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Guidelines for presenting a research paper

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This short note provides some hints for students presenting an academic paper. I'm assuming that you will have 15-30 minutes for your presentation. (Please look at your class syllabus to make sure.) Naturally, every presentation is unique and you may deviate from my suggestions if this seems appropriate. However, unless you have a specific reason to do otherwise, I suggest that you follow these guidelines closely.

Focus on the big picture: Keep in mind that a presentation is never a substitute for the paper itself. You will not be able to explain everything that the authors have done in their paper. Instead, you must focus entirely on only the most important aspects. Begin by asking yourself: What is the main question, and what is the main conclusion? Then look at how the authors arrived at their conclusion. Focus only on the 'big picture' - don't get lost in details. Your presentation should summarize this 'big picture' so that the audience has an *accurate* but *basic* idea of what the paper you are presenting achieves.

Keep it short: Do not prepare too many slides, and don't crowd slides with too much text. A single slide with 5 bullet points can easily take 4-5 minutes to present. If you have 15 minutes, that means 5 slides may be too much, and 10 slides is definitely too much. (Naturally, if some of your slides contain only a simple graph or table, this doesn't apply.) Practice your presentation to make sure you can do it in time without rushing. As a rule, you should never write things on slides that you do not intend to talk about. This (and too much text overall) is distracting for the audience. Ideally, listeners should be able to follow your talk without even looking at the slides.

Be clear and precise: Put yourself into the shoes of your audience. Would you understand your own presentation? Think about the order in which you are introducing concepts and facts. Remember that the listener does not know what's coming later. Can he still understand what you are talking about now? Avoid using technical language. If you do, make sure to provide clear and precise definitions. Do not try to impress your audience by making your topic seem difficult. The most impressive presentation is one that makes the audience feel like you are talking about something simple and easy.

Find the right 'tone': You are giving an *academic* presentation. This means that you should use morally neutral, logically clear language. Do not try to impress your audience with eloquence or excessive wit. Do not make political or moral appeals. Do not exaggerate your own knowledge or that of the authors you are discussing. Be modest and skeptical. Always remember that there is no certainty even when people do good science. Never get caught saying 'these authors have found out that storks bring babies.' Instead, say the following: 'These authors investigated the hypothesis that storks bring babies. To do so, they compared the number of babies in households with and households without storks on their roofs, while controlling for other factors. They conclude that their evidence is consistent with the hypothesis that storks bring babies.'

Follow a standard outline: You should stick to this unless there are special reasons to deviate. The outline differs somewhat depending on whether you are presenting a theoretical or an empirical (perhaps experimental) paper. Let's begin with a typical outline for presenting a **theoretical paper**:

Outline for a theoretical paper

1. Motivation and preview

2. Related Literature

3. Theory / Model (Assumptions, solution concepts)

4. Results (Propositions, Theorems)

5. Conclusion / Discussion

The **motivation** should begin with the main research question being addressed. Ideally, this should be only one question. You should also explain why the question is interesting. It is important at this stage to capture the attention of your audience. One way to do this is to give a real world example that listeners are likely to find important and / or that they can relate to. Do not go into too much detail, though. You should also give a *rough* preview of the main conclusion that the paper will arrive at, *without explaining why*. That's what the rest of the presentation will be about. (The motivation should take no more than 1/5 of your time.)

The **related literature** part of your talk should mention other papers that have dealt with the same question or very similar questions. In some cases, you may also want to mention papers that have used similar methods to address another question. Without going into any detail, just mention roughly what conclusions those papers come to and how the approach they take differs from the one you are presenting. Keep this very brief. (This part of your talk should take *at most* 1/5 of your time.)

When you present the **model** or theory, you should identify the *main assumptions*. Avoid mentioning results or conclusions at this point. This is like the part of an exam question where the model is being described. The analysis comes later. Also avoid justifying or criticizing the assumptions at this point. This should be done at the end (Conclusion / Discussion). If you are presenting a game theoretic model, you should also identify the solution concept that will be employed (e.g. Nash Equilibrium, Subgame Perfect Equilibrium,...). (This part may take 1/3 of the time you have available.)

Next you present the **results**. These will normally be summarized in Propositions or Theorems. Focus on the *main* results. If possible, provide some intuition as to why they follow from the assumptions. *Do not* go through the details of the mathematical analysis. Keep equations to a minimum - avoid them entirely if possible. If you can, explain what the main results would imply in the example you mentioned during your motivation. (Use approximately 1/4 of your time.)

Your **Conclusion** should begin with a single slide that *briefly* restates the question, the type of model used, and the main result(s). You may also want to mention larger implications, referring back to your example. Following this, you should have at least one **Discussion** slide identifying *important* criticisms and / or possible extensions. In formulating these, concentrate on things that *matter* for the main conclusions. Avoid discussing aspects that could be changed without affecting the main conclusions. (This part may take 1/5 of your time.)

Outline for an empirical paper

If you are presenting an **empirical paper**, the outline will differ somewhat:

1. Motivation and preview

2. Related Literature

3. Theory and Hypotheses

4. Data

5. Results

6. Conclusion / Discussion

When presenting empirical papers, it is important none the less to provide some theoretical justification for the hypotheses being tested. If the authors of your paper do not provide such a justification, you should say so explicitly. In either case, the emphasis in **part (3)** should be on identifying the most important empirical hypotheses to be tested. In **part (4)**, you should describe the data being used. (What is the unit of observation? What variables were observed? How many observations are there? Etc.) In some cases, the order of parts (3) and (4) may be swapped if the theory and hypotheses cannot be explained without referring to the specific data set that the paper uses. Otherwise, you should finish part (4) by explicitly explaining how the main hypotheses can be tested using the data. The **results** section should summarize the main empirical findings and how they can be interpreted. For each finding, mention the underlying test, the degree of statistical significance, as well as the magnitude of the effects. Make sure to *distinguish* between statistical statements and interpretations. (For example, suppose the authors find that stork nests are significantly related to the number of children in a house - a statistical statement - and *interpret* this as support for the theory that storks bring babies. It would be wrong to say that the authors 'find that storks bring babies'.) In the **discussion** section, try to assess (a) whether the authors' interpretation of their data is plausible ('internal validity': did storks bring babies to the houses included in the data set?), and (b) whether these conclusions have implications for the world outside of their data ('external validity': do storks bring babies to other houses as well?).

Outline for an experimental paper

If you are presenting an **experimental paper**, the outline is almost identical.

1. Motivation and preview

2. Related Literature

3. Theory and Hypotheses

4. Experimental design and procedures

5. Results

6. Conclusion / Discussion

The only difference is that section (4) now describes how the experiment was conducted. Try to distinguish clearly between 'design' and 'procedures'. 'Design' refers to the substantive content of the experiment, e.g. what decisions are participants being asked to make, what game are they playing, etc. 'Procedures' refers to details such as how subjects were recruited, whether computers were used, etc. In a short presentation, you should spend almost no time on 'procedures' unless they are very important for the paper you are presenting. You should mention where the experiment was conducted, the number of subjects involved, and the number of decisions being recorded. Don't waste time on details such as how many women or men there were, what fields they studied, etc. (again - unless these aspects are unusually important for the paper you are presenting). As above, Sections (3) and (4) might be interchanged if appropriate. If not, section (4) should specifify exactly what the theory / hypotheses mean in the context of the experiment.