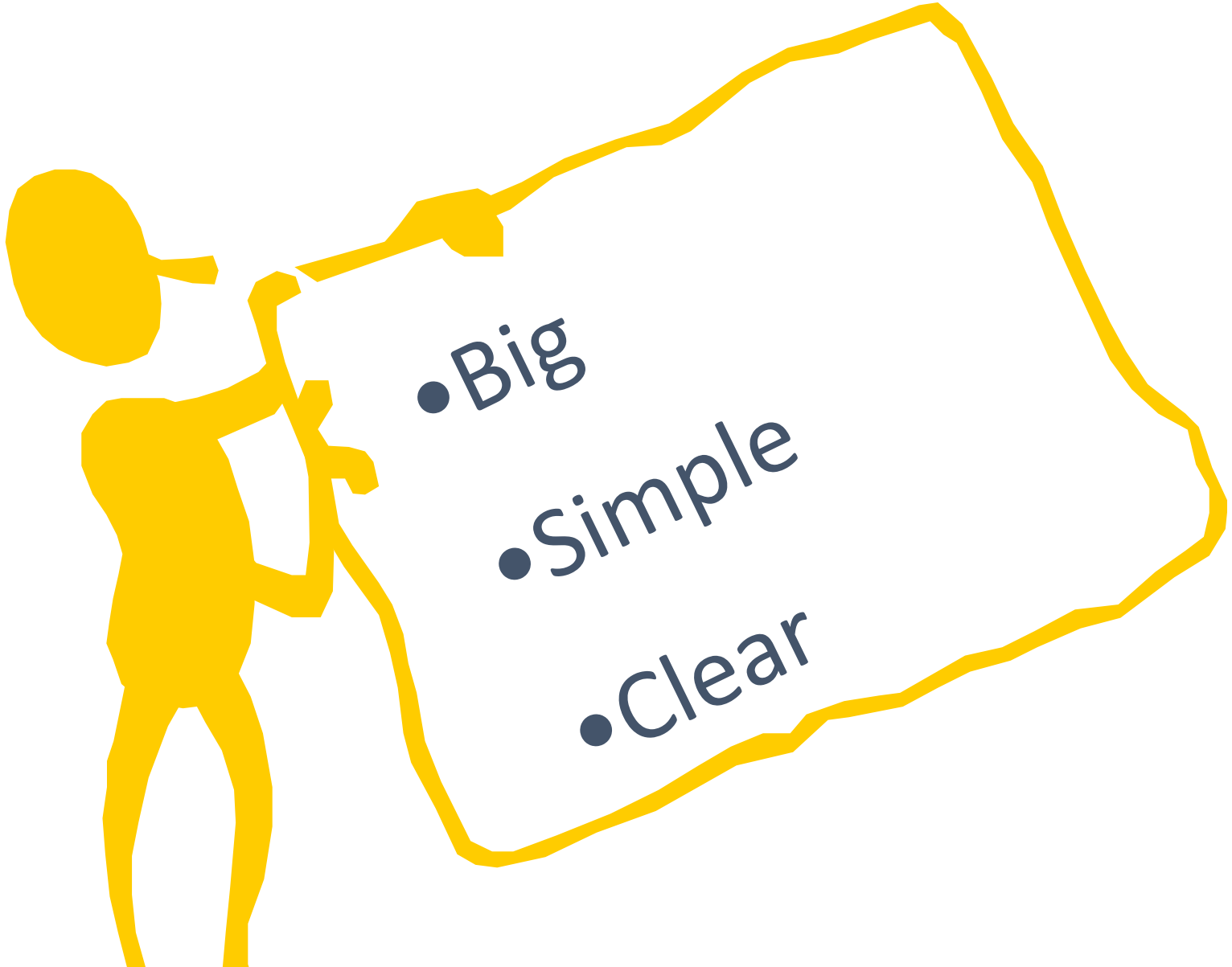
Arranging Your Argument

1. Shake hands with the audience.
2. Get to the point.
3. Present your theme.
4. Develop your agenda point by point.
5. Summarize and recommend.

Visual Aids

(not the stars of the show)

Design Concepts



Questions & Answers

- Beginning of a whole new interactive presentation
- Opportunity to make a point
- Most presentations are won or lost here

Questions & Answers

- Anticipate lines of questioning
- Rehearse
- Don’t rank questions
- Keep answers brief
- Be honest— on your answers
- Avoid negative words

- Don’t repeat negative questions
- Clarify question
- Defer to experts
- Move your eyes off questioner
- If negative, end your response focused on somebody else

THE Golden RULE

NEVER argue with a member of the audience.

Instead…

- Look at the questioner.
- Remain neutral and attentive.
- Listen to the whole question.
- Pause before you respond.
- Address the questioner, then move your eyes to others.

Easy as A B C

"I can't **A**nswer that question **B**ecause …, but I **C**an tell you…"

Stay on time

- If you plan a certain amount of time for your presentation, do not go over

- If there is no time limit, take less time rather than more to ensure that people stay engaged

Have a Backup Plan

- Technology can fail when least expected
- Have a backup copy on a flash drive
- Don't assume that your presentation will work fine on another computer
- Don’t assume the internet will be connected
- From a speaker point of view, it is also a good idea to be able to deliver your presentation without the slides just in case of projector failure

Discovering and Using Multimedia

Multimedia software will help you to develop skills to create products that are useful in your role as a teacher.

It lets you create presentations with words, pictures, sounds and videos. e.g PowerPoint.

Multimedia Skills

- Knowing PowerPoint
- Working with Slides
- Building presentations
- Making slides look good
- Adding words
- Adding pictures and effects
- Adding sounds, movies, links
- Adding animations and effects
- Setting up and playing presentations

PowerPoint

"Is PowerPoint bad? No, in fact, it is quite a useful tool. Boring talks are bad. Poorly structured talks are bad. Don't blame the problem on the tool."

Don Norman

Author of

The Design of Everyday Things

- In 1961, Dr. Joseph Foley became the Director of the Division of Neurology within the Department of Medicine. Under his leadership, the Division rapidly grew into a nationally recognized program. Upon his retirement, the Department of Neurology was formed, and Dr. Robert B. Daroff became its first Chairman in 1980. In 1994, Dr. Daroff became Chief of Staff at University Hospitals and Associate Dean at Case Western Reserve University School of Medicine. Dr. Dennis M.D. Landis was appointed in 1995 as chairman. Under Dr. Landis, the Department greatly expanded in faculty and subspecialty programs. Dr. Landis stepped down as Chairman in late 2006, and in January 2008, Dr. Anthony J. Furlan became the present Chairman. The department has continued further growth in programs and faculty and is now part of the Neurological Institute of University Hospitals.

- The Department now includes s over 55 faculty at nine sites (University Hospitals-Cleveland Medical Center, Case Western Reserve University School of Medicine, Richmond Heights Medical Center, Bedford Medical Center, Westlake Health Center, Ahuja Medical Center, Suburban Health Center, Park East Medical Center, and the Cleveland VA Medical Center). Within the Department are many Centers, among them, Brain Tumor, Epilepsy, Neuromuscular, Movement Disorders, Stroke and Cerebrovascular, Neuro-Critical Care; Brain Health and Memory, Neuro-Ophthalmology, and General / Community Neurology. The Department Residency Program is one of the largest in the country, and takes up to 12 residents per year, in addition to fellows in Pediatric Neurology, Neuromuscular Medicine, Epilepsy, Vascular Neurology, Neurologic Critical Care, Movement Disorders and Behavioral Neurology.

Powerpoint

Advantages

- Quick, easy & simple
- Prepare in advance
- Good for large audience
- Can include pictures & graphics easily
- Something to look at

Disadvantages

- Can be tedious
- Not very dynamic
- Easy to overload with information
- Be careful with animations
- Tendency to read word for word

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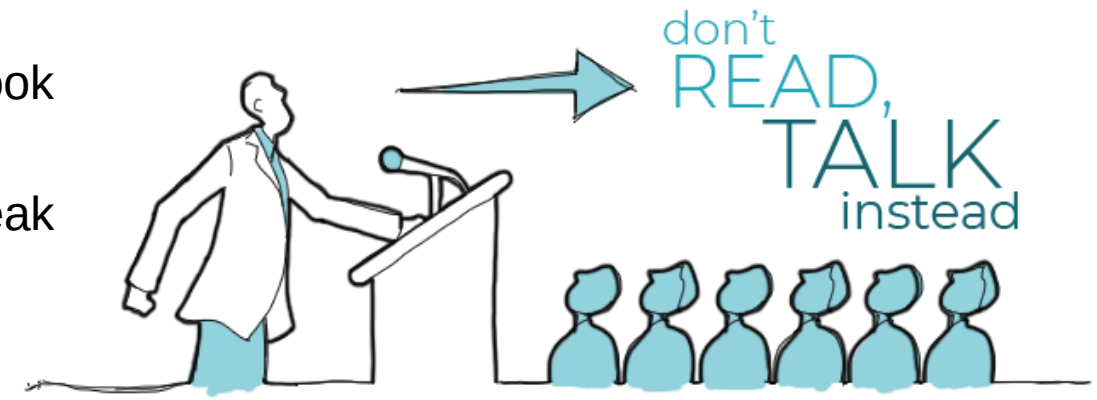

Show up early and verify that your equipment works properly

- Make sure that all equipment is connected and running
- Verify that the projector's resolution is the same as the computer on which you created your presentation
- Arrange cable
- Check pointers

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