

Oral Presentations

Malika Moutawakkil

Lisa Hunter

Education & Human Resources

Center for Adaptive Optics

University of California Santa Cruz



Overview



- Importance of oral presentations
- Getting ready to create your presentation
- Preparing your presentation
- Giving your presentation

Importance of Oral Presentations



- Who gives oral presentations and when?
 - Scientists and engineers
 - Administrators and managers
 - Students
- In your experience:
 - What makes an oral presentation effective?
 - What makes an oral presentation ineffective?
- Learning to give good oral presentations gives you many new opportunities

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Guidelines



- How much time do you have? Does the time include question and answer time?
- Who is the audience?
- What is the approximate size of the audience?
- Will they provide a projector?
- Should you prepare hard copies of your presentation? Will they make copies for you?
- Do you need to submit a title and abstract?

Audience



1. Identify your audience

- What level of detail should your talk be?
- Who is in the audience (a pioneer in the field?)
- Learn what is conventional and know when you are throwing convention aside.

How to effectively work with your mentor



- Inform them about your presentation
- Let them know dates and deadlines ahead of time and remind them graciously
- Get approval to present your research and establish the process (does he/she want to approve final talk, etc.)
- Come to your mentor with a start or specific question
- Suggest your own alternatives and ask their opinion
- Let them talk
- When practicing in front of them, ask if they will give their comments throughout or at the end (gives you a diplomatic way to ask for comments at the end)

Determine general structure for your presentation



- Never take more than you allotted time!!!! Plan for ~80% of your given time
- Determine components of your talk and approximate time for each:
 - Introduction
 - Body
 - Conclusions

Creating the structure for your presentation



- Don't spend time making your slides until you have a good handle on your general outline
- Identify the major question or goal of your project
- Did your project answer the question or accomplish the goal?
 - If yes, how
 - If no, why not and what could be changed to get an answer
- Working backward from your answer, determine the essential elements needed to convince your audience

Putting it all together



- Written outlines
- Index cards or post-its (visual mechanisms for looking at overall presentation)
- If you are struggling, try something different - different things work for different people

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Organization of Presentation



“Tell ‘em what you’re gonna tell ‘em, then tell ‘em, then tell ‘em what you told ‘em”

1. Introduction:
 - A. Overview (tell ‘em what you’re gonna tell ‘em)
 - B. Reason to listen
 - C. Background/context
2. Body (tell ‘em)
3. Conclusion (tell ‘em what you told ‘em)
4. Acknowledgements and references

Reason to Listen

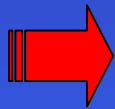


- Get the attention of your audience
- Why should the audience be interested?
- Can be part of your background or introduction

Background



- What does the audience need to know to understand your work?
- Consider your audience's background
- How does your work contribute to the big picture within science, engineering, or society?
- Zoom in: start general and focus in on your specific work
- Give definitions
 - Define acronyms, review fundamental scientific concepts if applicable, explain instruments
- Give credit to important contributors (especially if they're in the audience!!)



Body of Presentation



- Determine your take home message(s)
 - Question
 - Problem
- Tell a story that leads the audience to that message, gradually unfolding the facts.
- Use good graphics: charts, flowcharts, diagrams, etc.
- Keep your purpose in perspective
- Be careful to differentiate between experimental evidence and speculation

For projects that are “questions”...



- **State the question**
- **Approach to answer question**
- **Results (data)**
- **Limitations of approach**
- **Explanation of what results mean - use your data to create a scientific explanation**
- **Alternative explanations**
- **Be careful to differentiate between experimental evidence and speculation**
- **Conclusions**

For projects that are “problems” or “designs”



- **Problem statement**
- **Approach to solve problem**
- **Constraints**
- **Design and support for design decisions**
- **Trade-offs and limitations imposed by your design**
- **Testing and verification**
- **Conclusions**

Conclusion



- Tell them what you told them
- One slide
- Recapitulate the purpose, point out the evidence, state the conclusion
- Provide one final visual aid that consists of a single statement or diagram

Acknowledgments and References



- Two common ways for including references:
 - Prepare a separate slide with all references
 - Integrate references throughout your presentation (at bottom of appropriate slides)
- Photos of your lab for acknowledgement (include names) are visually interesting
- Acknowledge funding for your project in writing (don't need to say). In this case:

“Funding provided through the Center for Adaptive Optics, a National Science Foundation Science and Technology Center (STC), AST-987683.
- Make sure you include everyone before the big day

Creating the Slides



- Plan for 1-2 minutes per slide
- Limit each slide to one main idea
- Include no more than you will discuss on each slide
- Include titles to supplement, not duplicate
- Use several simple slides rather than one complicated
- Use duplicates if you need to refer to a slide already shown....don't go backwards
- Plan your slides for a good visual pace
- Give credit where credit is due
- Be prepared to explain whatever you put up

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Getting In



- Fear is at a maximum, rapport at a minimum
- Establish contact with audience
- Jokes are risky....sometimes they work, sometimes they fall flat
- Title: concise, brief, accurate
- Examples

Delivery



- Enthusiasm is essential
- Clearly articulate every word and sentence
- Maintain eye contact
- Take your time, slowing down solves many problems
- Avoid monotony
 - Change your voice pattern
 - Repeat words or phrases
 - Pause
- Silence is better than um's, etc. Do you know YOUR "filler"?
- Avoid distracting mannerisms

Getting Out



- Once you have stated your conclusion, stop!
- Avoid rambling on, repeating, etc.
- Give acknowledgements, if you haven't already, say thank you, and answer questions

Answering Questions



- Be gracious
- Answer briefly and to the point
- Repeat the question if possible, this will:
 - Make sure you understood the question
 - Give you a chance to think
 - Make sure that the audience heard the question
- If you don't know the answer, say so:
 - “That is a good question, I hadn't thought of it like that before”
 - “I am not sure. I will have to give it some thought, perhaps we can talk more later”
- Don't be afraid to take a moment to think

Dealing with Fear



- It is a sign that you care
- Look calm
- Know your demons and minimize them
- Focus on what you are explaining (visualize it)
- Know relaxation techniques (deep breathing, relaxing your hands, etc.)
- Find a friendly face in the audience
- Prepare and rehearse **MANY TIMES**
- If you have a tricky or rough spot, memorize those few lines that get you through
- There is no one way to deal!!

Things to avoid



- Taking up too much time
- Apologies
- Putting unnecessary text or diagrams on visuals
- Reading the slide or your notes
- Omitting credit when due
- Spending too much time looking at visual displays (turning your back to your audience)

Final Checklist



- ✓ Last minute adjustments:
 - clarify vague statements
 - strengthen weak points or rough spots
- ✓ Rehearse in front of a friend
- ✓ Dress to feel confident, comfortable, and show respect for audience
- ✓ Relax. Get a good night's sleep and eat
- ✓ Summarize your presentation in 2-3 well-constructed sentences

Final Checklist (cont.)



- ✓ Last minute advice to make major changes should be questioned
- ✓ Work on transitions between slides
- ✓ Get comfortable with your laser pointer, the room, computer set-up, etc.
- ✓ How will your data get to computer that has data projector? Have two or three backup plans
- ✓ Check in with session chair or moderator

Summary



- Giving good oral presentation is part of science and an asset to almost all careers
- Clarity and organization are essential
- Practicing is the key to success

You will do a great job !!!

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