

# Guidelines to Giving a Good Professional Seminar

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## Examples of introductory statements:

1. During the time it takes me to present this seminar, as many as 3-4 species of organisms will go extinct from this earth, never to be seen again.
2. Over 75% of the native salmon fish stocks in the Pacific Northwest are extinct, endangered, or threatened with extinction. Why and what should be done about it?
3. A recent article in the journal Science claims that women are genetically less capable than are men at solving mathematical and engineering problems.
4. Why does a zebra have stripes?

Use a powerful statement that grasps the attention of the audience. You want the audience to anxiously anticipate your next sentence, or say to themselves, "This sounds interesting, I want to see where she(he) is going with this." You want the audience to know that your research addresses a bigger question than the data, organisms, or study site themselves. A good way to start a talk is to ask a question, the more profound the better. Think about the lead-in statements to the News each night, they are designed to perk your interest so you catch the "details at 11".

## The two most important sentences in a talk are the first and last

Do not start with:

I came to Memphis 3 years ago to work on .....

Can I have the first slide please...

Will someone please turn out the lights....

My advisor was .....

For the last two years I have been trapping voles .....

I would like to thank the U.S. Fish and Wildlife Service .....

You want to catch the audiences attention so they look forward to the next sentence. Be creative with your first sentence.

**Get to the point!**

How to quickly get to your objective. (Big picture to small picture)

1. Over 75% of the native salmon fish stocks in the Pacific Northwest are extinct, endangered, or threatened with extinction.
2. The four greatest threats to fish stocks are: overharvest and habitat loss due to dams, forest logging practices, and grazing practices near spawning streams.
3. The relative importance of these four factors and how they relate directly to the fish decline are not known.
4. The overall objective of the research project with which I was associated was to evaluate the relative importance of each of these factors.
5. Specifically, I tested the hypothesis that grazing pressure along streams contributed significantly to the destruction of fish spawning habitat.

By the 5th sentence you are right into the heart of your research. Don't keep the audience in suspense with respect to what you did. *Get to the point!!!* Most additional reference material that you could present is probably not necessary to understand what you did.

Here is another example.

1. All mammal populations have the potential to increase exponentially, however all populations asymptote, stop growth, and then decline. Why, what factors limit population growth?
2. Factors that reportedly limit population growth include resource (food) limitation, predation (and/or disease), climatic factors, or behavioral factors such as territoriality, dispersal, and reproductive suppression.
3. All of these factors have been studied independently in a number of species, however, no one has conducted a multi-factorial experiment to test the relative importance of each of these factors in a single population.
4. The objective of my project was to ..... (this will in all likelihood be your first slide).

See how easy it is to tell the audience what the big picture is and how your research addresses this big question. Now the audience knows where you are going for the rest of your seminar. Any additional background will now make sense. You can go back and provide additional background information after the audience knows where you are going with your talk, but only if it is essential to your objectives.

## **Wolff's seven sentence Rule**

*State your objective by the seventh sentence or less.*

## **Do not start your talk with visual aids**

Always say something to the audience while the lights are still on. Do not hide in the dark. All of the initial attention should be brought to you and to what you say. These first four to seven sentences should lay the groundwork for your seminar. Also you will come back to these in your conclusion.

**You do not need a title slide**, the moderator has already introduced you and given the title of your talk. Don't be redundant. Besides, by the time you show your first slide you will be on to your objectives.

## **Know the room**

Light switch, projector switch and focus. Who is going to turn out the lights? Where is the pointer (best to bring you own)? Are the curtains pulled? How dark do you need the room to be?

Put your slides in a tray and preview them before you get to the seminar room. Be sure they are right side up, etc. Number your slides in the lower right hand corner (this becomes upper left hand corner when put in slide tray).

When focusing a slide, do not say, "I can not see if this is in focus from here". Yes you can, this is just nervous chatter, you can see just as well as the audience can.

## **Know your projector**

Everyone should know how to use a slide projector (and overhead), change a light bulb, focus, work plug-ins, forward and reverse, putting carousel on and off projector, fixing jammed slides, knowing the limitations of auto-focus, etc. The rules change slightly for power point presentations, but you still need to know your projection equipment.

## **Slide preparation**

Keep slides simple, few words, big letters, clear and contrasting color combinations. One slide for every 1-2 minutes of presentation (especially true for data slides). More slides can be used if they are photos of organisms, study plots, etc.

Avoid showing slides of formulas or equations.

Try to make all of your slides horizontal. Vertical slides often go off the screen.

Do not back up to show a slide twice, have two slides positioned in order.

*Tables:* Limit to 2 x 3 or 3 x 4 cells at the most. Whenever possible use bar charts or graphs instead of tables.

*Figures:* no more than 3 or 4 lines (or variables; 1-2 is better). Label each line (or bar), do not use legends or keys. Explain axes (remember, this is first time the audience has

seen the slides); conclude the main point from data slides. The audience can remember only 2-3 main points from each talk. Make sure it gets the take-home message.

## Plan ahead

Think about your seminar presentation while doing your research. Get GOOD photos of methods, equipment, study site, research organism, etc.

Your seminar preparation starts the day you start your research.

THIS IS NOT A TRAVELOGUE FOR YOUR RELATIVES, DO NOT INTRODUCE THE AUDIENCE TO YOUR BOYFRIEND OR GIRLFRIEND OR BOSS'S DOG, OR SHOW WHERE YOU HAD LUNCH OR GOT STUCK IN THE MUD. A Gary Larson cartoon can be used effectively to make a scientific point, but keep your presentation scientific.

Learn how to use a camera, or get someone who does to take photos for you. Remember it takes 5-7 days to get Kodachrome film developed, ~ 4 hours for E6 film (Ektachrome or Fugichrome). Do not use bad slides (washed out or too dark). PLAN AHEAD!

## Organizing your talk

1. *Introduction* – short and sweet. Start with the big picture to show the relevance of your work. Very quickly get to your objectives. Think of all the seminars that you heard in which the speaker never told you the purpose of the talk. Many speakers start out with methods. DON'T DO IT, YOU KNOW BETTER!
2. *Objectives (hypotheses)* – State clearly and succinctly on a slide. Null hypotheses are worthless, justify and state your *working* hypotheses! While stating and justifying your hypotheses, you can bring in more introductory material. The point I make above is that the audience needs to know right away what the seminar is going to be about.
3. *Methods* – You can list these on a slide, but better to show pictures of study site, equipment, collecting devices, sampling tools, etc. Let the audience get the general picture of techniques and procedures but do not get bogged down in irrelevant detail. REMEMBER, the audience is going to remember only 2-3 major points from your seminar, I doubt these include the size of trap, length of transect, distance from stump, how bad the mosquitos were, or the name of your assistant. Know what is relevant and what is not. (Acknowledgments, which are optional should go here with the methods).
4. *Results* – data, graphs, tables, charts that are all legible and clearly explainable. If you have several objectives or subprojects, you can have a separate set of methods and results for each objective. When you show a slide, remember to not only explain the results, but also the conclusion from each result that relates back to your objectives.
5. *Conclusion* – This is the take-home message. List conclusions, number them or set them apart. Use voice inflection to emphasize each point you want the audience to remember. Tell them what is important and what to remember.

6. *Acknowledgments* (optional) – Thank your mentor, other co-workers, funding agency, etc. if you want to, but this is not mandatory or in most cases even necessary. I consider this section optional. Take the credit for your work and don't distract the audience from the contents of the seminar. If you give acknowledgments at the end of your talk, make sure the audience has already had the take-home message. An alternative place to state your acknowledgments is in the methods.

**Everything you say should be important, some things are just more important than others**

Intermingle data slides with photos of site or methods. Keep your audience interested. Do not use filler talk. It is better to give a 30-minute talk where everything is important, than a 45-minute talk with 15 minutes of filler. You will bore the audience and they might miss the punch line. Remember verbiage rhymes with garbage!

**How to end a seminar**

The end of your talk should be self-evident. Use inflection in your voice, hand gestures, "And the last point that I would like to make is....", or "In conclusion...., thank you", or "And lastly, I would like to thank my advisor, Dr. Charles Darwin, and the US Forest Service for making this research possible, thank you". Closing slides are acceptable, use a nice sunset, your study site or organism, something on the lighter, less serious side. But do not tell us what it is (we all recognize a sunset by now). Just use it for background during your concluding statement. It is still probably better to turn the slides off and lights on so the attention is drawn to you when making your final closing statements (same reasoning as for introduction).

Advance slides at end to a blank space, do not leave projector light on the last slide. Turn on lights (or see to it that the moderator does).

When you finish your seminar, you should have told the audience,

*Where you were going and why*

*How you got there*

*What you found there*

*Where you have been*

When you get to the end, you do not want the audience to say "So What"! i.e. "What was the purpose of the research? What am I supposed to do with this result? How does this work relate to anything?" You want to make sure you have told them the answers to these questions. Be sure to emphasize the inferences that can be drawn from your study.

## Answering questions

Answer questions succinctly. LISTEN TO THE ENTIRE QUESTION, think about it, answer it, and go on to the next question. DO NOT ANTICIPATE THE END OF QUESTION AND INTERRUPT THE PERSON BEFORE (S)HE IS THROUGH ASKING IT. When someone asks a question, this does not give you a license to give another seminar. Keep answers *short*! Acknowledge that the question was good and relevant. Thank the person for bringing your attention to that point. If you do not know the answer, tell the person that she made a good point and that you will think about it, or analyze your data that way, or look up a reference, or whatever.

## Delivery

1. Talk clearly, loudly, and slowly; know your room and its limitations. Some large auditoriums require you to project your voice more, small rooms allow a more intimate delivery. Direct your delivery to people in the back row. You should not have to ask the audience if they can hear you, you should have a good enough feel for the room, its limitations, and your voice projection qualities to know how loud to speak.
2. Look directly at all of your audience when speaking. Let everyone in the audience think you are talking to them. Do not stare at the back wall or look at the floor. Work your way from one side of the room to the other if you do not use a podium.
3. When using slides, either face the audience or position your body at a 45 degree angle to the screen and audience. Use the pointer, but then turn to the audience. Use your right hand when on the left side of the screen, left hand when on the right side of the screen.
4. Carry on a conversation with the audience. Let them feel they are a part of the presentation.
5. Do not apologize or blame anyone else for anything; i.e. quality of slides, why your study did not work, why some analysis is not done, etc. A seminar should be remembered for what went right, not what went wrong.
6. A stoic expression and no body language is boring to an audience and it will lose interest in you. Show enthusiasm during your presentation. Use expressions and mannerisms that let your audience know that you are excited about being there and telling them about what you did.
7. Do not memorize or read your talk, but know it very well so the words flow smoothly. Refer to your notes if necessary, but the key is to know what you are talking about.
8. Your slides are your notes, each slide should be a hint of what message you want to convey. The best speakers use NO written notes.
9. Very important to use inflection at most important points.
10. Let the audience know what to remember and what is the most important. *“And the point I want you to remember here is . . . . .”*
11. Walk around, get your audience to feel a special bond with you. Treat members personally, talk as though you were addressing individuals. If you are not comfortable

with this, you can stay behind the podium with your notes, but try to be somewhat animated or excited about your work.

12. The best way to avoid nervous tension is to know your subject well and have confidence in what you did. Giving a seminar is a good time to show off what a great scientist you are. This is your “10 minutes of fame”.
13. If you are comfortable, your audience will be too. If you are tense, so will be your audience. You must learn to be comfortable on stage, the way to do this is to *know your subject*.
14. Know your audience. If you use scientific jargon, be sure to consider if your audience knows what the term means.
15. Do not use mixed media; i.e. overheads and slides, slides and blackboard, etc.
16. Good speakers are good entertainers!

### **Stay on time**

Your presentation should be timed so you end with 10-15 minutes for questions, (3 minutes for a 20-minute presentation; or whatever is allotted in the program). **DO NOT RUN OVER TIME.** A potentially good seminar and speech can be received poorly by the audience if the speaker does not respect the time limit. Running overtime is one of the worst sins a speaker can commit, don't do it!

### **Appearance is important.**

Once again, know your audience. You would dress differently for familiar colleagues than you would for a job interview or if you were an invited speaker. Dress conservatively and professionally; do not let your appearance distract from your seminar. Your appearance is often reflected in your delivery, sloppy dressers often give sloppy talks.

### **Most of all, have fun!**

## Check list for the presenter (and the audience)

1. *Introductory sentence:* Was it appropriate, did it catch your attention, was it a representative umbrella question for the rest of the talk? (Remember, the conclusion or concluding statement should come back to this sentence).
2. *Objectives:* Did the speaker get to his(her) objectives within the first 4-7 sentences?
3. What was the first slide? Was this an appropriate first slide?
4. *Slide quality:* What was the size of print, was it centered properly, was it brief and to the point (i.e. or was there too much information)?
5. *Hypotheses:* Did the author have clearly stated and mutually exclusive hypotheses?
6. *Methods:* Were the methods explained clearly and were they appropriate for testing the hypotheses?
7. *Results:* Were the results clearly presented; were the graphics clear and simple? Did the speaker violate any of the rules for explaining the content and conclusions of each data slide? Were too many or not enough data presented? Did the speaker talk to the audience or to the screen? Did the color on graphics show sharp contrast and were color combinations complementary?
8. *Conclusions:* Did the results justify the conclusions? Were the conclusions direct, obvious, and clearly and unequivocally stated? Did the speaker answer the “so what” question? i.e. what inferences were drawn from the study?
9. *Closing comments:* Did the speaker present the closing arguments with the lights on and projector off? Did the closing comments refer back to the introductory statement? Will you remember the take-home message? Was the last statement obvious such that you knew the speaker was done or did he have to tell you he was stopping?
10. *Speech and Delivery:* Did the speaker hold your attention throughout the talk? Show smooth transition from one thought to the next? Talk too fast or too slow? Use proper and effective speech inflection to emphasize main points?
11. *Enthusiasm:* Did the speaker sound enthused and excited about her(his) work and the presentation or did (s)he seem bored and anxious to get it over? Did the presentation seem memorized, was it read, or was it delivered spontaneously? Was it presented at an appropriate level for the audience?



12. *What Will You Remember:* What feature stands out from the presentation (hopefully it was the take-home message that the speaker intended)?
13. *Addressing the Audience:* Did the speaker address each member of the audience? Did you feel like you were being incorporated into the presentation? Did the speaker stand in an appropriate place so you could see the screen? Did the speaker look at the audience while speaking, or out the window, or at the back wall?
14. *Use of Visual Aids:* Did the speaker know how to use the overhead and/or slide projector?
15. Did the speaker present any extraneous material that you did not need to know?
16. *Acknowledgments:* Were any acknowledgments made and if so were they in the right place or did they distract from the talk?
17. *Timing:* Was the seminar timed appropriately leaving adequate time for questions?
18. *Questions:* Did the speaker handle questions appropriately? i.e. short and to the point answers.

# Guidelines for Giving a Truly Terrible Talk

Strict adherence to the following time-tested guidelines will ensure that both you and your work remain obscure and will guarantee an audience of minimum size at your next talk. Continuity of effort may result in being awarded the coveted 5:00 P.M. Friday speaking time at the next national meeting.



## Slides

1. Use lots of slides. A rule of thumb is one slide for each 10 seconds of time allotted for your talk. If you don't have enough, borrow the rest from the previous speaker, or cycle back and forth between slides.

2. Put as much information on each slide as possible. Graphs with a dozen or so crossing lines, tables with at least 100 entries, and maps with 20 or 30 units are especially effective; but equations, particularly if they contain at least 15 terms and 20 variables, are almost as good. A high density of detailed and marginally relevant data usually preempts penetrating questions from the audience.

3. Use small print. Anyone who has not had the foresight to either sit in the front row or bring a set of binoculars is probably not smart enough to understand your talk anyway.

4. Use figures and tables directly from publications. They will help you accomplish goals 2 and 3 above and minimize the amount of preparation for the talk. If you haven't published the work, use illustrations from an old publication. Only a few people in the audience will notice anyway.

5. Make sure at least one slide is in upside down or sideways. This relieves tension in the room.

## Presentation

1. Don't organize your talk in advance. It is usually best not to even think about it until your name has been announced by the session chair. Above all, don't write the talk out, for it may fall into enemy hands.

2. Never, ever, rehearse, even briefly. Talks are best when they arise spontaneously and in random order. Leave it as an exercise for the listener to assemble your thoughts properly and make some sense out of what you say.

3. Discuss each slide in complete detail, especially those parts irrelevant to the main points of your talk. If you suspect that there is anyone in the audience who is not asleep, return to a previous slide and discuss it again.

4. Face the projection screen, mumble, and talk as fast as possible, especially while making important points. An alternate strategy is to speak very slowly, leave every other sentence uncompleted, and punctuate each thought with "ahhh," "unhh," or something equally informative.

5. Wave the light pointer around the room, or at least move the beam rapidly about the slide image in small circles. If this is done properly, it will make 50% of the people in the front three rows (and those with binoculars) sick.

6. Use up all of your allotted time and at least half, if not all, of the next speaker's. This avoids foolish and annoying questions and forces the chairman to ride herd on the following speakers. Remember, the rest of the speakers don't have anything important to say anyway. If they had, they would have been assigned times earlier than yours.

If the above doesn't suit your style or goals, then perhaps the following alternate guidelines will be more useful.

## Make a Better Presentation

### Slide Preparation

#### General Principles

1. Slides must be well designed, simple, and readable by everyone in the audience. It is worthwhile to use professional slide preparation services, if available.

2. Use as few slides as are really needed and can be discussed in the time allotted. As a general rule, one slide for each 1 or 2 minutes of presentation is all that will be effective.

3. Devote each slide to a single fact, idea, or finding. Illustrate major points or trends, not detailed data. Do not show long or complicated formulas or equations. Each slide should remain on the screen at least 20 seconds.

4. Use the absolute minimum number of words in titles, subtitles, and captions. Remember that standard abbreviations are acceptable.

5. Use bold characters. Do not use ornate or fancy serifs. A rule of thumb for the minimum height of readable lettering (size) is 3 millimeters on the finished slide. Do not make slides from illustrations or tables that were prepared for publication. They are rarely satisfactory. A good way to test your material is to stand away 1 foot for every inch of original copy width. If you can't read it from that distance, then your audience will not be able to read it either when it is projected.

6. Color adds attractiveness, interest, and clarity to slides. Illustrations and should be used whenever possible. If you use color, remember that contrasting colors are easier to see.

7. Use 2" x 2" paper or plastic mounted slides, designated for a 35 mm slide projector. Be sure that they are clean and in good physical condition.

8. Critically examine every slide, and try out the entire set under adverse light conditions before using them at a meeting. It is sometimes impossible to provide excellent light conditions at meetings.

9. Mark a large positioning dot or make a notch in the lower left hand corner of each slide when it is laid flat so it may be read; rotate 180° for loading into a carousel. A notch makes it easy to see that all slides are in correct position in a tray. Number every slide in proper sequence, and give them to the projectionist exactly as you wish them shown. This is important, because slides may be

dropped or become disarranged. Come a few minutes before the start of the session to give the projectionist time to arrange your slides for presentation.

10. If flying to the meeting, hand carry slides on board so that they don't get lost if baggage goes astray.

11. An introductory and concluding slide can much improve the focus of your talk.

## Tables

1. Do not use more than three or four vertical columns; six to eight horizontal lines. Any more and the information will not be readable.

2. Do not use ruled vertical or horizontal lines. They distract the eye and clutter the slide.

3. Whenever possible, present data by bar charts or graphs instead of tables. Colored graphs are very effective.

## Graphs

1. Generally, do not use more than one or two curves on one diagram; three to four as maximum but only if well separated.

2. Label each curve; do not use symbols and legend.

3. Do not show data points unless scatter is important.

## Presentation

1. Write the talk out in advance so that your ideas are logically organized and your points clear. At the very least, write out a detailed outline. Cover only the few essential main points, and leave the details for your publication.

2. Rehearse. If possible, give your talk to one or more colleagues, and ask them for suggestions for improvement. If the talk runs longer than the allotted time, eliminate the least essential material and rehearse again.

3. Speak slowly and clearly. Word choice should be simple: Use active words, short sentences. Words should reinforce visual material.

4. Out of consideration for the other speakers and the audience stay within your allotted time. This is essential to ensure adequate time for questions and discussion and adherence to schedule.

5. Use the public address system and speak into the microphone toward the audience at all times. If you need to see what is being shown on the screen, have pictures or copies at the speaker's rostrum.

For more information on preparing a technical slide show, the most detailed and possibly the best manual yet written, especially for technical and scientific slide users, is *35-mm Slides: A Manual for Technical Presentations* by Dan Pratt and Lev Ropes, published by the American Association of Petroleum Geologists, 1978, 32 pages, \$5.00 each; order from AAPG, Box 979, Tulsa, OK 74101.

