Tips and Tricks in giving (IOPS) presentations

The tips and tricks reported below are compiled from comments that have been gathered from IOPS Ph. D. students. The comments are divided in three categories concerning the structure of the talk, presenting your research, and the presentation of visual material. Of all the points made below, the most important is the following. *Do not overestimate your audience*. People within the IOPS are concerned with very different models and techniques, and most of them are likely to be laymen in your area. Keep that in mind when preparing your talk. Try to reach out to the part of the audience that is not familiar with the particular technique you are concerned with. This will make life easier for both you and your audience.

The structure of your talk

1) What is the point?

The proper aim of giving a presentation is to communicate ideas and findings. This holds for statistics and psychometrics as it does for any other field. A general problem encountered here is that people are not able to digest more than one or two ideas at a time. This means that you have to think very carefully about what the main points of your talk will be. Focus your talk on these points; do not try to communicate your entire research project, or to give an exposition of each and every detail of your research. Respect the cognitive limitations of your audience. Decide on what you want to communicate, concentrate on it, and structure your talk around it. It is also very important that, in an early stage of your talk, you actually tell the audience what the main point is; this may be clear to you, but that does not mean it is clear to everybody else. If people have to figure this out for themselves during your talk, you will not have their full attention.

2) Why are you doing this?

People need to know not only what the point is, but also why it is worth making. This does not mean that you have to convince them of the fact that your research will save the world; it means that people need to know where you are coming from. Do not overestimate your audience in this respect: If you make a point that will be recognized as relevant by, say, people working in multidimensional scaling, this does not imply that people involved in item response theory will recognize it as such. Yet, these people are also in the audience; they will want to have a rough idea of the motivation for your research. Giving a simple example may help here.

3) What are you going to do?

For the speaker, it often feels like a waste of time to give an overview of the talk. However, for the audience, it is absolutely necessary to know what they can expect. Therefore, always start by giving an overview of the main points to be discussed. During the talk, you should not rely on people's memory, because they will forget the structure you presented very quickly. So, you have to continuously remind the audience of where you are during the presentation. You can do this by drawing intermediate conclusions, or by explicitly stating that you are moving from one part of the talk to another.

Presenting your research

1) Talk to your audience

Always face your audience. Projections of sheets are not interested in what you are saying, so you do not have to talk to them. If you turn away to look at your sheets, never do this for more than a split second. It is, however, better to avoid this completely, because what will seem like a split second to you will seem like minutes to the audience - and usually, the audience's estimate is better. Many people start looking at their sheets out of fear of shyness. Now, these are perfectly normal emotions to have when giving a presentation, especially when it is your first time - almost everybody feels this way. However, try not to give into these feelings. If, like many people, you have a problem looking listeners in the eye, look at their foreheads or at the wall facing you, or whatever it takes not to turn away from the audience. As soon as you turn your back on the audience, you will be difficult to follow; and unless you have a very loud voice, people in the back will simply not hear you.

Be careful not to stand between the projector/beamer and the screen, which causes half or more of the screen to be unreadable for most of the people in the audience. The best way to avoid this is to stand on one of each sides of the screen.

2) Speak up

Usually, there are no microphones in IOPS-conferences. However, the conference rooms can be pretty big. Coupled with the fact that people have a mysterious tendency not to fill the first and second rows but rather to concentrate in the back rows, this requires that you have to speak loud and clear. For some people, this is difficult. If you are one of these people, you will need to practice.

3) Practice and ask for feedback

It is very difficult to schedule a talk; sheets get lost, people may ask questions during the talk, and in general everything takes longer than you think. By far the best way to deal with these problems is to practice. Practicing talks before an audience of fellow Ph.D. students, and preferably including your supervisor, almost inevitably provide a harsh confrontation with the time problem. Usually, it is best to schedule your talk a few minutes shorter than the time you have. Practicing before an audience is also a great way to get feedback on your presentation, and if you have given a talk one or two times before the actual conference presentation, this may further boost your confidence. The audience will notice when you are comfortable in a talk, and they will appreciate it.

Visual material: Sheets, Graphs, and Equations

1) Keep it simple

As is the case for the general structure of your talk, you have to limit the information displayed on slides; so always avoid information overloads. Tables, for example, only work on a slide if they are small; giving the results of a simulation study in a 20 x 20 table is therefore not a good idea. Think hard about the mode of presentation that will be easiest to understand for your audience. Most people are visually oriented, and for them graphical representations can do a great job. So, if you can replace a table by a graph, or a set of model equations by a graphical representation, do so. Of course, this will not always be possible, but it can be done more often than many people think. Do note that, if you use a graph, you will have to explain what it shows. For instance, you will need to tell the audience what is on the x-axis and what is on the y-axis; otherwise nobody will understand.

2) Keep it readible

The text on your sheets has to be BIG, because it has to be readible in the back of the room. The minimum for plain text is 18 pt, but use 24pt to be on the safe side, and to keep yourself from putting too much on one slide. The fact that you are likely to present equations creates a special problem. Equations usually contain subscripts, which means that the subscripts need to be BIG too. If the subscripts are big (say, 18pt), then the main text has to be even bigger. This means that only one or two equations fit on one slide. This may be a problem for you, but it is a blessing for the audience. Now, do not try to avoid this problem by filling up your sheets with equations anyway and minimizing the subscripts. Subscripts are essential and should be readible. So you have to cut down on the equations, which means you have to show the most important ones only. Even the most technically oriented people in the audience will be thankful for this.

3) Avoid multi-tasking

As every psychologist knows, people are terribly bad at multi-tasking, so you need to avoid the need for them to do this at all times. Sheets and slides are useful as an illustration of what you are saying, but they should not draw the attention away from the speaker. Therefore, you should avoid writing entire phrases and sentences on your sheets; if you do this, people will start reading, and if they are reading they are not listening. Do not try to solve this problem by reading the sentences yourself. Apart from the fact that this makes a silly impression, it will lead you to look in the direction of your sheets rather than at the audience, which is always to be avoided. So, limit the text on your sheets to keywords and *very* short sentences. Equations induce multi-tasking of the worst kind, so if you show more than three equations on a sheet you are certain to lose that part of the audience not already familiar with them, which is everybody except your supervisor.

4) What do the symbols mean?

Symbols do not have an inherent meaning, not even within the IOPS. Therefore, you will have to explain of each symbol in your equations what it stands for. Again, do not overestimate your audience here. That q stands for a latent trait will need little or no mentioning for those working in IRT, but this does not hold for those working in factor analysis or in multidimensional scaling. Keep addressing the meaning of your symbols throughout your talk, because the time that people can remember them after you move to the next sheet, is about three seconds. A great way to do this is by always translating the basic idea of an equation in words, which is moreover something your audience will appreciate.

5) Derivations are difficult

Equations are hard to digest for any audience, even a psychometrically oriented one, but derivations are impossible to follow for everybody except the experts in your particular area. In IOPS-conferences, this class of people will often contain one member, namely you. Given that you already understand the derivations, there is little use in presenting them in a detailed fashion. So, try not to focus on the derivation, but on the result of the derivation. There is, of course, one case in which it is difficult to achieve, namely when the derivation itself is the core of your research. In that case, syou have no other option but to present the derivations as clearly as possible. In the great majority of IOPS talks, however, skipping the details of the derivation will not only be possible, but actually an improvement.