

Part II

What to Write on the Slides

The audience does not need to see, or hear about, all the data you have collected. The data needs editing so that you only present concise and relevant evidence to justify any point you make.

Trevor Hassall and John Joyce

Chapter 6

Titles

You will learn how to

- choose a title for your presentation
- decide what to include in your first slide
- be concise

Why is this important?

- The title of your presentation is like an advertisement—you want as many people as possible to be interested in it, so it should not be too technical or too generic.
-

6.1 Decide what to include in the title slide

There is no standard way to construct a title slide, but most presenters prioritize information by using different font sizes. The two most important elements, which should be given the most space, are

1. the title
2. your name

Other things that some presenters sometimes include are

3. the name and date of the conference
4. co-authors
5. the name and/or logo of your institute/research unit
6. your supervisor
7. acknowledgments
8. sponsors
9. a photo
10. a background image

Some of the best presenters use their title slide to attract audience attention. They do this either by completely ignoring points 3–7 above, or by putting such details in a very small font. Points 3–7 generally contain no information that 99.9% of the audience need to know or that they can't find out from the conference program.

Point 3 has become a kind of standard way to show that the presentation is not simply a recycled version of a previous one—this goes to the extent of putting the conference name and date on every single slide. This seems totally unnecessary.

Points 4–7 tend to be included exclusively to satisfy colleagues, professors, supervisors, and those that have helped during your research. It probably makes more sense to thank these people personally away from the conference. If you are part of a research team, there is no need to list all the names of the people in your team. If you absolutely must give acknowledgments to such people, then it is probably a good idea to put their names in a small font and in a nonprominent position in your slide. Similarly, if you have participated in many projects, you don't need to write the names of these projects. This kind of information is very pertinent to you, but it is usually of no interest to the audience. You could simply say, "*There are 14 people in our team and we have already participated in 10 projects.*" That is all the audience needs to know.

You may have a contractual obligation to mention sponsors (Point 8).

Points 9 and 10 may help to make your title slide look more interesting. Typical photos and background images include elements of your research or photos (or maps) from your country of origin.

The more information you have on your title slide the more it will detract away from the most important things: your title and your name.

6.2 Remove all redundancy

When you have decided on your title, rewrite it removing redundant words (in square brackets in the examples below) and leaving in only key words.

- The ligno-cellulose biomass fuel chain [: a review]
- [A study on] producing bread [in Andalucia] with [the] acid moisture [technique]
- [Development of] a Portable Device for Work Analysis to Reduce Human Errors in Industrial Plants
- [Issues of] language rights and use in Canada

6.3 Make sure your title is not too technical for your audience

The title of your presentation is a like an advertisement for a product, so consider not using the title of your thesis or paper as the title of your presentation. An interesting title is more likely to attract people to your presentation, and titles of papers and theses are rarely designed to attract the attention of an audience.

Attendees sometimes watch presentations in fields that are not strictly their own, but perhaps where they feel they might be able to apply their findings or because they are looking for new areas of research. It may thus be useful to think of titles to your presentations that are likely to engage a wider audience, which is not all made up of experts in your precise field of research.

Here are some examples of alternative titles:

TECHNICAL	NONTECHNICAL
A Pervasive Solution for Risk Awareness in the context of Fall Prevention in the Elderly	Stop your grandmother from falling
An evaluation of the benefit of the application of usability and ergonomics principles to consumer goods	I hate this product! How the hell does it work?
Construction and validation of a carrier to shuttle nucleic acid-based drugs from biocompatible polymers to living cells	Q: How can we get nucleic acid-based drugs from biocompatible polymers to living cells? A: Use a shuttle
Contact Force Distribution in the Interference Fit between a Helical Spring and a Cylindrical Shaft	Will this fastener kill me?

Notice how in each case, the nontechnical titles contain verbs. Verbs give the idea of dynamism, nouns don't. You may think that the last title—Will this fastener kill me?—is too obscure. However you would probably be curious to see what it was about.

Look at the title below from a Bangladeshi researcher at a congress in Italy:

Preparation, characterization, and degradability of low environmental impact polymer composites containing natural fibers

It describes some work on composites based on natural fibers, which are materials with a much lower environmental impact. He began by quoting an article from *The Record*:

Getting ordinary plastic bags to rot away like banana peels would be an environmental dream come true. After all, we produce five hundred billion a year worldwide. And they take up to one thousand years to decompose. They take up space in landfills. They litter our streets and parks. They pollute the oceans. And they kill the animals that eat them.

He had a quick series of slides (with no titles or text) with photos to illustrate his concepts: plastic bags, banana peels, landfills, litter, and polluted oceans. Notice also how he used very short sentences—these were easy for him to say and were dynamic for the audience.

And at the end of his presentation he returned to his original statistic. He asked a few people in the audience how many bags they thought they used a month, and on the basis of that number, he told them how many years it would take to cover the whole of Italy (where the congress was being held) if everyone in the country used the same number of bags per month.

He certainly managed to attract the audience's attention with this interesting information, but he might have had a bigger audience if he had called his presentation:

Can natural fibers save the planet?

Can natural fibers save Italy?

Italy is slowly disappearing under polyethylene bags

Bags, bags and more bags

Will we all be suffocated by plastic bags?

By giving his presentation a very academic title, those people at the congress not specifically interested in polymer composites might have been discouraged from attending his talk.

6.4 Use a two-part title to attract both a general and a technical audience

If the Bangladeshi researcher mentioned above was worried about being too informal, he could have used a two-part title, in which one is technical and the other is more appealing to a generic audience. On the next page are some examples:

ONE-PART TITLE	TWO-PART TITLE
Preparation, characterization, and degradability of low environmental impact polymer composites containing natural fibers	How can we stop Italy disappearing under polyethylene bags? Using low environmental impact polymer composites containing natural fibers
Anti-tumor activity of bacterial proteins: study of the p53-azzurine interaction	Azzurine binds to p53. Towards a nontoxic alternative to chemotherapy?
The discorsal construction of audience identity in undergraduate assignments	Who or what is the students' audience? The discorsal construction of audience identity in undergraduate assignments

Another alternative is to have both titles in the conference program, and just the fun/more informal title on your title slide.

6.5 Don't be too concise in titles—use verbs and prepositions not just nouns and adjectives

What is the problem with this title?

An innovative first-year PhD student scientific English didactic methodology

When you start reading it, it seems to have one meaning. But when you finish, it seems to have another meaning. The problem is that this title is a string of adjectives + nouns + nouns that act as adjectives.

A much easier title to understand would be

An innovative methodology for teaching scientific English to first-year PhD students

Good titles put

- the adjective next to the noun it refers to (*innovative* refers to *methodology* not to *students*)
- have a verb (*teaching*)
- use prepositions (*for, to*)

Some more examples showing the use of verbs are given below:

NO VERBS	WITH VERBS
The <u>implementation</u> of sustainable strategies in multinational companies	<u>Implementing</u> sustainable strategies in multinational companies
TOF-SIMS: an innovative technique for the <u>study of</u> ancient ceramics	TOF-SIMS: an innovative technique for <u>studying</u> ancient ceramics
Fault <u>detection</u> of a Five-Phase Permanent-Magnet Motor - a four-part solution	Four ways <u>to detect</u> faults in a Five-Phase Permanent-Magnet Motor
<u>Effect of crop rotation diversity and nitrogen fertilization on weed management in a maize-based cropping system</u>	How does crop rotation diversity and nitrogen fertilization <u>affect</u> the way weeds are <u>managed</u> in a maize-based cropping system?

6.6 Check your grammar

The rules of grammar, particularly the use of articles (*a, an, the*) also apply in titles. Can you find the grammatical mistakes in the ungrammatical titles below?

UNGRAMMATICAL	GRAMMATICAL
Multimodality in the context of Brain-Computer Interface	Multimodality in the context of <u>a</u> Brain-Computer Interface/of Brain Computer Interfaces
Importance of role of planning and control systems in supporting interorganizational relationships in health care sector	<u>The</u> importance of <u>the</u> role of planning and control systems in supporting interorganizational relationships in <u>the</u> health care sector
Iran Foreign Policy	Iran <u>'s</u> Foreign Policy

6.7 Check your spelling

Titles of presentations often contain spelling mistakes. This is particularly true if the title of the presentation is also the title of your thesis. You have seen that title so often that when you look at it on your slide you don't actually read it because it is so familiar to you. Can you find the spelling mistakes in these titles?

The Rethoric of Evil in German Literature

Governance choice in railways: applying empirical transaction costs economics to the the railways of Easter Europe and the former USSR

Hearth attack! Cardiac arrest in the middle aged

In the first example *rethoric* seems correct because it looks as if it reflects the pronunciation (correct: *rhetic*). In the second and third examples it should be *Eastern* and *Heart* respectively—unfortunately no spell check system would have found the mistakes because *Easter* and *Hearth* are also correct spellings (but with entirely different meanings). Also, there is the repetition (*the the*) which you may not notice: although they are in sequence they appear on different lines.

ADVANCED TIPS

6.8 Use slide titles to help explain a process

When the main purpose of your presentation is to explain a process or how a piece of equipment works, it is a good idea to use your slide titles to explain each step in the process. Here are titles of the first six slides from an engineering presentation. Each slide simply has a title and then a diagram or picture, which the presenter then explains.

- Slide 1: Title slide: 3D Laser milling modeling: the effect of the plasma plume
- Slide 2: Laser Milling: a process well suited for mold manufacturing
- Slide 3: Laser Milling Centers consist of various sub-systems
- Slide 4: The laser beam is controlled by a Laser Beam Deflection Unit
- Slide 5: A valid estimation of the Material Removal Rate is required
- Slide 6: Many parameters affect the Material Removal Rate

Notice that there is no “Outline” slide. The presenter used slide 1 to introduce himself and his research area. Then slides 2 and 3 provided some background information. And then the later slides described how the laser worked. The audience was guided step by step and even a nonengineer like myself was able to follow.

6.9 Think of alternative titles for your slides

When thinking of titles for your slides, bear in mind the quantity of slides that an audience will see over a typical two-day congress. Ask yourself how much audience attention you are likely to attract by a series of titles such as, Introduction - Methodology - Discussion - Conclusion and Future Work - Thank you for your attention - Any questions?

If your slot is near the end of the morning or afternoon (particularly on the last day of the conference), you need to think of alternative titles. Avoid words that give no real information and which the audience has probably seen a hundred times since the beginning of the conference such as, *activity*, *investigation*, *overview*.

Here are some possible alternative titles to the typical sections of a presentation:

Outline:	Why?	Why should you be excited?
Methodology:	How?	Don't try this at home
Results:	What did we find?	Not what we were expecting
Discussion:	So what?	Why should you care?
Future work:	What next?	Men at work
Thank you:	That's all folks	See you in <i>name of location of next conference</i>

Chapter 7

Writing and Editing the Text of the Slides

You will learn how to

- decide when, and when not, to use full sentences
- reduce the amount of duplication between what the audience read and what you say

Why is this important?

Over a three-day conference the average attendee will see between 300 and 500 slides. That's a lot of slides and a lot of effort on the audience's eyes. Your aim should be for the audience to quickly assimilate the information on your slides and then focus on you. The less text there is, the quicker the audience will focus on what you are saying. You will also be less tempted to "read" your slides.

7.1 Be aware of the dangers of PowerPoint

If you buy 20 tubes of paint you don't automatically have a painting. Likewise, if you create a set of PowerPoint or keynote slides you don't automatically have a presentation. You just have a set of slides.

A presentation is slides plus a lot of practice.

Try practicing your presentation without using any slides. If you find it difficult, it means you are relying too much on your slides.

Presentation software templates encourage you to

1. create a series of similar-looking slides
2. use bullets on every slide
3. have the same background, which may include your institute's logo
4. have a title for each slide

The first three can lead to a very tedious and repetitively visual presentation. There are a limited number of standard backgrounds, and most audiences will have already seen most of them. Try to invent your own background, or if not use a very simple background color.

But the fourth, titles, is very useful. Titles are like a map for the audience guiding them through the presentation.

Having similar looking titles (i.e., same color, font, and font size) throughout the presentation should be enough to give it a sense of cohesion and consistency. This means that you can vary the other three—the look, the use or not of bullets, and have a changing background where appropriate.

7.2 Print as handout then edit

You can generally print up to nine slides on a page—this is called “print as handout.” When you see all your slides together like this, it gives you a clearer picture of the amount of text you have used throughout your presentation.

Look at each slide and ask yourself if the text is crucial. If it is not crucial, cut it.

If it is crucial then ask yourself—can I express it in a more succinct way? Could I use a picture rather than text? Do I really need a slide to express this point or could I just say it verbally?

7.3 Only use a slide if it is essential, never read your slides

Next time you watch someone doing a presentation, decide if their slides were

- a) specifically designed to help the audience understand the topic
- b) simply prompts for the presenter so that he/she wouldn't forget what to say next

The main task of your slides should be to fulfill point (a), and at the same time fulfill point (b).

Try to reduce any overlap between what you say and what your slides “say.” The slides do not need to contain everything that you will say—you should never read your slides. You just need a slide for your most important points. And it is your job to draw the audience’s attention to why the information on your slide is important.

A slide should only come alive when you actually start commenting on it. Slides should support the talk, not reproduce the talk itself in a written/graphical format.

7.4 Only write what you are 100% sure is correct

If you make mistakes in your English when you talk, the majority of your audience will probably not care or even notice. However, they may notice written mistakes. Don’t be creative with your English. Only write what you know is correct. Generally speaking, the shorter the sentence, the less likely you are to make a mistake.

However, the less text you have, the more evident any grammar or spelling mistakes are. These final slides from three different presentations (all real) did not make a good final impression:

End
Thank!
Any question?

The presenters should have written “The end,” “Thanks,” and “Any questions?”

7.5 One idea per slide

It is very important not to have more than one main idea or result in each slide. Thus any bullets, data, or graphics on the slide should be in support of this main idea. You can check how many ideas there are in your slide by trying to give it a title. If a title doesn’t come quickly to mind, it may mean you have covered too many points and thus that you need to divide up these points into further slides.

The moment to give detail is when you are talking through the slide. There shouldn’t be too much text/detail within the slide itself.

7.6 Generally speaking, avoid complete sentences

Which is it easier for an audience to do—read or listen? The answer is probably read—it requires much less effort. If you fill your slides with text, you are encouraging your audience simply to read and not to listen to what you say. This habit will

then continue throughout your presentation. At this point you could simply email the audience your paper.

By simplifying and cutting you will have much cleaner slides. The audience will then spend more time listening to you, and less time reading your slides.

Assuming your audience all understand English quite well, if you write complete sentences in your slides

- your audience will read the text on the slide rather than focus on you
- when you comment on the slide it will be difficult for you to avoid repeating word for word what is on your slide. Alternatively, you will be forced to paraphrase, which may lead to unnecessarily long sentences
- your slide will be full of text and to accommodate this text the font may be too small for the audience to read clearly

Moreover, if you have a lot of text on your slides but you say something very different from the text, then the audience has to take in two different sets of information—one written, the other verbal—at the same time. The human brain is not equipped to simultaneously read some information and to listen to something different.

So the solution is to do one of the following:

- cut the slide completely and simply talk
- reduce the text to three or four short bullet points which the audience can absorb immediately. Then expand on one or more of these bullets
- give the audience a few seconds to absorb the text (for example, an important definition or a quotation from an expert), and then blank the screen and start talking

Otherwise there will be two presenters—you and your text—and you will both be competing for the audience's attention.

7.7 Only use complete sentences for a specific purpose

Some audiences, however, appreciate complete sentences. They enable attendees with a low level of English to

- follow your slides, even if they can't follow what you say
- better understand your pronunciation if they can also see the written forms of the key words that you are using
- take notes
- memorize what you have said if they have a better visual memory than auditory memory

Three possible solutions for dealing with an audience with mixed levels of English are

1. have slides with complete sentences but keep them as short as possible, removing all redundancy and removing articles (*the, a/an*). Ways to do this are explained in this chapter. When you show these slides, give the audience up to five to six seconds to read them. Then, make general comments without reading the text. This allows the audience to absorb the information on the slide and then they can concentrate on what you are saying
2. have short bulleted sentences. In addition, prepare photocopies of the same slides but with full text. You can then distribute these to the audience before you begin and the people in the audience with poor English can then refer to them during the presentation
3. give the audience a handout after you have finished, where you can write more complete sentences, and add extra details, e.g., extracts from your paper, your contact details

Even if the audience has a high level of English, complete sentences can occasionally be used to emphasize a particular point, explain a difficult point, or give a quotation.

Again, it is important to remember that you

- should never read your slides, there is absolutely no advantage for either you or the audience, particularly as people read at different speeds and most will not be synchronized with your speech
- don't have to explain everything on your slides—if you have a series of four bullets, you may only need to comment on the first bullet, leaving the audience to interpret the other three
- need to have a variety of slide types. You cannot do what I have suggested in the first solution above (show slide, wait five seconds) throughout the whole presentation, as this will be very tedious for the audience. So try to have some slides with more text, some with less text, and as some with no text at all

7.8 Don't put text in your slides to say what you will do or have done during your presentation

In an outline there is no need to write “*I will discuss the following . . .*” Likewise on the Conclusions slide do not write “*We have presented a strategy for. . .*” In such cases, you simply need to say those phrases.

Imagine you are participating in a project to get more people in your country and surrounding countries to use the Internet. You are at a conference on the Internet, and you are reporting on what you have done so far. Below is the text contained in your first slide:

INTERNET DIFFUSION PROJECT

- Several research and technological projects have been activated. I am going to describe the results of the Internet diffusion project.
- The main goal of the project is to analyze Internet diffusion among households, companies, nonprofit organizations through the use of domain names.

Ask yourself

- does the audience need to see this information?
- what am I going to say when I show this slide?

The problem is that if you do not practice your presentation, you will not be prepared for the fact that in reality there will be nothing that you can say when you show this slide, apart from repeating what is on it. There is nothing complicated on the slide, no tables, no strange words, no pictures, in fact nothing that the audience would not be able to understand if you simply stood in front of them and told them.

This is the kind of slide that should be cut completely. Instead, when you show your title slide you could say something like this:

Hi, I am here today to tell you about a completely new project—the first in Eastern Europe in fact. The idea is to find out how much the Internet is being used among various categories of users: households, companies, nonprofit organizations [*you can count on your fingers to highlight each category*]. To do this we are looking at the numbers of Internet domain names by type. My idea is to tell you where we are at the moment. Then it would be great if I could set up contacts with those of you here who represent other Eastern European countries. You might be interested to know that we estimate that there are around 25 million domain names registered in our part of the world and this represents . . .

7.9 Avoid repeating the title of the slide within the main part of the slide

If the title of your slide is *How to free up space on your disk* don't have a series of bullets introduced by *The following are ways to free up space on your disk*:

7.10 Use only well-known acronyms, abbreviations, contractions, and symbols

In the following examples the shorter versions are in brackets: as soon as possible (asap); to be confirmed (tbc); for example (e.g., or eg), that is to say (i.e., or ie); information (info); against (vs); research and development (R&D); and, also, in addition etc., (& or +); this leads to, consequently (> or =); 10,000 (10 K); 10,000,000 (10 M).

However, don't use abbreviations, acronyms, and symbols unless they are well known. If you explain a new acronym in Slide 2, by Slide 3 the audience will already have forgotten what it means. It is much easier for them to see the full words.

7.11 Choose the shortest forms possible

Use the shortest words and shortest phrases possible. Here are some examples:

regarding = on; however = but; furthermore = also; consequently = so; necessary = needed

We needed to make a comparison of x and y. = We needed to compare x and y.

There is a possibility that X will fail. = X may fail.

Evaluating the component = Evaluating components

The user decides his/her settings = Users decide their settings

The activity of testing is a laborious process = Testing is laborious

No need for the following: = No need for

Various methods can be used to solve this problem such as = Methods:

7.12 Cut brackets containing text

Brackets tend to contain examples, definitions, or statistics.

Natural fibers (wool, cotton etc.,)

ISO (International Organization for Standardization) approval

In the examples above, it is generally not necessary for the audience to see the information in brackets, you can simply say

We analyzed some natural fibers such as wool and cotton.

Our device has been approved by the International Organization for Standardization.

By deleting the parts in brackets, you will thus have extra information to add when you comment on your slide.

7.13 Make good use of the phrase that introduces the bullets

To save space, don't repeat the first words in a series of bullets—either incorporate them into the introductory phrase or simply say them when you make your commentary.

ORIGINAL	REVISED
The advantages of using this system are	Advantages for researchers:
➤ <i>it will enable researchers to</i> limit the time needed in the laboratory	➤ limits lab time
➤ <i>it will help researchers to</i> find the data they need	➤ finds relevant data
➤ <i>it will permit researchers to</i> produce more accurate results	➤ produces more accurate results
	The system enables researchers to
	➤ limit lab time
	➤ find relevant data
	➤ produce more accurate results

In the original example above, the first three words on each bullet (*enable*, *help*, and *permit*) mean the same in this context.

See [Chapter 8](#) Using bullets

7.14 Avoid references

References to other authors' works, legislation (e.g., EU directives, dates of laws), and manufacturer's instructions are generally not necessary on slides. You may think they give authority to what you are saying, but in most cases they are just distracting and add unnecessary text to your slides.

You might be worried that in the Q&A session someone might ask you for such details, for example if there is some contention about which author made a certain finding. If so, you can create a separate slide showing these details and only show the slide if someone asks the question.

7.15 Keep quotations short

Imagine that you are doing a presentation on Human Rights and you wish to quote what was said by a judge. There is no need to quote the full text. If you do you will force the audience to read it all and probably also force the audience to hear you reading it all. Your choices are either to paraphrase it using your own words; or you can cut the parts (i.e., the parts in *italics* in the original version below) that are not fundamental to an understanding of it, and replace them with three dots (...). More drastically, you may decide not to use three dots but tell the audience that you have removed a few words for the sake of space (the full quote could be given in a handout)—this leads to the revised version below, which takes a lot less time for the audience to read and absorb.

ORIGINAL

I also concede that the Convention organs have in this way, on occasion, reached the limits of what can be regarded as treaty interpretation in the legal sense. At times they have perhaps even crossed the boundary and entered territory which is no longer that of treaty interpretation but is actually legal policy making. But this, as I understand it, is not for a court to do; on the contrary, policy making is a task for the legislature or the Contracting States themselves, as the case may be.

REVISED

The Convention organs have, on occasion, reached the limits of treaty interpretation in the legal sense. They have perhaps even crossed the boundary and entered territory which is no longer that of treaty interpretation but is actually legal policy making. But policy making is a task for the legislature or the Contracting State.

7.16 Deciding what not to cut

If you think that a particular slide, photo, story, or statistic is likely to help you achieve your objective of getting people interested in your work and in you, and of generally making your presentation more entertaining, interesting, and memorable, then don't cut it. But don't keep it just because you personally think it is fun. Try it out on colleagues to test its utility. A presentation with interesting parts, even if less essential than other parts, will be far more digestible than a presentation with only essential parts and nothing interesting.

7.17 When you've finished creating your slides, always check your spelling

When you become very familiar with your slides it becomes almost impossible for you to notice spelling mistakes. It is also possible to unintentionally misspell words and sentences. So this means you may not see the mistakes.

Presentation software does not always manage to highlight incorrect spellings. To check the spelling of your presentation you need to convert the text into your word processing program (e.g., Word, NeoOffice). Before you begin checking or writing, ensure that

- the automatic spell checker is off, otherwise Word (or equivalent) will automatically change the spellings of words that may in fact be correct.
- the language is set only to English (US, UK etc.) and not to English + your language. Otherwise the program might alter the spellings of English words to conform to how a similar word is spelt in your language

Microsoft Word highlights words that it thinks are not spelled correctly with a red underline. However, given that you probably use a lot of technical words, these too may appear with a red underline because they are not in Word's internal dictionary. It is easy just to ignore these words hoping (or presuming) that you have spelt them correctly. But there is a good chance that at least one of these words will not be spelt correctly. It is a good idea to check on Google or Wikipedia if the spelling is correct or not.

Some of your misspellings of normal words may not be highlighted because they are words that really exist. Some examples are as follows:

chose vs choice, fell vs felt, form vs from, found vs founded vs funded, led vs leaded, lose vs loose, than vs then, through vs trough, with vs wit, which vs witch

You can find a more complete list of such words, plus a list of US and UK spellings in another book in this series *English Usage, Style, and Grammar for Science*.

Make sure your spelling is consistently British or American.

Chapter 8

Using Bullets

You will learn how to

- minimize the number of bullets
- be consistent in the use of bullets

Why is this important?

Audiences will potentially see thousands of bullets during a conference. An audience will be more attentive if they believe you have made a special effort for them to make your talk not just useful, but also interesting and entertaining: limiting the number of bullets is a sign of such effort.

8.1 Avoid having bullets on every slide

A presentation that is essentially a series of bullets leads to what is humorously known as death by PowerPoint, which in Wikipedia's definition is a criticism of slide-based presentations referring to a state of boredom and fatigue induced by information overload during presentations such as those created by the Microsoft application PowerPoint.

8.2 Choose the most appropriate type of bullet

Always use the standard bullet (•) unless the items

- need to be numbered to show the order or chronology in which something is done
- are in a list of things that were scheduled to be done and have been done. In this case you can use a tick (✓).

8.3 Limit yourself to six bullets per slide

When you are giving lists keep them short. Six bullets are generally more than enough. And you only need to talk about a couple of them (e.g., the top two).

An exception is when you are not going to talk about any of the bullets but your aim is simply to show that, for example, your instrument has a lot of features, or that your research group has been involved in a lot of projects. Such features or projects can thus all be preceded by a bullet, or can simply appear as an unbulleted list. In such cases you do not need to read/say anything on the slide.

8.4 Keep to a maximum of two levels of bullets

The slide below has three levels of bullets, which generally leads to messy slides.

ORIGINAL	REVISED
DISCUSSION	OPTIMIZATION GOALS
➤ Different optimization goals:	➤ Save storage
○ Save storage	➤ Save CPU utilization with multiple applications
○ Save CPU utilization	
▪ Only if multiple applications are being run together	

As you can see from the revised version, you can reduce the bullets to one level by

- changing the title of the slide from *Discussion* to *Optimization Goals*
- incorporating the third level into the second level (*Save CPU use for multiple applications*). Alternatively you could delete the third level and simply give this information verbally

8.5 Do not use a bullet for every line in your text

The default settings of PowerPoint and other applications encourage you to use a bullet before every line of text.

Note how the bullets in the original version below have been misused in this slide from a presentation on detecting faults in a magnet motor.

ORIGINAL	REVISED
MODELING FAULT CONDITIONS	MODELING FAULT CONDITIONS
➤ Two main faults are investigated:	Two main faults are investigated:
➤ Open phase. In this case the current sensor in each phase.	➤ Open phase. In this case the current sensor in each phase.
➤ Shorted turns. In this case a percentage of the turns of the winding is shortened.	➤ Shorted turns. In this case a percentage of the turns of the winding is shortened.
➤ Under these conditions the faulty ...	Under these conditions the faulty ...

The first line (*Two main faults ...*) introduces a list of two items. So only the second and third lines need bullets. The fourth line is not a *fault*.

8.6 Choose the best order for the bullets

The normal practice is to order the bullets in terms of which ones you will be commenting on. Given that there is generally no need to comment on all the bullets in a list, it is best to put the ones you intend to talk about at the top of the list.

Sometimes you may have a list of bullets and you intend to make one general overall comment about them, without commenting on any of them individually. In such cases it is best to put them in alphabetical order to highlight that they are not in order of importance. Alternatively, you can say, “*By the way these bullets are in no particular order.*”

8.7 Introduce items in a list one at a time only if absolutely necessary

Presentation applications allow you to introduce items in a list one at a time. This can be useful if it is crucial to delay information, for example when giving your conclusions in order to get the audience to focus on one conclusion at a time.

Otherwise, show all the items at once and give the audience three to five seconds to absorb them before you start talking. This means that

- you don’t have to keep hitting the mouse to introduce the next item. Your hands are thus free and you can move away from the laptop and keep your eyes focused on the audience

- the audience doesn't have to constantly keep changing where they are looking (you or your slides), and they are not waiting for the next item to appear. They can do all their reading at once
- you won't inadvertently introduce two items at the same time (and thus lose the whole point of delaying the information)

8.8 Use verbs not nouns

Where possible, use verbs both in the introductory sentence and in the bullets themselves. Using verbs, rather than nouns, reduces the number of words you need.

NOUNS	VERBS
Testing is the activity of	Testing involves
➤ The observation and recording of results	➤ Observing and recording results
➤ The evaluation of the component	➤ Evaluating the component

8.9 Be grammatical

Using the least amount of words is generally a good tactic. But what you write has to be grammatical and the words have to be in the right order.

Make sure the first word in each bullet is grammatically the same:

- an infinitive (e.g., *study/to study*)
- an -ing form (e.g., *studying*)
- a verb (e.g., *studies/will study*)
- a noun (e.g., *researcher*)
- an adjective or past participle (e.g., *good, better, improved*)

BAD EXAMPLE (BULLET 1—NOUN; BULLET 2—VERB; BULLET 3—ADJECTIVE)	GOOD EXAMPLE (ALL VERBS)	GOOD EXAMPLE (ALL ADJECTIVES)
Advantages for researchers:	Advantages for researchers:	Advantages for researchers:
➤ Lab time limited	➤ Limits lab time	➤ Limited lab time
➤ Finds relevant data	➤ Finds relevant data	➤ Relevant data
➤ More accurate results	➤ Produces more accurate results	➤ More accurate results

The grammar in the slide in the first column below may initially look correct, but it isn't.

INCORRECT GRAMMAR (DIFFERENT GRAMMATICAL FORMS)	INCORRECT GRAMMAR (ALL NOUNS)	GOOD EXAMPLE (ALL VERBS)
A Java infrastructure for ➤ MPEG-7 features processing ➤ XML database managing ➤ Algorithms ontology exploiting ➤ Functions integrating	A Java infrastructure for ➤ MPEG-7 features processing ➤ XML database management ➤ Algorithms ontology exploitation ➤ Functions integration	A Java infrastructure for ➤ Processing MPEG-7 features ➤ Managing XML database ➤ Exploiting algorithms ontology ➤ Integrating functions

In the first column above, the final word in each bullet ends in -ing, but unfortunately they are not all the same grammatical form. *Processing* can be a verb or a noun, but the other three (*managing*, *exploiting*, *integrating*) can only be verbs and cannot be in this position in a phrase. In the second column, there is a series of noun+noun+noun constructions, which is difficult for the audience to understand quickly and is generally not grammatically correct. The best solution is to use verbs, as in the third column.

8.10 Minimize punctuation in bullets

There is no general agreement on how to punctuate bullets. The simplest solution is to use no punctuation at all, and begin each bullet either with a lower case letter or with an upper case letter. The important thing is to use the same style consistently.

Chapter 9

Visual Elements and Fonts

You will learn how to

- keep all visual elements (e.g., photographs, pictures, cartoons, diagrams, graphs, charts, tables) as simple as possible
- use fonts and colors that will be clear on any projector/screen
- avoid constantly looking behind you at the screen to remember what your slide is showing

Why is this important?

Research has shown that of all the information the mind stores, 75% is received visually, 13% through hearing, and 12% through smell, taste, and touch. Visual aids improve learning by 200%, retention by 38%, and understanding complex subjects by 25% to 40%. Visual aids in color get an 85% higher attention span.

NB: This book focuses on the language, structural, and oral delivery elements of giving presentations, so this chapter only deals briefly with visual aids.

For websites on this topic see the links on page 165.

9.1 Only include visuals that you intend to talk about

Only show graphs, charts, tables, and diagrams that you will actually talk about. If you don't need to talk about them, you could probably cut them.

9.2 Avoid visuals that force you to look at the screen

A key quality of good presenters is that they spend about 95% of their time looking at the audience. They minimize the moments when they need to look behind to see what is on the screen.

If you talk while looking at the screen you lose audience attention and also your voice is much more difficult to hear.

If your visuals are clear you shouldn't need to look at the screen or point. If you need to point, it means that you need to simplify what is on your slide. Simplification is obviously a benefit for the audience but also for you because it means that you will not get lost or confused in complicated explanations.

The problem with pointing with your hands/fingers, your cursor, or using a laser pointer is that it may be clear to you where you are pointing but it rarely is for the audience. It also means that you will have to turn your back on the audience for several seconds. This can be very distracting for the audience.

9.3 Use visuals to help your audience understand

We tend to enjoy the creative graphical side of preparing a presentation but think less about the actual utility for the audience of what we have created. The aim of visuals is to help your audience to understand, but often they confuse the audience.

To avoid confusion, experts recommend

TYPE OF GRAPH OR CHART	USEFUL FOR	MAX. NO. ELEMENTS
Pie	percentages	3–5 slices
Bar charts (horizontal), columns (vertical)	comparisons, correlations, rankings	5–7 bars/columns
Graphs	showing changes over time. Scatter graphs give clear overview of how data are scattered	1–2 lines
Tables	comparing small amounts of information	3 columns and 3 rows
Cartoons	clarifying all kinds of graphs and charts	1–2

In addition, you should

- minimize the amount of information contained
- include labels and legends, and locate them as close as possible to the data points they refer to
- ensure that labels are horizontal, otherwise the audience will find them difficult or impossible to read
- explain what the axes represent and why you chose them
- present comparative information in columns not in rows

You can also use visuals to

- get audience attention
- inject humor
- vary the pace of the presentation

To learn how to comment on graphs etc, see [Section 14.2](#)

9.4 Simplify everything

Given that tables and graphs are difficult to interpret quickly, decide if it would be possible to present the same information in a much clearer way.

A sequence of related tables over several slides means that the audience have to remember what was in the previous tables. The best solution is to have all the information on one slide. You can only do this by significantly reducing the amount of information and having a maximum of two adjacent figures.

9.5 Use a photo to replace unnecessary or tedious text

Below is the second slide (the one after the title slide) from a presentation on how to dispose of unused electronic and electric equipment. The title of the slide is EU WEEE Legislation and it is about the directives that the European Union has given on waste disposal.

- Directive 2002/96/EC of January 27, 2003 on Waste Electrical and Electronic Equipment (WEEE), subsequently amended by 2003/108/EC
- Directive 2002/95/EC of January 27, 2003 on the Restriction of certain Hazardous substances (RoHS).
 - Polluter pays principle extends producers' responsibility to the entire life cycle of electrical and electronic products.
 - The "old for new" requirement establishes that customers can leave their used items to EEE retailers if new products substituting them are sold

The aim of the presenter should be to reduce the amount of text and thus improve the audience's chances of understanding and remembering. So the questions the presenter should ask himself/herself are as follows: Does the audience really need to know the number of the directives? The exact dates of the directives? When the directives were amended? The names of the directives?

The answer to all these questions is probably “no.” Instead, all this information will distract the audience when the presenter comments on the slide.

It would be much easier to replace the slide with some photos of used electronic goods (such as old washing machines, fridges, TVs) by the road or on a rubbish dump. The presenter can then say

Two European Union directives in 2003 stipulated that producers are responsible for pollution not just during the production process, but also at the end of the life of the product. This means that when you and I buy a new fridge, we can leave our old one with the retailer, rather than dumping it by the side of a road. It is then the producer's responsibility to dispose of our old fridge.

The advantages of this approach are

- once the audience has looked at the photos of dumped fridges, they will focus directly on you, the presenter
- you don't have to “compete” with your slide, because your slide has no text and therefore “says” nothing
- the audience does not have to read through information that they will never remember and in any case do not need to know. If such information on directives really is important, then it would be better to put it in a handout that could be given to the audience at the end of the presentation
- you relate what you say directly to the audience. Everyone in the audience probably has a fridge and everyone knows (or can at least imagine) the problems of disposing of an old one. By involving the audience you can make your point much more strongly. And because they are engaged they will remember more

9.6 Avoid animations

Some features of presentation software often seem to be used solely to impress the audience. Animations are occasionally useful, but they

- may not convert from your laptop to the conference PC
- typically and inexplicably go wrong during the presentation itself
- can be distracting and annoying for the audience
- tend to be used to explain complicated processes. It may be better to just simplify the process—the audience doesn't need to see or understand every step.

9.7 Make sure your slide can be read by the audience in the back row

Audiences will not be pleased if you say, “*I know that this is too small for you to read but . . .*” This generally happens when you paste a figure from your paper directly

into your presentation. This never works. Look at your figure and decide what is the key information that you want your audience to remember. Then start again with a completely new graphic whose sole aim is to show that key piece of info.

If a table or graph is too detailed, it can be distracting and confusing. One solution is to enlarge just one part of it, i.e., the key element you want your audience to understand. If showing the whole table is essential for your purposes, you can show it all in one slide. Then in the next slide show a reduced version but highlighting the interesting part through color, circles, or enlargement.

9.8 Use maps to interest the audience and boost your confidence

Maps are often used in presentations to show the location where your research was carried out, or to show your country of origin, particularly for those people coming from less well-known countries.

Bear in mind that the audience's knowledge of geography will very much depend on where they come from. You may need to use two maps: one to show the big picture (i.e., where your country is in relation to countries that the audience will certainly know the location of) and another bigger map to show where your country/region is.

Maps seem to have a positive psychological effect on presenters. If the presenter is proud of where he/she comes from, he/she becomes animated and passionate when talking about his/her homeland. This elicits a good reaction from the audience and thus boosts the presenter's confidence.

For example, I watched Elena Castenas, a presenter from Visayas State University in the Philippines, begin her presentation with a map of her country, and say the following:

I come from the world's twelfth most populated country - the Philippines - where about 92 million people live. About a tenth of the population live, like me, abroad. What many of us miss the most is our country's seven thousand one hundred and seven beautiful islands - if you get a chance go there, they are really amazing. So we have the benefits of a truly wonderful archipelago and a mass of natural marine resources, but land resources are very limited. Because of the population pressure, we need to increase crop production by maximizing land utilization through crop diversification for example by intercropping and crop rotation. So in my research I am trying to evaluate the allelopathic potential of grain legumes on corn, rice, and barnyardgrass. By doing this I hope to make a contribution to improving living standards in my country.

This introduction had a very positive effect on the audience because Elena smiled while she was talking (particularly when she said the words *beautiful*, *amazing* and *wonderful*), and this made her seem both credible and convincing. By giving the exact number of the islands she managed to show not just statistical accuracy but also passion. She also tried to relate directly to the audience (*if you get a chance . . .*). But she wasn't showing the map and talking about her country just for fun: she linked the geography of her country to the topic of her presentation. Her reasons for doing the research were also very convincing—*increase crop production*

and thus raise living standards. At the same time the audience learned something about one of the world's biggest (but probably not very well known) countries.

9.9 Choose fonts, characters, and sizes with care

The major organizations on the Internet (e.g., Google, Firefox, Amazon, YouTube) use Arial, or a similar font. Research has shown that if you use an easy-to-read font such as Arial or Helvetica, people are more likely to be persuaded about what you are saying.

Comic sans gives the idea of fun and children, and is thus probably not appropriate in a presentation. Presenters sometimes choose it because they think that by doing so they automatically give their presentation a fun element—but it is actually more difficult to read and does not look very professional. Times Roman is possibly the most common font used for writing documents, but it is more difficult to read than fonts like Arial.

If you use a font size smaller than 28 points, the audience may not be able to read your slide. Use 40 points for titles. But avoid putting complete sentences in capital letters. Signs in airports, highways, and metropolitans are all in lower case letters. Why? Because capital letters are much more difficult to understand.

It may be tempting to use lots of formatting because it makes slide preparation seem more creative. However, your text will be easier to read if you limit underlining, italics, shading, and other forms of formatting to the minimum.

9.10 Use color to facilitate audience understanding

Only use color to help audience understand your visuals, not simply to make them look nice. Be consistent with color; use the same color for the same purpose throughout the presentation.

Website designers know that the background of a website can have a significant effect on whether a surfer is likely to stay and look, and possibly buy. This implies that the background color of your slides may also affect how willing the audience will be to spend time looking at them. The experts suggest using dark text such as blue or black on a medium-light, but not bright background, or light colors on a medium-dark background. Dark colors on a dark background are very hard to read.

A lot of people have problems distinguishing red and green (and also, brown/green, blue/black, and blue/purple); so don't use those colors in combination. Avoid red as it has associations with negativity—it is the color often used by teachers to make corrections and in finance it indicates a loss.

If you project your slides you will see how different they look from on your laptop. The audience's ability to see your slides very much depends on the internal and external lighting of the room. If the sun is shining directly onto the screen it makes light colors (particularly yellow) almost impossible to see. Some beamers make red look like blue. Also, bright light considerably reduces the strength of color in photos.

9.11 Choose the most appropriate figure to illustrate your point

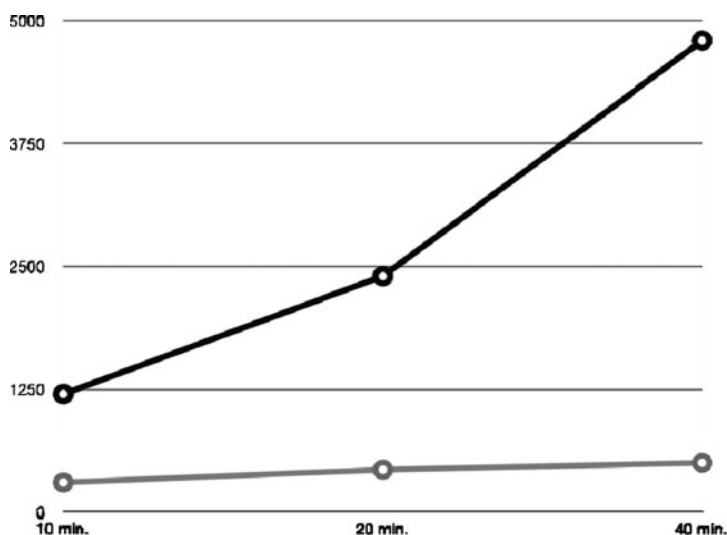
Imagine you want to present the following information:

1. the number of different words used in a presentation does not rise significantly with the length of the presentation
2. this means that even in a long presentation the number of words whose pronunciation you may have to practice does not increase very much.

With regard to point (1), a 10-minute presentation will contain a total of 1200–1800 words, of which 300–450 will be different. The words are “different” in the sense that a presenter may use a total of 300 different words to express himself/herself, but many of these 300 words he/she will use more than once (for example, *an*, *the*, *this*, *then*), which then gives the total number of words (total words). In a 20-minute presentation the “total words” will be twice as many as in a 10-minute presentation, but the percentage of “different words” will only rise slightly from 300–450 to 320–470. Likewise in a 40-minute presentation.

With regard to point (2), only a small number (around 20) of the “different words” will be words that a presenter does not know how to pronounce, as the vast majority of words should already be familiar to the presenter. In addition, this number does not rise significantly with the length of the presentation—for example, in a 20-minute presentation it may only rise from 20 to 22.

Below is a graph that is designed to illustrate the information given above.



The presenter could say

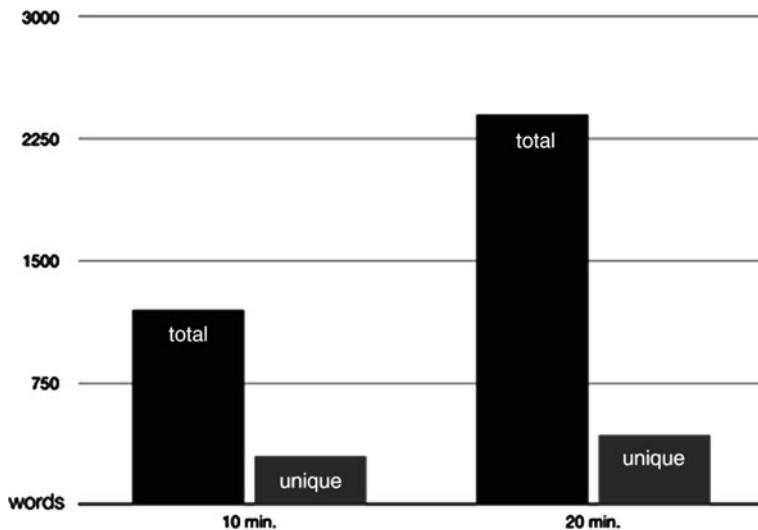
This graph clearly shows that the total number of words, which is shown in the black line, in a presentation changes in direct relation to the number of minutes of the presentation. On the other hand, the number of different words, which is represented by the gray line, does not increase very much.

However, there are some problems with the graph and the explanation:

- there are no labels, either for the y-axis or for the two lines, so initially the audience will be confused and the presenter is forced to explain what the axes mean
- the most interesting information is contained in the gray line (which represents the total different words), but the way the y-axis has been scaled does not make it clear how many different words are used for each type of presentation
- the audience will be left thinking “what does this all mean?” or “why are you telling me this?”

In fact, there is nothing said about what the connection is with pronunciation (point 2 above), which is supposed to be the key fact that the presenter wants to give to the audience. If you choose the wrong type of illustration, you may find it more difficult to talk about your key points.

The bar chart below shows the same information as in the graph, but perhaps in a more dramatic and immediate way:



But again, there is no connection with pronunciation. In any case, it would be impossible to illustrate the number of words that could create pronunciation problems, because the number would be barely visible as a bar.

Below is a table that a presenter has cut and pasted from a paper

	total: all words	total: different words
10-minute presentation	1200–1800	300–450
20-minute presentation	2400–3600	320–470
40-minute presentation	4800–7200	340–490

There are a few problems with cutting and pasting from papers:

- readers of papers have, in theory, all the time they need to absorb detailed information; in a presentation the audience does not have this time frame
- by having so much information (i.e., the ranges of values and the coverage of three different lengths of presentation), the presenter may be tempted to describe everything, without telling the audience where they should focus. Clearly the more you describe, the longer you take, and potentially the more mistakes in English you will make
- the table in the paper may have been used for a slightly different purpose from what is needed for now—in fact this table tells us nothing about pronunciation

Generally, the best solution is to

- have a really clear idea of what it is that you want the audience to learn about (in this case, the number of words they will have to learn to pronounce)
- choose the minimal amount of data that will clearly convey this idea
- choose the most appropriate format for conveying this idea (the graph and bar chart did not really work well for our purposes in this case)
- use the simplest possible form of this format

So a good solution could be the following table:

	all words	different words	words difficult to pronounce
10 minute	1200	300	10–20
20 minute	2400	320	12–22

This table is quick for the audience to read and absorb. The significance of the very slight rise in the total number of different words is very easy to see. Also, the data on a 40-minute presentation has been removed and just the lower value of the number of words is given.

And it also contains a new column “difficult words to pronounce.” The information given in the second column is interesting, but the key information for someone

who is preparing a presentation and who is worried about pronunciation is in the third column (which does have a range of values, but these are very easy to comprehend immediately).

The result is now that the presenter only gives the audience the information that they really need to know and excludes everything else.

This is what the presenter could say:

I think that from this table it is clear that the number of different words we use in a presentation only increases slightly from a 10-minute presentation to a 20-minute presentation. The significance of this is in the third column. You don't have to learn the pronunciation of many words. In fact, most of those 300 or 320 different words you will probably already know how to pronounce. This is great news. You just have to learn between 10 and 20 words for a 10-minute presentation. And only a few words more for a presentation that is twice as long.

Note how the presenter

- does not describe the table
- tells the audience where to focus their attention (*the third column*)
- explains the importance of the data
- uses a lot of short sentences—they are easy for the presenter to say, and easy for the audience to understand
- shows enthusiasm (*great news*)

If you were the presenter and you were worried that someone in the audience might question your accuracy, then you could also say,

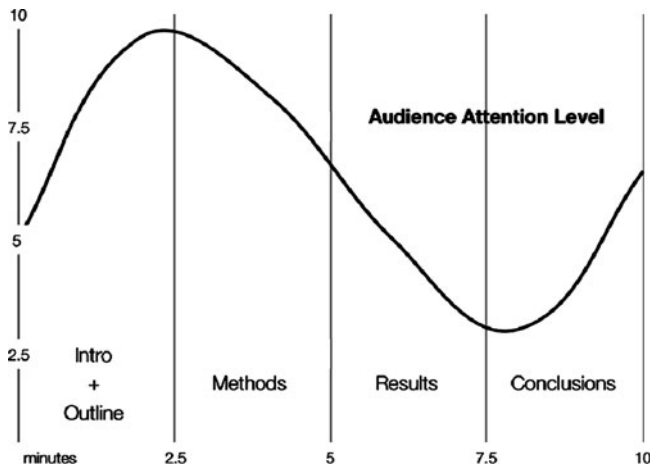
By the way, the number of words in a presentation obviously varies from presenter to presenter, so someone who speaks very fast may use up to 1800 words. And the number of different words will very much depend on the number of different technical words that a presenter needs. So instead of 300 it could be 450 different words. But in any case the number of different words doesn't rise considerably if you speak for 20 or 40 minutes rather than just 10 minutes.

9.12 Explain graphs in a meaningful way

The statistics that you give the audience (whether your own statistics or those of others) will be very familiar to you, so there is a natural tendency to explain them too quickly and in too much detail. The secret is just to select a few and explain them in a way that the audience can understand.

If the statistics are in the form of a graph, it helps the audience to understand better if you explain what the quantities are on each axis and why you chose them. This gives the data a context and also allows you to add some personal details about how and why you selected them. Obviously, however, if the axes are self-explanatory there is no need to comment on them.

Think about how you might explain and comment on the graph below.



Would this be a helpful commentary for the audience?

In the graph that can be seen in this slide, which delineates the typical attention curve of an audience during a 10-minute presentation at an international conference, the x-axis of this two-dimensional plot represents the number of minutes, and the y-axis the amount of attention paid by an audience. The graph highlights that at the beginning of a presentation the level of attention is relatively low. Then it rises rapidly, reaching a peak at about two minutes. After approximately three minutes it begins to drop quite rapidly until it reaches its lowest point at around seven minutes thirty seconds. Finally, it rises quite steeply in the ninth minute and reaches a second peak in the last minute.

The problem with the above is that it contains no information that the audience could not have worked out for themselves. Basically all you have done is describe the curve in a rather abstract and tedious way. What you really need to do is to interpret the curve and point out to the audience what lessons can be learned from it. You could say something like this:

OK, so let's look at the typical attention curve of an audience during a 10-minute presentation. *[Pauses three to five seconds to let audience absorb the information on the graph].* What I'd like you to note is that attention at the beginning is actually quite low. People are sitting down, sending messages on their Blackberry, and so on. This means that you may not want to give your key information in the first 30 seconds simply because the audience may not even hear it. But very quickly afterwards, the audience reach maximum attention. So this is the moment to tell them your most important points. Then, unless you have really captivated them, their attention goes down until a minute from the end when it shoots up again. At least it should shoot up. But only if you signal to the audience that you are coming to an end. So you must signal the ending, otherwise you may miss this opportunity for high-level attention. Given that their attention is going to be relatively high, you need to make sure your conclusions contain the information that you want your audience to remember. So stressing your important points when the audience's attention will naturally be high—basically at the

beginning and end—is crucial. But just as important is to do everything you can to raise the level of attention when you are describing your methodology and results. The best ways to do this are . . .

Note how the presenter

- does not describe the line, but talks about the implications
- does not mention what the x and y axes represent because they are obvious in this case
- highlights for the audience what they need to know
- repeats his/her key points at least twice (i.e., give important information at the beginning and end, signal that you are coming to an end)
- addresses the audience directly by using *you*

Note also how the graph helps the audience to understand which part of the presentation the minutes correspond to. The graph thus shows that audience attention is dropping considerably around the fifth to seventh/eighth minutes, which correspond to when a presenter is normally giving his/her results. Consequently, given that the results are often the most important part of a presentation, the presenter needs to do everything possible to recapture the attention of the audience and ensure that they actually hear the results.

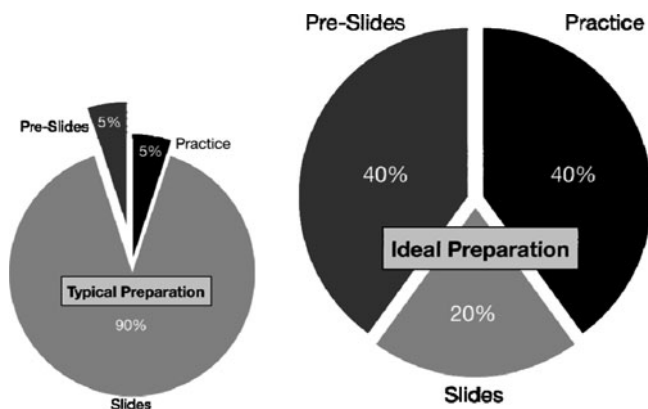
NB: The information on this graph is only a very approximate idea of how much time to spend on each part of a 10-minute presentation. In some cases, your methodology may be much more important/interesting than your results, in which case you will dedicate more time to it.

9.13 Remember the difference in usage between commas and points in numbers

Note how in the graph in 9.12, the minutes have been indicated a decimal point (2.5) rather than with commas (2,5). The international convention is to use the US system of points for decimals (.) and commas (,) for whole numbers. For example, 3.025 is said *three point zero two five* and 3,125 is said *three thousand one hundred and twenty-five*. Ensure you make this change when you convert graphs and tables from a figure or text written in your own language into an English version.

9.14 Design pie charts so that the audience can immediately understand them

The two pie charts below represent the percentages of time spent on three aspects of preparing a presentation.



The secret to pie charts is not to have too many slices. Given that in the first chapter of this book I outlined 10 stages for preparing a presentation, there could have been 10 slices in the pie. But 10 slices would be hard for the audience to decipher on the slide and difficult for the presenter to explain. Plus it would be almost impossible to put clear labels on each slice. In any case, you can always tell your audience that you have considerably simplified the chart, and that if they are interested in seeing the full version they can see it in your paper, on your website, etc.

Notice how the two pie charts are not the same size. This tells the audience that the second chart is the one they should give the most attention to.

If you do reduce a pie chart to its most important elements, it will be easy for the audience to understand immediately. It will also require minimal comment by you, as highlighted by the revised version below:

ORIGINAL

In the next slide we can see a comparison between the typical practice of presenters during their preparation of a presentation and the ideal practice. Pre-slide preparation in the normal practice is allocated 5% of the time in comparison with 40% in the ideal time. On the other hand, in the normal practice 90% of the presenter's time is dedicated to slide creation . . . (63 words)

REVISED

I think these pie charts are self-explanatory. People spend too much time on designing slides, rather than preparing what they want to say and then practicing it. (27 words)

Note how in the original version above, the presenter gives no extra useful information—it is merely a tedious description of the information contained on the chart. The revised version simply limits itself to interpreting the data.

An alternative to the above pie charts is not to have a slide at all. You could simply walk to the whiteboard and write 90 and 20% in large characters. You then say to the audience,

If you are like most presenters, you probably spend about 90% of your time preparing your slides. This leaves you only 10% to think about what you will actually say and to practice saying it. The result is often very poor presentations. Instead you should reduce the slide preparation time to 20% and use the other 80% of the time for deciding exactly what to say and then how to say it. (72 words)

Note how the presenter directly addresses the audience using *you* (rather than saying “*Typically presenters spend about 90% of their time preparing their slides*”). This alternative is useful if you already have lots of figures in your presentation and so it provides variety. Also, it immediately attracts the audience’s attention if you walk over to the whiteboard. However, it does mean that you will have to spend more words explaining everything (72 words rather than 27).

So another alternative is to reproduce the pie chart on the whiteboard—which should not take more than about 10 seconds—and then give you explanation as in the revised version above.

The moral of the story is to always think about the most audience-oriented and quickest way to present information. In the case above, a pie chart (whether as a slide or on a whiteboard) is the quickest, easiest, and most effective way for you to convey information to the audience.

What all the figures in 9.11, 9.12, and 9.14 highlight is that the easier a figure is to understand, the less time you will have to spend on explaining it. Likewise, the more complex it is, the more difficult it will be for you to explain—and the consequence will be that you will be less relaxed and therefore more likely to confuse the audience and make mistakes in your English.

Please note that all the information presented in these figures is only very approximate and is based purely on my personal observations.

Chapter 10

Getting and Keeping the Audience's Attention

You will learn how to

- attract and retain your audience's attention throughout your presentation
- understand when audience attention is at its highest and lowest

Why is this important?

According to the presentations expert Shay McConnon, *Juries typically remember only 60% of what they are told. Why? The case is not about them. No matter how hard they try, people have difficulty paying attention to presentations that aren't about them.*

10.1 Gain and keep your audience's attention

Below is a summary of the first nine chapters of this book in terms of how you can attract and hold your audience's attention:

1. have a clear idea who your audience are, don't assume that they are naturally going to be interested in your topic
2. have an agenda and a clear structure with clear transitions so that the audience know where you are going
3. make it easy for the audience to follow you and your slides
4. help the audience to understand why you are showing them a particular slide
5. involve your audience and give them lots of examples
6. make frequent eye contact
7. avoid too much text on your slides
8. use simple graphs and tables
9. make your text and visuals big enough for everyone in the audience to see clearly
10. avoid entering into too much detail (i.e., just select those things that the audience really need to know about the topic)
11. avoid spending more than a couple of minutes on one specific detail
12. have a variety of types of slides (not just all bullets, or all text, or all photos)
13. speak reasonably slowly and move from slide to slide at a speed that the audience will feel comfortable with
14. sound interested and enthusiastic about your topic
15. vary your tone of voice
16. inject some humor
17. move around occasionally rather than being static

10.2 Exploit moments of high audience attention

Audiences tend to remember things that are said at the beginning and end of a presentation, because their attention is generally high at these points.

They also remember things that they hear more than once.

And finally they remember curious facts, things that stand out.

Ideally you need to state your key points both at the beginning and ending. In the middle go through each key point more in detail. If possible, include an unexpected/counterintuitive/interesting fact for each key point. Try juxtaposing data with quotations, and serious issues with a humorous anecdote.

The point of your presentation is to disseminate information and engage interest for your project. If your audience do not listen, then there is no point in you doing the presentation. So, most ways of getting and maintaining their attention are legitimate provided that they

- are relevant, or in any case interesting and memorable
- do not offend anyone

10.3 Don't spend too long on one slide

Our attention span is affected by how long we look at something that does not change. Research has shown that we can only look at something static for 30 seconds and then we start thinking about something else. So if possible, reduce the amount of time you spend showing the same slide. For example, you could show the slide, explain what you need to explain with the aid of the slide, and then blank it (see [Section 10.7](#)) and carry on talking.

10.4 Maintain eye contact with the audience

If you don't make eye contact with all your audience throughout the duration of your presentation, they will quickly start thinking about other things.

You can only maintain eye contact with the audience if

- you know exactly what you are saying—if you are not sure what you are going to say next, you will probably start looking up at the ceiling or down at the floor
- your slides are simple—if they are complex you will be very tempted to turn your back to the audience to remember the information on the slide

10.5 Be aware of the implications of the time when your presentation is scheduled

There are clearly good times and bad times in the conference schedule for presenters to give their talks. What are known as the “graveyard slots” (i.e., the worst/dead times) take place

- when attendees would probably rather be having lunch (attendees may focus more on their stomach than on you)
- at the end of the day (the audience have probably assimilated all the information they are capable of assimilating in 1 day)
- at the end of the last day (the worst possible slot, when attendance is always low)

If you have been allocated one of the above slots, you will need to make a special effort to gain and keep the audience's attention. You can do this by

- being a little more informal
- understanding that the audience will be unable to assimilate much new information—therefore consider reducing the number of points you intend to cover and the amount of detail you give
- finishing early and on a high note—the audience will thus go away with a positive impression of you

ADVANCED TIPS

10.6 Quickly establish your credibility

How the audience judge your credibility will determine the success of your presentation. Even if your slides are fantastic, and your results seem good, the audience will not give you their full attention if they do not feel you are credible i.e., if they cannot fully believe or agree with what you are saying.

How do you establish your credibility? It is helpful if you tell the audience something about your knowledge and experience with the topic, and also why you are interested in it.

10.7 Learn ways to regain audience attention after you have lost it

When you are doing your presentation you may be competing for the audience's attention with one or more of the following:

- their mobile phone or laptop—they may be text messaging or emailing
- the person sitting next to them may want to chat
- things happening outside the window
- their hunger (particularly at the end of the morning session)
- their boredom—yours may be the sixth, seventh, or even eighth presentation that they have seen that day

These kinds of distractions do not always depend on the level of interest of your presentation. In any case, you have to try and regain their attention. You can do this by

- blanking the screen (on PowerPoint you can do this using the B key)
- using the whiteboard—inevitably the audience will want to know what you are going to write. Make sure you write large enough for all the audience to see—this generally means writing very little or only drawing simple diagrams. Make sure you move to the side of the whiteboard so that the audience can see what you are writing/have written
- asking the audience a rhetorical question. Try and predict what kind of questions the audience might be asking themselves at this point of your presentation. Pause. Ask the question. Pause again. Then answer it
- giving the audience a statistic. People are fascinated by numbers and they help the audience see the dimension of the situation. See 10.8 on how to present statistics

- saying “*here’s something you might be interested in seeing*” or “*I’ve brought along something to show you . . .*” and producing an object from your pocket, bag, etc. Your audience will be immediately curious to see what the object is. Again it has to be big enough for everyone to see, or you have to have lots of them to distribute among the audience—but be careful as they may turn into an even bigger distraction! Objects can also be a good substitute for explanations
- showing an unusual slide—this could simply be a slide that breaks with the normal pattern of your other slides. It could be an interesting photo, a clear and effective diagram, or contain a number, a short quotation, or a question

10.8 Present statistics in a way that the audience can relate to them

Compare these ways of stating the same statistics.

ORIGINAL	REVISED
A bird’s eye and a human’s eye take up about 50 and 5% of their heads, respectively. In our study of the importance of vision in birds of prey, we found that this factor was . . .	A bird’s eye is huge. It takes up about 50% of its head. Half its head. That’s 10 times more space than a human’s eye takes up. In fact, to be comparable to the eyes of a bird of prey, such as an eagle, our eyes would have to be the size of a tennis ball. When we studied eagles, vultures, and buzzards, we realized that . . .

Note how in the revised version, the speaker gives the same information twice—50% and *half*. This is useful because it is very difficult to distinguish between the sound of *fifteen* and *fifty* (likewise between 13 and 30, 14 and 40, etc). By using the analogy of a tennis ball, the audience gets a much clearer idea of the proportions. Clearly, to be effective it would be helpful to have slides of an eagle’s head and a tennis ball, and maybe a cartoon of a person with tennis ball eyes. Also, you would be guaranteed attention if you pulled two tennis balls out of your pockets!

For more on statistics, see [Sections 11.2, 11.3, and 11.4](#)

10.9 Be aware of cultural differences

In his book *Outliers*, Malcolm Gladwell, a writer at *The New Yorker* magazine and named as one of *Time* magazine’s 100 Most Influential People, talks about cultural

differences in the way we communicate and receive information. In [Chapter 8](#) he makes three very interesting points:

1. many Asian countries are “receiver oriented,” this means it is the listener’s task to interpret what the speaker is saying
2. the Japanese have much higher levels of “persistence” than Americans. This means that the Japanese can stick to a task for much longer than their American counterparts—they have higher levels of concentration
3. our memory span is correlated to the time it takes in our language to pronounce numbers. Because the words for numbers in Asian languages are quicker to pronounce and are more logical (*ten-one* rather than *eleven*), Asians tend to be able to absorb numbers and make calculations generally far more quickly than those in the West

What he writes has huge implications for presentations. It means that if you are talking to an audience that includes a good number of people from the West (particularly the United States and Great Britain), you should try to

1. work very hard yourself to make it absolutely clear what you are saying, so that it is effortless for the audience to understand
2. be aware that your audience may not be used to concentrating for long periods and may thus have a short attention span
3. give the audience time to absorb and understand any numbers and statistics that you give them

10.10 Be serious and have fun

Attendees at my courses are often skeptical when I say that audiences are more receptive if they enjoy themselves—my students don’t doubt the truth of this, but they think that it is not professional and that their professors would not approve. However, many of the world’s top professors do approve.

Professor Chandler Davis, the mathematician and well-seasoned conference attendee, told me,

Some of us can’t help expressing our joy in knowing the facts, particularly those WE discovered; presenters who don’t naturally impart the joy should be roused to doing so.

And Nobel Prize Winner in Chemistry in 2008, Professor Martin Chalfie, confirmed that

A professional presentation can be both serious AND fun.

Another professor, psychologist Thomas Gilovich from Cornell University, states that

Our appetite for entertainment is enormous . . . If the listener comes away from the communication either informed or entertained, the interaction has been worthy of his or her time and attention, and the speaker has met one of his or her most basic requirements.

Being entertaining doesn't necessarily mean making people laugh. It means

- occasionally providing standard information in a novel or unusual way
- using examples that your audience can easily relate to
- finding interesting and surprising statistics
- using very simple but unusual graphs and pictures that underline important points in a new way

In any case you may decide to provide a few humorous slides or anecdotes. You can then try one and see what reaction you get from your audience. If it works well you can use the others. If not, skip them.

Be careful about telling jokes. They may be dangerous, as the joke may

- not be understood
- be offensive or inappropriate for the culture of your audience
- be completely irrelevant to the topic of the presentation

Part III

What to Say and Do at Each Stage of the Presentation

A good presentation of a paper can be a delightful experience, an elegant performance, a memorable show for its audience. During the course of my scientific career I have seen thousands of presentations. Most go into oblivion at once, but some stay in the memory for a lifetime. There's no doubt about it: good speaking skills are more important than dazzling PowerPoint slides.

Osmo Pekonen, Finnish author and mathematician

Chapter 11

Ten Ways to Begin a Presentation

You will learn how to

- immediately gain the attention of your audience
- connect with the audience by adopting a less formal style

Why is this important?

How you introduce yourself and how the audience react to your introduction determine at least 30% of the success of your presentation. Audiences form their impressions of a presenter within approximately 90 seconds, after which it is difficult to change their opinion.

Many of the best presentations, or certainly the most enjoyable ones, are those where the presenter simply chats to the audience and tries to connect with them immediately. You can do this by using one or more of the following techniques:

1. say what you plan to do in your presentation and why
2. tell the audience some general facts about where you come from
3. give an interesting statistic that relates to your country
4. give an interesting statistic that relates directly to the audience
5. get the audience to imagine situations
6. ask the audience a question or get them to raise their hands
7. say something personal about yourself
8. mention something topical
9. say something counterintuitive
10. get the audience to do something

If you are an inexperienced presenter the easiest introduction is number 1, and 2–3 are also not difficult to manage. The introductions described in points 4–10 are advanced tips and require more confidence and creativity. They are worth trying because they deviate from what the average non-native speaker does and thus tend to attract audience attention.

Whichever beginning you chose, when you get up try to smile and keep your eyes on the audience—don't look up at the ceiling or down at the floor as this gives the impression that you can't remember what to say. Have a quick glance (look) at your notes, rather than looking behind you to remember what is on your slide. Audiences like positive enthusiastic presenters, so don't joke or say anything negative about the location of the congress, the organization, or about the local people, and the local infrastructure. This may amuse some members of the audience but alienate others—particularly those who live locally.

11.1 Say what you plan to do in your presentation and why

A good standard introduction while showing your title slide is to say some or all of the following:

- what hypotheses you wanted to test
- why you chose this particular method for testing them
- what you achieved
- what impact this might have on your field

ORIGINAL

Hello everyone and thank you for coming. First of all I'd like to introduce myself, my name is Ksenija Bartolić. As you can see, the title of my presentation is *Innovative Methods of Candidate Selection in Industry*. I work in a small research group at the University of Zagreb in Croatia. We are trying to investigate the best way to select candidates for a job and we hope our research will be useful not just in the field of psychology but also for human resources managers in general.

REVISED

Hello, I am here to talk about a new way to select candidates for a position in a company. I'd like to tell you three things. First, why I think the current methods for selecting candidates are not effective. Second, my radical alternative, which is to let the receptionist of the company make the decision. And third, how trials proved that even against my own expectations this solution reduced recruitment costs by 500%. Moreover, it was as effective as traditional interviews in more than 90% of cases. I believe that human resources managers . . .

Both versions are perfectly acceptable. Both are clear and reasonably succinct and you can obviously choose the one you feel most natural/confident with. The revised version has the following advantages:

- it avoids giving information that can be easily deduced from the title slide (i.e., the name of the presenter and the title of the presentation)
- it immediately tells the audience what they can expect to hear, without having to show an outline slide
- it covers the main messages of the presentation
- it includes the main result of the research at a point in the presentation where audience attention is likely to be high—the audience doesn't have to wait to the end of the presentation to hear what the outcome of the research was

However, the original version also has an advantage. By delaying important information (i.e., the overview of what the presenter is planning to say) it gives the audience a few moments to settle into their seats and tune in to your voice. Even if the audience are not listening or concentrating, and even if they have an initial problem with the presenter's accent or voice level, they will still be in a position to follow the rest of the presentation. So the revised version is good provided that the audience are already focused on you, which is generally the case if you are not the first presenter of a particular session.

The other nine beginnings outlined below are designed to immediately attract audience attention, but delaying key information by 30 seconds to a couple of minutes on the basis that the audience are not generally at their most alert during the first 60 to 90 seconds. The advantage of such introductions is that understanding the rest of the presentation does not hinge (depend) on the audience hearing and absorbing every word.

Note: The "original" versions are perfectly acceptable but are generally less effective in attracting audience attention than the "revised" versions.

11.2 Tell the audience some facts about where you come from

Audiences are often interested in learning new information about countries that they are not familiar with. For example, if you are at a conference in Europe or North America, and you are from a country outside these areas, then exploit your uniqueness and tell the audience something about your country. However this information should not last more than 30 seconds. Also, it must be clear to the audience that there is some connection with the topic of your research.

ORIGINAL

Good afternoon everyone, my name is Cristiane Rocha Andrade and I am a PhD student at the Federal University of Paraná in Brazil. I am here to give you a presentation on some research I have been conducting on allergies to cosmetics and to propose a way to use natural cosmetics.

REVISED

I come from Brazil. It took me 30 hours to travel the 9189 km to get here, so please pay attention! In Brazil we have two big forests, the Amazonian and the Atlantic with around 56,000 species of plants. More than 90% of these species have not been studied yet. This is why I decided to study natural cosmetics with raw materials from Brazil.

In the revised version, Cristiane cleverly gets the audience to pay attention, by explicitly telling them to do so (but in a humorous way). She uses many numbers, including the exact number of kilometers between her home town in Brazil and the location of the conference. She could have said “about 10,000 km” but that would not have had the same dramatic and humorous effective. She then connects where she comes from with the aim of her studies.

For another example using maps, see [Section 9.8](#)

11.3 Give an interesting statistic that relates to your country

Imagine that you are studying how soil erosion affects farmers and food production in your country. A typical but not very interesting way to start would be

Today I am going to present some results on the problem of soil erosion and how it affects food production in my country.

But you could begin much more dramatically with a statistic:

Ten thousand tons of soil are lost through erosion in my country every year. This means that fertility is lost and desertification ensues.

Or you could begin in a much more personal way:

Two months ago I went home and saw the devastation caused by the floods [shows picture of floods]. I have an uncle whose land has been almost completely eroded. This means that his crops will fail this year. So why is this a problem? It means that in the world today . . .

Another possible beginning of the same presentation could have been to say, *“In my country 30 tons of soil per hectare is lost due to rain every year.”*

But the problem is that 30 tons of soil are not something your audience can easily visualize. However, if you say, *“Imagine if this room was filled with soil. Well, after a single rainstorm on a small field in my country, three quarters of the soil would have disappeared.”* In this case you are giving the audience a statistic that they can relate to. It may not be completely accurate, but it is accurate enough for them to see that you are talking about a catastrophe. If you then say what the consequences would be if this process isn’t stopped, again using something the audience can relate to (*the equivalent of Iceland would disappear in less than a year*), then you will have a captivated audience.

For more on statistics, see [Sections 10.8](#) and [14.2](#)

11.4 Give an interesting statistic that relates directly to the audience

A very effective introduction is to show the title slide while the audience is coming in. Then when it is time to start, blank the screen and tell the audience a fundamental and recent statistic in your field or a key result in your research. After giving your statistic, you introduce yourself and say why the statistic relates to what you are going to tell the audience.

Of course, you know why you are mentioning a certain statistic and the relevance that it has, but the audience might not. Help them make the connection. If possible use statistics that they can relate to their personal experience or that they can easily understand or visualize.

Your statistics need to relate to your audience’s capacity to understand them. Which of these statistics do you find easier to understand/visualize or has the greatest impact on you?

1. 73 million papers have been completed in the last 10 years.
2. Last year 7,300,000 papers were completed.
3. Every day 20,000 scientific papers are completed.
4. 14 papers are completed every minute.
5. In the 10 minutes that I have been talking to you this morning 140 papers will have been completed around the world.

6. Hands up those of you who have finished writing a paper in the last seven days. Well around the world, in the last week about 140,000 papers will have been produced, that's an incredible 14 papers every minute.
7. By the year 2050 800 million papers will have been written, that's enough paper to fill this conference room 33,000 times.

Statistic 1 is probably too high for audiences to comprehend—if possible reduce statistics from millions, billions, and trillions to something more manageable. Statistics 2-4 are all fine, but they lack impact. Statistic 5 is more interesting because the timescale is now (the very moment that the presenter speaks), rather than a generic day or year. Statistic 6 directly involves the audience and motivates them to listen to the answer. Statistic 7 makes an unusual comparison to physical space.

11.5 Get the audience to imagine a situation

Without introducing yourself or the topic of your presentation, make your first word of your presentation “Suppose . . .” and then give the audience a hypothetical situation which relates both to the audience and to the topic of your research.

ORIGINAL	REVISED
My name is Minhaz-Ul Haque and the title of my presentation is Using Protein from Whey-coated Plastic Films to Replace Expensive Polymers. As you can see in this outline slide, I will first introduce the topic of . . .	Suppose everyone in this room had brought with them today all the food packaging that they had thrown away in the last year. I have counted about 60 people here. Given that the average person consumes 50 kilos of food packaging a year, then that is three tons of packaging. Over the next 4 days of this conference, we will produce about 450 kilos of packaging, including plastic bottles. My research is aimed at increasing the recyclability of this packaging by 75%. How will we do it? Using protein from whey-coated plastic films to replace expensive polymers. My name is Minhaz-Ul Haque and . . .

11.6 Ask the audience a question/Get the audience to raise their hands

An effective way to start a presentation is to get the audience to think about a question. If you use this technique, ask your questions, wait for a maximum of two seconds, and then continue.

For example, imagine you are at a conference on rare diseases. There is little point in beginning your presentation by showing your audience a slide with the following definition:

Rare Diseases are a heterogeneous group of serious and chronic disorders having a social burden.

Your audience will probably already know what a rare disease is. Instead you need to tell them something they don't know and something that will attract their interest. So, cut the text completely and write the following on the whiteboard (but have a slide as a backup in case there is no whiteboard):

1:50,000

1:2,000

The audience will be immediately curious to know what the numbers refer to. This is what you could say:

Do you know anyone who has a rare disease? *[Two second pause]* Well if you are from the United Kingdom, the chances are that you don't. But if you are from Spain, then you might know someone who does have a rare disease. Does that mean that here in Spain we have more rare diseases? No, it simply means that our definition of what constitutes a rare disease is different from that in the UK. A rare disease in the UK is something that affects 1 in 50,000 people. In Spain we follow the European Union definition of 1 in 2,000. That's a very big difference. Well, my research group has been looking at . . .

The technique is to immediately tell the audience something that they may not know, rather than giving them an abstract definition of something they already know. Notice that each sentence is short—this makes the sentences easy for you to say and easy for the audience to understand. The two-second pause after asking the question may seem like a long time to you (when you are on the podium) but for the audience it is a chance to think about the question you have just asked, and to them it doesn't seem long at all.

An alternative to asking a question is to get the audience to raise their hands in response. As with the question technique, give the instruction (hands up if/raise your hands if), then wait for a maximum of two seconds before you continue.

ORIGINAL

Hello everyone, I am Rossella Mattera, a PhD student in Molecular Medicine. I am here today to tell you about the ExPEC project, in particular about a vaccine against ExPEC. What is ExPEC? ExPEC or extra-intestinal pathogenic *Escherichia coli*, is a microorganism that causes a large spectrum of diseases associated with a high risk of death. The commonest extra-intestinal *E. coli* infection that is caused by these strains is cystitis, in fact 80% of women have this "experience" during their lifetime, with a reinfection in less than 6 months. . .

REVISED

Hands up the men who have had cystitis. *[Pause]* I bet many of the men here don't even know what cystitis is *[said in jokey tone]*. In this room there are 20 women and 16 of you women will experience cystitis during your lifetime. You men are lucky because cystitis mainly affects women. It is a horrible infection that makes you feel you want to go to the toilet every two or three minutes. Cystitis is caused by ExPEC or extra-intestinal pathogenic *Escherichia coli*. This infection affects 80% of women. Cystitis, pyelonephritis, sepsis, and neonatal meningitis are common infections caused by these strains. Most ExPECs are resistant to the antibiotic therapy, therefore we need a vaccine. I am a PhD student in Molecular Medicine. I am here today to tell you about a vaccine against ExPECs.

11.7 Say something personal about yourself

Tell an anecdote about yourself—how you first became interested in the topic, what you particularly like about this area of research, where you work, and what is special about it, a particular event that took place during the research, for example an unexpected problem, a counterintuitive result. Show the audience your enthusiasm for the topic—tell them what amazes and excites you about your research. When you talk about your passion for your work your face will automatically light up and your voice will be animated—the audience will thus be more engaged.

ORIGINAL

I am going to describe the creation of strawberries with a strong consistency in the pulp. In our research we modified strawberry plants with agrobacterium and we obtained 41 independent transgenic plants. On the basis of yield and fruits firmness, we then selected six different varieties of strawberry.

REVISED

I became interested in agronomy and biosciences completely by accident. One summer holiday while I was a student I was working in an organic ice cream shop. Every day we got crates of fresh fruit, and every day we had to throw away kilos of strawberries because the ones at the bottom were completely squashed and had already started to mold. The pears, on the other hand, were always fine. So I thought, what if we could mix the succulent look and delicious taste of a strawberry with the strong consistency of the pulp in a pear?

In the original version, the presenter launches into her topic without giving the audience time to switch their brains on. If the audience miss what she says now, their understanding of what she says later may be impeded. In the second version, she answers a question that many people have—how did someone choose to do the job they do? The audience enjoy comparing their experiences with that of the presenters.

Here is a true story told by Professor Maria Skyllas-Kazacos from the University of New South Wales, of how she became a chemical engineer.

One of the choices in the industrial chemistry degree, I think when you got to the third year, was whether to do the mainstream industrial chemistry subjects or to do polymer science. A friend a year above me said, “Oh, you should do the polymers. Polymers is a really big, important industry.” So I decided to try polymers. I went along to the first class—only five or six of us had chosen this, and I was the one girl—in a polymer engineering laboratory. The lecturer started to talk about grinding and milling and adding carbon black to rubbers, and he said, “When you come in the lab, you’ve got to wear dirty clothes because we use a lot of carbon black in here and you’re going to get covered in it. And tie your hair all the way back and make sure it’s all covered, because any loose hair can get jammed in the machine and you’ll be scalped.” I had very long hair! A friend told me later that this lecturer did not want girls in the lab and deliberately went out of his way to scare me off doing polymer engineering—and he succeeded—I dropped polymer engineering immediately and took up the industrial chemistry option instead.

Note how she

- uses colloquial language and sounds like she is talking to a friend
- gives interesting details
- quotes from other people (i.e., uses their words)
- mixes long sentences with short ones
- obviously enjoys telling this story

11.8 Mention something topical

Try to relate your beginning to something that is already in the audience's mind, a recent news story or something connected to the conference.

ORIGINAL	REVISED
My name is Horazio Perez and I work at the Center for Transportation Research in . . . In my presentation today I would like to tell you the results of an experimental study on real time bus arrival time prediction using GPS data.	I know that a lot of you, like me, have been getting to the conference each day by bus. I don't know about you, but I have had to wait about 10 to 15 minutes each time. And it's been great fun. In fact, not only have the buses been late, but as soon as one comes, then another two quickly follow. And that's made me even happier. Why? Because my research is investigating why this happens—why do buses come in threes? And if it happens here in Geneva, where Rolex have their headquarters, then clearly no one else has solved the problem yet, and I am going to get in there first. My name is Horazio Perez and . . .

Horazio takes a very banal situation, catching a bus, and relates it both to the audience's experience and the topic of his research. He also adds an element of suspense by talking about “fun” and “happy” in a situation which for most people would simply be frustrating. By doing this he attracts and holds the audience's attention.

11.9 Say something counterintuitive

People like to have their views challenged, as long as these views are not related to things they feel very strongly about such as religion, ethics, and politics. If your research has proved something that goes against commonly held opinion, then this is a perfect opportunity to gain the audience's attention.

ORIGINAL

In this presentation a comparative analysis will be made of some investigations into the proficiency in the use of the English language on a world scale. The parameters and methodology used to make the analysis, along with some of the results will be presented. I will begin by giving a brief overview of the background . . .

REVISED

Who speaks and writes the best English in the world? The British maybe, *[Pause]* after all they have the Queen, and that's where the language originated? *[Pause]* Or do you think it's the Americans? Or the Canadians or Australians? *[Pause]* Actually it's the Scandinavians, the Danes, and the Dutch. And if you have been attending most of the presentations here in the last few days, I guess it's these guys who you understood the best. Does this mean that the native English speakers can't even speak their own language? Of course not. But . . .

11.10 Get the audience to do something

Author Bjørn Lomborg, an expert on global problems and one of the world's top 75 most influential people (*Esquire* magazine), began a presentation for TED.com by saying

What are the big problems in the world? And I must say, before I go on, I should ask every one of you to try and get out pen and paper because I'm actually going to ask you to help me to look at how we do that. So get out your pen and paper. The bottom line is, there is a lot of problems out there in the world. I'm just going to list some of them. There are 800 million people starving. There's a billion people without clean drinking water. Two billion people without sanitation. There are several million people dying of HIV and AIDS. The lists go on and on. There's two billions of people who will be severely affected by climate change—so on. There are many, many problems out there.

In an ideal world, we would solve them all, but we don't. We don't actually solve all problems. And if we do not, the question I think we need to ask ourselves—and that's why it's on the economy session—is to say, if we don't do all things, we really have to start asking ourselves, which ones should we solve first? And that's the question I'd like to ask you. If we had say, 50 billion dollars over the next four years to spend to do good in this world, where should we spend it?

He then got the audience to work together for 30 seconds to think about 10 of the biggest challenges in the world and to prioritize solutions to these problems. His technique was not just to present statistics but also to gain the audience's attention and involve them directly. This meant that they really felt involved and were thus more motivated to hear his solutions.

Getting the audience to do something active, rather than just sitting there passively, has several advantages:

- it gives you time to settle your nerves
- it gives the audience a nice break from the usual run of back-to-back presentations

- it normally generates a lot of interest, particularly if you have a terrible time slot for your presentation, such as at the end of a session

I have mentioned a lot of techniques for opening a presentation. Your instinctive reactions while reading them were probably as follows:

1. yes, most are better than traditional beginnings
2. but no, I could never have the confidence to do that

There is absolutely no reason why you can't use such techniques. I have had students who had never given a presentation before, and who are even quite timid, who managed to create beginnings like the ones outlined above. It does require a little courage. But only a little. Yet the result is fantastic. The audience appreciate it and when you see their positive reaction it makes you feel good and boosts your confidence. The result is that you deliver a better presentation.

The secret is to experiment. Try adapting your topic to one or more of the ways outlined above. Be creative. Have fun. And keep trying until you find the best approach. But before using it at the conference, test it out on colleagues to make sure that it gets the reaction you hoped for.

The more fun you have preparing your presentation, the more fun you will have when you give the presentation, and the more fun the audience will have listening to you.

It is fundamental to connect with the audience. If you don't connect with them, they will not give you the attention you deserve. This is particularly true if your presentation is scheduled just before lunch, after lunch, or at the end of the day, i.e., at times of the day when the audience's attention is very low.

Finally, it is not only at the beginning of your presentation that you can use these techniques. They are also excellent ways of regaining attention later in the presentation.

Chapter 12

Outline and Transitions

You will learn how to

- move from your first slide into the main part of the presentation
- introduce each new section and thus highlight the logical structure of your presentation

Why is this important?

Although the logic of your presentation is clear to you, it won't necessarily be clear to your audience. Using the right transition phrase will help to guide your listeners.

12.1 Consider not having an “Outline” slide

Scientific presentations tend to follow the same structure—introduction, method, results, discussion. Unless you intend to radically deviate from this structure then you do not necessarily need to use an outline slide as a transition into the main part of the presentation.

A poor outline slide like the ones below is a signal to the audience that they will hear the same old things again.

OUTLINE

- Introduction
- Methodology
- Results
- Conclusions

AGENDA

- Overview
- Aims and purposes
- Theoretical framework
- Research methods
- Empirical analysis

The slides above simply tell the audience that your presentation follows the standard procedure and that surprises are highly unlikely. They are a series of abstract words that act as an invitation for the audience to go to sleep—the slides give no information to the audience that they could not have imagined or guessed for themselves. It also encourages the presenter to say things that add no information for the audience (see original version below which refers to the first outline slide above). However although you do not need to show the audience a slide like this, you do need to tell your audience verbally what you plan to do, i.e., your main messages. But you need to do this in a way that really gives them useful information that will help them to understand the context and structure of your presentation (as in revised version).

ORIGINAL

First I will give you a brief introduction to my work. Then I will outline the reasons that led me to conducting this research. Next I will explain my methodology before discussing my results.

REVISED

First, I'd like to tell you about why I am interested in incompetence in the workplace. Then, I'll be showing you how we managed to investigate this potentially embarrassing area in 10 different multinational companies. And finally, I'll show you our results that indicate that around 80% of middle managers have been promoted into a position for which they simply don't have the skills.

12.2 Use an “Outline” slide for longer presentations and for arts, humanities, and social sciences

An outline may be more useful when you are giving a longer presentation (20 minutes, 45 minutes) or for topics outside physical and life sciences. In this case the audience may need a slide showing the conceptual framework to help them understand the rest of your presentation. Keep it down to a maximum of four points, otherwise the audience may think that the presentation will be covering too much for them to readily assimilate. As always, you should focus on your main messages.

An outline is also useful when you are not describing some research project, but are talking more generally about a certain issue. In this case, the sequence of your presentation may not be immediately obvious and an outline might help to orient the audience.

In some disciplines, presenters begin with a slide containing a question. This question encapsulates the reason for their research, it is the question that they hope their research will answer. For example,

To what extent does Iran’s foreign policy include realism?
Would online voting solve election fixing?
How has the Internet affected parent/child relationships?

The presenter then needs to have another slide in which he/she indicates the approach or context used to answer this question. This helps to give a structure to the presentation and to alert the audience to what they can expect to hear.

The outline slide for the last question could thus be

The Internet has

- replaced time previously dedicated to family interactions
- replaced educational role of parents
- given parents a mass of info on good parenting
- provided opportunities for shared entertainment

The presenter’s commentary on the above slide could be

When I posed the question “How has the Internet affected parent/child relationships?” I began by focusing on the negative factors, such as how families spend less time together given that most kids today have their PC in their bedroom. And, as a mother myself, I also thought about how parents are being used less and less as a source of information to help kids with school work. But then I realised that parents today can use the Internet to learn about the behaviour of their children and how they can improve their relationships with them—there is so much useful information out there. So that was one positive factor. Another positive factor is that there is a lot of fun stuff on the Internet, particularly videos on YouTube that families can actually share together, in the same way as they might watch a TV show together. So these are the four factors that I have been studying, and today I would like to focus on the first and fourth points.

Note how the presenter

- does not read the four bullets but comments on them using different words
- involves the audience in the story of her decision-making process
- uses an informal but nevertheless professional style
- tells the audience that she is only going to talk about two of the points—she wouldn't have time to talk about all four, and this enables her to talk about two in more detail

12.3 Use transitions to guide your audience

You know two very important things that the audience does not know:

- what you did and found in your research
- the sequence of your slides and why they follow a particular structure

You need to help the audience follow your presentation. You cannot jump from one slide to the next at great speed. If the audience misses one particular point, they may lose the thread (i.e., the links, logical flow) of the rest of the presentation.

The way of moving from one slide to another, and from topic to topic, is crucial. For the audience it should be like following a map, and you need to make it very clear to them whenever you make a turn. Also, at each turn it is helpful if you summarize for them what you have told them so far. Those in the audience who missed a previous turn now have an opportunity to get back on the right road. This is a different from a paper, where readers can, if necessary, just retrace their steps.

In a presentation, these moves or turns are called transitions.

Before you move to the next section or group of slides

1. pause for two seconds. This signals to the audience that you are going to say something important
2. look at the audience and give a quick summary of the most important things you have said so far. Repetition may seem boring to you because you know the subject so well, but it gives the audience a chance to check their understanding
3. move on to the next section explaining how it relates to the previous one

This whole process should take about 20 seconds, so don't think it is unnecessarily increasing the length of your presentation.

12.4 Exploit your transitions

A transition is a good opportunity for

- you to slow down or change the pace of the presentation
- the audience (and you) to relax a little—remember that the audience cannot assimilate vast quantities of information in quick succession
- you to regain the audience's attention by making them curious about what is coming next.

12.5 Signal a move from one section to the next

Imagine at the beginning of your presentation you say something like, “*I am going to give you the three most important findings of our research.*” Then the most obvious transition from the introduction to the main part of your presentation would be to say “*Okay, let’s look at the first result.*” Then later when you introduce the other two results you can introduce them numerically, *the second, the third.*

If your structure is methodology, results, and discussion, then between the methodology and results you could say, “*Okay, so that covers the methodology, now I am going to outline our results, one of which was really quite unexpected.*” This reassures the audience that there is a plan to your presentation, and that they are being guided from step to step.

The second part of the above transition—*One of which was really quite unexpected*—highlights another benefit of transitions. You can use transitions to regain audience attention by getting them interested in hearing what you are going to say next.

12.6 Only move to the next slide when you’ve finished talking about the current slide

It is a good idea not to spend more than two minutes on one slide. The audience will soon get bored looking at the same slide and start thinking about something else. Don’t move on to the next slide before you have finished talking about the current one. Otherwise the audience will stop listening to you and start absorbing the information on the next slide.

12.7 Only use an introductory phrase to a slide when strictly necessary

When the sequence of slides within a section is logical, you often don’t need any expression to introduce the next slide. The transition shouldn’t need any introductory explanation.

Instead of saying “*In this next slide we have a diagram of X which shows how to do Y*” you can simply say “*Here is a diagram of X which shows how to do Y,*” or even more succinct “*Here is how to do Y.*” By avoiding unnecessarily long introductory phrases the impact of your slides will be more dramatic.

12.8 Be concise

If you don’t practice what to say when making transitions, you will probably improvise and say something like

OK, that's all I wanted to say at this particular point about the infrastructure. What I would like to do next in this presentation is to take a brief look at the gizmo. This picture in this slide shows a gizmo. As you can see a gizmo is a . . .

Instead of attracting the audience's attention, the above phrases are full of redundancy, add no information, and are likely to send the audience back to sleep.

Try to make your transitions memorable.

OK, here's something that you may not know about a gizmo: blah blah blah. In fact you can see here that a gizmo is . . .

12.9 Add variety to your transitions

Try to vary your technique for making transitions, so do not always use the same phrase. Here are some alternatives:

Turn the screen off : This immediately regains the audience's attention. You can then write something on the whiteboard or say something orally.

Ask a rhetorical question: For example, you can say, "*Have you ever wondered why it is impossible to predict when your PC is going to crash? Well, after I have summarized what we have just looked at, I am going to tell why experts think it is impossible but how we think we have actually managed to solve the problem.*"

Give the audience something to look forward to: The example above shows how you get the audience to concentrate now by telling them you will be giving them interesting information later. Another example: *In the next slide I will be showing you some fascinating data on xxx, but first . . .* or *Later on, we'll see how this works in practice . . .*

Signpost: Tell the audience where you are in the structure of your presentation. For example if you say "*And now to sum up briefly before the Q&A session*" you are alerting the audience that your presentation is nearly over.

Chapter 13

Methodology

You will learn how to

- explain a process/methodology
- talk about diagrams

Why is this important?

This part of the presentation is where the audience is most likely to get lost, so clear explanations are fundamental. Bear in mind that your audience will only absorb about 20% of the information you give them.

In this section there are many examples from presentations. As in the rest of this book, you will see the original version and the revised version. The original versions are all perfectly acceptable and if you are an inexperienced presenter you may find them more suitable than the revised versions. The revised versions should enable more experienced presenters to connect with the audience more effectively.

13.1 Regain the audience's attention

Most modern movies switch from scene to scene far more frequently than in movies made 20 to 30 years ago (and further back in the past). On the web, videos of three minutes or less tend to be watched far more frequently than those of ten minutes.

This means that our concentration span is getting shorter and shorter, so your audience need to be constantly stimulated if their attention is to be held.

When you describe your methodology, you are probably already three minutes into your presentation and thus your audience's attention will be decreasing.

You have to find ways of regaining it.

See [Chapter 10](#) Getting and keeping the audience's attention

13.2 Give simple explanations and be careful when giving numbers

Explain things in a way that the audience does not have to make a big mental effort. Your audience will probably only be able to absorb about 40% of what you are saying. So it helps if you repeat anything complex for them—do not expect them to understand everything the first time.

If you use numerical examples, make sure the numbers appear on the slide as it is very difficult for audiences to mentally translate numbers at great speed into their own languages and then be able to follow the example.

13.3 Give examples first, technical explanations second

The methodology part should be one of the highlights of your presentation and you should have fun explaining it. It helps the audience to follow a technical explanation if you give examples and intuitions first and then explain the process. If you begin with theoretical aspects you will probably lose the audience and maybe get lost yourself. If you begin with a simple example you gain the attention of the audience and gain confidence yourself.

13.4 Reduce redundancy

Be brief and only talk about what is strictly necessary. Only spend more time if *how* you did something is more important than *what* you achieved, i.e., if your methodology is more important than your results or if at this stage in your research you have no results. In this case, explain the steps clearly and why your chosen methodology was suitable (or not) for what you wanted to do. But again only mention what the audience really needs to know in order to make sense of what you did.

Reduce any introductory phrases when describing diagrams and examples:

Here I present a panoramic view of the architecture. = This is the architecture.

Now you can see here an example of an interface. = Here is an interface.

We shall see two examples in the following slide. = So here are two examples

In conclusion we can say ... = Basically, ...

13.5 Just show the key steps in a process or procedure

If you are showing your audience a process, it is tempting to show them all the steps of the process. The typical way to do this is to cut and paste a complex diagram from a book or paper, or to begin with a skeleton diagram and then gradually add new parts to it either via animation or a series of overlapping slides. This has three major problems:

- audiences can recognize a cut and paste—it gives the idea that you couldn't find the time to create something specifically for them
- the animation may not work (due to the transfer from your PC to the conference PC)
- gradually building up a diagram may take too long and can be very tedious for the audience. Also, if you realize that it is taking too long, you will probably speed up your explanation and your audience may not grasp what you are saying.

The solution is to ignore any pre-existing graphics and start from scratch. This does not have to be a laborious process, because you only need to highlight the essential. Your aim is to guide the reader through the highlights of the process. If something is quite complex, then break it up into manageable steps over two or three slides—but occasionally go back one slide or two, to highlight to the audience the various connections. If it takes more than three slides, then consider that you are probably entering into too much detail.

13.6 Explain why you are not describing the whole process

If you think people will criticize you for not explaining the whole process, you can say,

We don't have time to look at the complete process, so I just wanted to show you this part. If you are interested in the whole process then I can explain it at the bar or you can look it up on my web page.

If you are worried that someone in your audience will want to see absolutely every detail in your diagram, chart, table, or graph, then as you show your slide say,

This is a very simplified version of . . . This is what the prototype looks like in very general terms . . . The full diagram is on my web page. I will give you the address at the end of the presentation.

You can also use phrases that indicate that you are only talking in general terms, such as

For the most part . . . Broadly/Generally speaking . . . With one or two exceptions . . . As a general rule . . .

Then you can

- show a diagram of the complete process but magnify one or two parts of the process that you would like to focus on. Magnify means making those particular parts bigger so that the audience's attention is only drawn to those points. The other parts will in any case be deliberately too small for the audience to see
- just show three consecutive parts of the process and focus on the one in the middle, showing how it connects to the previous part and the next part
- highlight using a circle or a particular color the aspect (e.g., a row or column of a detailed table) that you want the audience to focus on so that they will ignore the other information
- use a different font and a bigger font size

13.7 Use active and passive forms effectively

You can use active and passive verbs even when describing a process in which you were/are not directly involved. Look at this extract explaining how ink is removed from magazines so that they can be recycled.

When the magazines first arrive at the de-inking plant, they go through the wire cutter, which is this thing here [*indicates the wire cutter on the diagram in the slide*]. The blade of the wire cutter slips under the baling wire, cuts it and releases loose magazines onto the conveyor. Now here you can see how the magazines then move up the conveyor to a pulping machine, which stirs the paper until a thin pulp is formed. After the magazine pulp has been thoroughly cleaned, it is piped to the final step—the paper machine, which you can see here.

Where she can, the presenter has used the active form (in the first part of the description: *arrive, move, cuts, releases*, etc.). In the last sentence she decides to use the passive (*is formed, has been cleaned, is piped*, etc.). This is because the recipient of the action, i.e., the pulp derived from the magazines, is a more relevant subject than the machinery used to move it around, since it is this pulp that is the subject of the whole process and also the subject of this part of the presentation. Moving from active to passive also creates variety in the description, and not using the passive all the time gives energy and dynamism to the description.

Note also how the presenter guides the audience by indicating on the diagram where they are in the process and by explaining technical vocabulary by pointing at the relevant item (*the wire cutter, which is this thing here*).

13.8 Indicate where you are in a process

Clearly when you are describing a process, such as recycling paper (see example above), you cannot always maintain full eye contact with the audience. You may occasionally need to point at the diagram. You can do this in various ways:

- use a telescopic pointer pen—they range in length from about 500–1000 mm and are relatively inexpensive. You can then stand to the left or right of the screen and use the pointer to indicate the item you are talking about
- use the pointer on PowerPoint (to turn it off, press the A key)
- draw on the screen. To show the pen, press *ctrl* or *cmd* + P (to turn it off, press the A key)

It is best to avoid using the laser pointer on the remote as it can be difficult to manipulate.

13.9 Tell a story rather than sounding like a technical manual

You can make a very technical explanation more interesting if you tell it like a story.

ORIGINAL	REVISED
The method was carried out as follows. Initially, X was done which led to a failure as a consequence of ... The next attempt involved ...	First I tried this, but it didn't work because ... so I tried that ... unfortunately that failed too probably because ... finally, one of the members of research group had a brainwave and ...

If you insist on giving a very technical explanation, keep it as short as possible. Also, give frequent summaries so that the audience can understand how each step is related. You can then say “*In other words ...*” and give a simpler summary.

In other types of presentations you may need to explain for example how you chose patients for a clinical trial, how you chose people for a survey, or how you selected specific data from a databank. You can involve your audience much more if you

- talk about the selection process like a story
- use active verbs rather than passive verbs
- exclude nonessential details

Below are two examples. The first example is a medical study involving laser vision correction:

ORIGINAL	REVISED
<p>The protocol, approved by the University Internal Ethics Committee, was carried out in accordance with what was outlined in the Declaration of Helsinki, and eligible patients were enrolled in the study during a screening visit after providing informed consent.</p> <p>The study comprised 100 patients that is to say 200 eyes, with various levels of impaired vision who had been referred to the Department of Ophthalmology and Neurosurgery. The inclusion criteria covered ages between 20 and 50 years, . . . Patients were not included if any of the following conditions were found to be present: corneal astigmatism =1D, surgical complications . . .</p>	<p>Basically, we selected 100 patients that members of our department had seen over the last year. We decided to study patients with an age range between 20 and 50, as those are the types of people who tend to opt for laser treatment. They had various levels of impaired vision. For obvious reasons we excluded any patients who had had any of these conditions [<i>shows list on slide</i>].</p>

Note how the revised version leaves out some of the details of the original (Declaration of Helsinki, ethics committee, informed consent, university department name). Although getting the approval of an ethics review committee (ERC) and informed consent from patients are cornerstones in medical research, the audience knows this already and does not need to hear it. It would only be interesting if an ERC had not given approval or if the patients had no idea what the research was about. The name of the university department was probably on the title slide and/or in the conference proceedings and is not relevant here.

This second example is from a survey on Vietnamese students' ability to write scientific English:

ORIGINAL	REVISED
<p>The research was conducted at two departments at Hanoi University of Technology, hereafter referred to as departments A and B. Ninety-four postgraduate male and female students took part in the experiment and survey. All had studied English for at least 7 years . . .</p>	<p>For my survey I needed Vietnamese students with a sufficient knowledge of English to be able to write technical English. Initially I started with some undergraduate students, as they were the easiest to find and had the most time available. But it soon became clear that postgraduates would be a better option, as the undergraduates did not have many assignments in English. Then another problem was that many Vietnamese PhD students actually study abroad, so it was quite difficult to find a sufficient number all studying in the same place, and all with a good knowledge of English. In the end, I discovered two departments at the Hanoi University of Technology . . .</p>

Both of the original versions would be possible in a presentation, but audiences might find the revised versions more interesting because

- the original versions sound like they were lifted directly from a paper. People do not usually talk in such a way. The use of the passive form (except when describing a process, see [Section 13.7](#)) is generally a sign of formality and is more often found in writing
- the revised versions make the presenter the protagonist (the main actor), the presenter talks the audience through the decision-making process in a way that makes the presenter seem like a real human being rather than an anonymous provider of information

13.10 Bring your figures, graphs, etc., alive

Constantly think to yourself “Why should the audience be interested in what I am saying?” If you show a figure, bring it alive to the audience. Try and transmit some of that energy you had when you were doing your research and you got your great/unexpected results.

Compare these two versions of a presenter’s commentary of a slide showing a diagram of how a software application (jscope) works.

ORIGINAL	REVISED
As you can see, this picture shows the framework of our software and illustrates that the storage of the information can be arbitrarily distributed, that the registration of the resources is guaranteed by a library, and that the discovery of the information is simplified by another library.	So here’s the framework. jscope has loads of features. <i>[pause for two seconds while audience looks at the diagram]</i> I particularly like three things about it. First, you can get anyone to store the info, completely randomly. Second, this library here took us months to compile. But what it does is to guarantee that resources are registered. Third, this other library helps you to find the info you want.

Note how the revised version

- numbers the three features, thus making it easier for the presenter to list them and easier for the audience to assimilate them
- avoids excessive use of nouns (*storage, registration, discovery*)
- uses the active rather than the passive
- uses personal pronouns (*I, us, we, you*)
- cuts words that may be difficult to pronounce (e.g., *arbitrarily*)
- uses more words than the original, but this is compensated for by its high digestibility factor (seven short sentences versus one long sentence)

For more on describing figures, graphs etc see [Sections 9.11, 9.12, 9.13](#), and [9.14](#)

13.11 Minimize or cut the use of equations, formulas, and calculations

Equations, formulas, and calculations are difficult and time consuming to explain. They

- rarely interest the audience and often confuse them
- may distract the audience—they start deciphering the equation and stop listening to you

If you show the formula below on a slide, the temptation for you is to explain each of the symbols. This would take several minutes and by the time you have finished the audience will probably have forgotten what you said at the beginning.

$$kV(s) = \frac{q_1 S(s) + \sigma_2 T(s)}{\beta_3 U(s)}$$

Instead of explaining the math in detail, just talk about its importance and how it relates to your study. You can then give details in a handout. For example you could say,

I am not going to explain the details of this formula—you can find them on my website, which I will give to you at the end of the presentation. Basically the formula says that if you want to analyze how easy it is to understand a written sentence, then you shouldn't just concentrate on how many words are used, but also the stress (S) and the time (T) involved in trying to understand it. So U stands for level of understanding. Using this verbosity index we found that scientific papers are 37 times more difficult to read than advertisements for products.

If you must use math, talk slowly, and go through everything step by step. Remember that people normally study equations on paper; it is not easy for an audience to absorb a formula in a very short space of time.

Chapter 14

Results and Discussion

You will learn how to

- communicate the value of your research
- explain statistics
- not overload on details
- talk about negative results

Why is this important?

This is the part of the presentation that may be of most interest to the audience but it comes at a point when audience concentration is likely to be at its lowest. An audience will forget more than 75% of what they hear within 24 hours, so informing them of all the details of your results is a waste of time.

14.1 Tell the audience what they need to know—not everything that you know

Unless describing the methodology is the main purpose of the presentation, the results are usually given in the middle of the presentation. In the middle means in terms of time, not the number of slides. You may in fact be towards the end of your slides, as you will go through the first slides more quickly.

Your findings and results should generally be the highlight of your presentation. The audience just need brief answers to the following questions:

- what did you find?
- was it what you expected?
- what does it mean?
- why should we be interested?

In a 10-minute presentation, this part should be just a couple of slides. It is not advisable to introduce interesting side issues, as they might confuse the audience.

Try to avoid the temptation to give the audience the full Wikipedia explanation. If you present a slide full of information, you yourself know what is important and where to focus your eyes, but the audience doesn't.

To make it clear that you are generalizing about your results, see [Section 13.6](#).

14.2 Explain statistics, graphs, and charts in a meaningful way

The statistics that you give the audience (whether your own statistics or those of others) will be very familiar to you, so there is a natural tendency to explain them too quickly and in too much detail. The secret is just to select a few and explain them in a way that the audience can understand.

For more on describing figures, graphs etc see [Sections 9.11, 9.12, 9.13, and 9.14](#)

14.3 Communicate the value of what you have done—put your results in the big picture

For you it may be clear how your results fit in within the current state of the art, but for your audience it may not. Tell the audience how your findings contribute to knowledge in your specific field. Show and tell them the benefits. Use expressions such as

What this means is that ... The key benefit of this is ... What I would like you to notice here is ... What I like about this is ... Possible applications of this are ... I would imagine that these results would also be useful for ...

ADVANCED TIPS

14.4 Avoid phrases that might make you sound overconfident or arrogant

When you talk about your results, it is generally a good idea to leave your discussion open to other interpretations. Compare the two versions below:

ORIGINAL

These results *definitely prove* that plain ethylene-vinyl acetate and cellulose are incompatible. *Our results also demonstrate* that cellulose fibers *are* more effective fillers for ... *No other researchers* have previously managed to find evidence of this effectiveness. *Cellulose should therefore be used* in preference to ...

REVISED

These results *would seem to indicate* that plain ethylene-vinyl acetate and cellulose are incompatible. *We believe that our results also highlight* that cellulose fibers *may be* more effective fillers for ... *To the best of my knowledge*, no other researchers have previously managed to find evidence of this effectiveness. *I would thus recommend using* cellulose in preference to ...

Note how in the revised version you are not removing the strength of what you are saying. In fact, you gain more credibility if you stress that you are open minded. You show the audience that you are aware that new discoveries are being made all the time and that there may be different ways to achieve the same result.

This means of communication is called “hedging,” and in presentations it should prevent the audience from seeing you as too arrogant or presumptuous.

You can protect yourself from such criticism by not stating things too categorically:

- put *would seem to/would appear to* before verbs such as *prove, demonstrate, give concrete evidence, support* (as in the revised example above)
- consider replacing verbs such as *prove* and *demonstrate* with less strong verbs such as *suggest, imply, and indicate*
- hedge strong affirmations using modal verbs (*would, might, may, could*) for example *this could possibly be the reason for ... this may mean that ...*
- replace adverbs that appear to leave no room for doubt, such as *definitely, certainly, surely, undoubtedly, indisputably*, with more tentative forms such as *probably, possibly, likely* or *it is probable/possible/likely that ...*
- avoid preceding categorical statements such as “*No data exist in the literature on this topic*” or “*This is the first time that such a result has been achieved.*” You can replace such expressions with *to the best of our knowledge, as far as I know, I believe, I think.*

- be careful not to sound like you want to impose your ideas—the phrase *Cellulose should therefore be used* is very strong, as in this case there is little difference between *should* and *must* (they are both often found in sentences describing obligations)

For more on hedging see companion volume *English for Writing Research Papers*.

14.5 Tell the audience about any problems in interpreting your results

Don't worry if there is not necessarily one unique or clear way to interpret your results. Again you can use a “hedging” technique, and admit such difficulties:

Interpreting these results is not straightforward primarily because the precise function of XYZ has not yet been clarified.

Although the physiological meaning *cannot be confirmed* by any direct observation, I believe that . . .

Despite the fact that *there appears to be* no clear correlation, I think/imagine that . . .

One way of explaining these contrasting results could be . . .

One of the possible interpretations for such discrepancies might be . . . but our future work should be able to clarify this aspect

The results did not confirm our hypothesis, nevertheless I think that . . .

Note how many of the phrases above include modal verbs (*might, could, should*), adverbs of concession (*although, even though, despite the fact, nonetheless, nevertheless*), and verbs that express a hypothesis rather than 100% certainty (*think, believe, imagine*). Such phrases are all useful for making what you are saying sound more tentative.

Also, look at the words in italics in the first three sentences: the subject of the verbs (*interpret, confirm, appear*) is impersonal, the speaker does not say, for instance, “*when I tried to interpret these results*.” This allows speakers to distance themselves from their results, to give the impression that the results do not depend strictly on them personally.

14.6 Be positive about others in your field

If you were Jim Smith and heard the original version below, imagine how you would feel.

ORIGINAL

I completely disagree with Jim Smith's interpretation of his own findings. He clearly misunderstood the significance of the outliers and failed to take into account the results of the third study.

REVISED

I found Smith's interpretation of his findings very interesting, though I do think there could be another reason for the outliers. Also, it might be worth analyzing the results of the third study in a different light.

Even if what the presenter said was true, you wouldn't be very happy to hear it expressed in such a negative way. As highlighted in the revised version, the secret is again to "hedge" what you are saying using the same techniques as suggested in 14.4 and 14.5, and to always be polite and constructive.

14.7 Explain whether your results were expected or not

If your results were not what you were expecting the audience will be curious to know why. Try to present the reasons in an interesting way, rather than as cold facts:

ORIGINAL	REVISED
The research failed to find agreement with our initial hypotheses. The results indicated X and not Y. Further analysis of the data revealed the necessity to effect a modification of a fundamental nature in our perspective.	I was surprised at the results, to say the least. It was actually the middle of the night, and I remember phoning the others in the team to tell them the news . . . The results were not what we were expecting at all. In fact they indicated X rather than Y. And now that we have examined the data in more detail, what we found is now beginning to cause a fundamental change of view.

When, as in the revised version, you comment on your feelings and you use a narrative style, you inevitably use more words. This is not a problem, as in this case if you were concise (like I have suggested you should always try to be) you would lose the drama and thus the interest of the audience.

14.8 Be upfront about your poor/uninteresting/negative results

A problem for researchers in some fields is that they agree to give a presentation at a conference that is scheduled 6–9 months later, hoping they will be able to present the results of some ongoing research. But they end up with unexpected, uninteresting, or seemingly inexplicable results.

But as stated in the popular journal *New Scientist*, *Science rarely delivers what scientists set out to find*.

Scientists who have been in research for many years will tell you that over the course of their careers, quite a large percentage of their results were not what they were predicting. But if you ask them what they do with these "negative" results, the good scientists will tell you that they learn from them. And, they tell their colleagues about their failures so that these colleagues can learn from them too. To do this they use papers in journals, but also presentations where they know there are often people in the audience who will see these unexpected results as a challenge and may help find a solution.

Dr Ben Goldacre is a British medical doctor who has spent much of his career trying to get medical scientists, the pharmaceutical industry, and the mass media

to be more transparent in publishing negative results. He talks about the dangers (including the death of innocent patients) of suppressing negative data. This is what he says in his fascinating and very readable book “Bad Science”:

‘Publication bias’ is a very interesting and very human phenomenon. For a number of reasons, positive trials are more likely to get published than negative ones. It’s easy enough to understand, if you put yourself in the shoes of the researcher. Firstly, when you get a negative result, it feels as if it’s all been a bit of a waste of time. It’s easy to convince yourself that you found nothing, when in fact you discovered a very useful piece of information: the thing that you were testing *doesn’t work*. . . . Publication bias is common, and in some fields it is more rife [widespread] than in others. In 1995, only 1 per cent of all articles published in alternative medicine journals gave a negative result. The most recent figure is 5 per cent negative.

The aim of a congress is to share experiences—both good and bad. If you have, or appear to have, negative results the audience will certainly be sympathetic, and probably relieved, because most of them will have been in the same situation. So

- admit to the audience that the results were not what you were hoping for
- never hide the poor results or invent anything to make them more interesting
- say what you plan to do next to resolve these problems
- ask the audience for help—have they experienced this, what did they do? Encourage them to come and talk to you later.

If you don’t do the above, you risk giving a bad presentation because you won’t be motivated to prepare well, thinking that your results are not interesting, and thus your presentation is unlikely to be inspiring.

In any case, consider asking your professors and colleagues about how they resolve the problems of presenting negative or unexpected data.

14.9 Encourage discussion and debate

Conferences tend to me much more interesting when the presenters speak convincingly about their topic, but they leave the door open to other possible approaches and interpretations. Also, they are willing to discuss any limitations in their research. If you follow this practice you will

- sound more credible. You will seem confident enough to give the audience space to suggest alternative interpretations
- sound less arrogant. Your aim is not to lecture to the audience like a university professor, but rather to discuss your ideas with them. It is important that your tone of voice is friendly and not hard. You do not want the audience to be passive listeners but to be active in asking questions, both in the Q&A session and after the presentation at the bar or social dinner

A series of presentations where ideas and results are presented in a way that there is no room for debate does not make for a stimulating conference.

Chapter 15

Conclusions

You will learn how to

- state your conclusions clearly and succinctly
- talk about your future work
- elicit feedback from the audience

Why is this important?

The conclusions are an essential part of a presentation—you want to remind the audience of your most important points/messages and leave them with a positive final impression, which will then encourage them to read your paper and contact you in the future.

15.1 Be brief and don't deviate from your planned speech

In a ten-minute presentation, your conclusions should probably last around one minute—in fact, you should only need three or four sentences. If you are not brief you will lose the audience's interest and they won't be able to remember what you have said.

It is vital to prepare your closing and know exactly what you are going to say (every word) and do. Ending suddenly by saying *“that's it”* or *“thank you”* does not create a good impression.

First, stand confidently and look directly at your audience. Signal that you are coming to an end. This is important as it will wake them up and get them to concentrate on the final points that you want them to remember.

Like the beginning, it is worth trying to memorize your last 60 seconds so that you do not have to look at your slides, laptop, or notes—but just at the audience. This will give the audience the sensation that you are confident and professional.

State your conclusions clearly and a little bit more slowly than in the previous part of the presentation—try not to be in a rush to finish!

15.2 Make sure your final slides give useful information

Look at the slide below. If the presenter deleted it, would the audience still be able to follow what he/she says? Very probably, yes.

FUTURE WORK

- We want to perform experiments using the prototype gizmo
- We will enhance the prototype so that we can produce an industrial version
- We will trial the industrial version in hospitals

When you use a slide to summarize your main points, you really want the attention of the audience, so don't write full sentences. By using short phrases you force the audience to think about what they might mean, and this should lead the audience to being more attentive. So the above slide could be rewritten as

FUTURE WORK

- Experiment using gizmo
- Enhance prototype to industry
- Trial in hospitals

Such a slide should help you to remember the three points and make the audience more alert to hear the full meaning behind the three words.

However, as mentioned in [Section 7.7](#), using full sentences may be appropriate if you have an audience with poor English listening skills.

Alternatively, you could avoid having a conclusions slide. Instead, you move to the whiteboard and write your three key words—*experiment*, *enhance*, *trial*. Simply by getting the audience to move the focus of their eyes will catch their attention and then they are more likely to listen to what you say.

15.3 Show your enthusiasm

As I hope I have highlighted throughout this book, presentations are most effective when the speaker uses simple language, talks to the audience as if they were a group of friends, and sounds convinced (and if possible enthusiastic). Compare these two versions of conclusions to a presentation on the conversion of organic waste into energy.

ORIGINAL	REVISED
Well, we have arrived at the end of this presentation now. In conclusion, from these results the following considerations can be drawn. Using the methodology outlined in this presentation, the production of a certain quantity of energy can be derived from the utilization of organic waste. The consequence is that small farms have the potential for the generation of sufficient quantities of fuel and heat to satisfy their needs, thus leading to the reduction of the current reliance on oil and nuclear power. Thank you for your attention.	So, just a quick summary. Using our process, we can produce energy. Energy from organic waste: THE MOST DISGUSTING sludge in the world. This virtuous circle means that small farms could generate all the fuel and the heat that they need just by using waste! So we all become less dependent on oil and nuclear power. And the added benefit is that this helps factories and cities to resolve the problem of waste disposal, which is particularly complex for organic waste. Two problems resolved at the same time!

Note how the original version

- takes 30 words before reaching the phrase *the production* ..., which is the first time that the audience hear key information. The revised version only takes eight words to reach this point
- repeats words unnecessarily (e.g., *presentation*). The revised version repeats words (e.g., *energy* in the second line) for dramatic effect
- uses a preponderance of nouns (*production*, *utilization*, *generation*). The revised version uses more verbs (*produce*, *using*, *generate*)
- uses no emotive adjectives (e.g., in the revised version the presenter uses *disgusting*)
- doesn't allow the presenter to sound enthusiastic

15.4 Five ways to end a presentation

Below are some ways to end your presentation, which are similar to the ways suggested to begin your presentation (see [Chapter 11](#)):

1. use a picture
2. directly relate your findings to the audience
3. give a statistic
4. ask for feedback
5. talk about your future work

As you read them, note how they try to do some or all of the following:

- announce to the audience that the speaker is about to give his/her conclusions and do this using just two or three words (e.g., *in conclusion*, *to sum up*). Audiences tend to have a higher attention if they know something is about to finish
- repeat the key points of the presentation in order to give the audience a clear message to take home and remember
- try to address/involve the audience directly—again this helps to capture audience attention

15.4.1 Use a picture

This is probably the easiest way to end your presentation. There are many ways to use pictures in your final slide:

- if you had a key picture that you used earlier in the presentation, you can re-exploit by superimposing your conclusions on it. This picture should be chosen so that it reminds the audience of an important point that you mentioned earlier
- if you focused on your country when you were introducing yourself at the beginning of the presentation, you could use another photo or a collage of photos depicting scenes from your country and suggest that the audience travel there some time
- if the basis of your conclusions is your future work, you could create a picture that illustrates your concepts or simply gives the idea of future work or work in progress. A typical picture people use is a “men at work” road sign—if possible customize it in some way to differentiate yourself from the thousands of other researchers who use such a slide
- if you are feeling creative you can design an amusing slide (e.g., a cartoon or photo) that sums up your message. You can get ideas for this by looking at the endings of presentations on [ted.com](#)

It is worth investing some time in creating a good final slide which the audience will find memorable. And you will be able to exploit or adapt this slide in

many future presentations too. For example, I live and work in Pisa, Italy. I had an artist draw a funny cartoon of me holding up the Leaning Tower. I have been using this cartoon for many years during my presentations and it always gets a smile from the audience thus helping to end the presentation on a warm and positive note.

15.4.2 Directly relate your findings to the audience

You can relate the implications of your research directly to the audience—tell them what impact it might have on them personally if your findings were, or were not, put into action. For example

In conclusion, our comparison of inner city schools in poor areas and private schools in richer areas highlighted that kids from private schools achieve about 20% better results. What we found to be critical was what children do during their summer holidays. The parents of the children from richer families tended to give their kids access to more books and to encourage them to visit museums and so on. Kids from the inner schools simply didn't have this extra boost from their parents. And just to remind you what I said during my discussion of the results, this means that having access to more computers or to better teachers does not seem to make much difference. So if any of you have kids, I think there are four lessons to be learned. First encourage them to be as proactive as possible, second tell them not be afraid of authority, third get them to engage in critical thinking, and finally don't let them spend the whole of the summer holiday lying on the beach or surfing YouTube and Facebook.

15.4.3 Give a statistic

I watched a researcher give a presentation on an alternator for an automobile engine. An alternator converts power from the gasoline engine that drives the car along. In his conclusions he told us that using his alternator would reduce our consumption of gasoline by 2–3% a year, thus saving us 90 euros.

The problem is that 90 euros doesn't sound like a big saving. A more effective way of communicating this information might have been to say

So, to sum up, I think there are three advantages of my design for an alternator. The first two advantages, as I showed you when I was explaining the design and development, are that it costs less to produce than traditional alternators, and a massive 80% of its parts can be recycled. But I think the third benefit is the one that will interest you the most. My alternator will reduce gasoline consumption by about 2–3%. That may not sound very much. But if everyone in this room used it—I have counted about 50 people here—then we would save nearly 5000 euros a year. If every car driver in this country used it, we would save about 1.8 billion euros a year. That's a lot of money saved on importing gasoline from abroad. And that's without even thinking about the reduced environmental impact.

Using interesting statistics is a great way to end a presentation. But

- relate them to the audience in some way
- if necessary, multiply them to get a number that is powerful and evocative

15.4.4 Ask for feedback

You can use your conclusions to get help from your audience. In the following example, the presenter uses the three points in his conclusions to stimulate interest in the audience:

What would be great for us is to have your feedback on these three points [*points to his slide which contains three key conclusions*]. First, it seems to us that our Gizmo has solved the problem of overheating—what do you think? Second, our results would appear to show both P and Q—so what is the reason for this apparent contradiction? It would be really useful if any of you could give me some ideas on this. Third, we are pretty sure that our Gizmo could be used in hospitals—but maybe you know of other possible applications.

15.4.5 Talk about your future work

Your plans for the future are actually one of the main reasons you are at the congress. This is a fantastic opportunity to do some self-promotion. You may have up to 100 people listening to you. One of them might be interested in helping you or collaborating with you. Tell the audience that you would welcome speaking to anyone who could suggest ways of continuing your line of research. If you have done a convincing presentation and have showed that you are the kind of person other people might like working with—not just because of your scientific knowledge but equally importantly how you seem as a person—then you might find that you get an invitation to work in another laboratory that might have more equipment or funds than your current one.

Talking about future work is particularly appropriate when you have presented negative findings, when you have told the audience that your research did not go as you expected. You can also use your conclusions to talk about the limitations of your work. In both cases, your future work will probably thus involve rectifying the problems you encountered and telling the audience how you plan to do this.

A possible limitation of our work is that we have used two rather simple datasets. Unfortunately, due to computational constraints we couldn't use larger networks. But as I hope I have highlighted, we are still only in the first phase. So we are more interested in the methodology. But in the next phase, we are planning to implement the code using other programming languages. In any case, I think that there are two main benefits of our methodology compared to previous ones. First, . . .

15.5 Write/Show something interesting on your final slide

About 95% of scientific presentations seem to end with a slide that says one of the following:

1. Acknowledgments
2. Thank you *or* Thank you for your attention

3. Questions? *or* Any Questions?
4. Contact details: adrian.wallwork@gmail.com

The first, *Acknowledgments*, is not a memorable way to end a presentation. The people you acknowledge are not likely to be of interest to the audience (see [Section 6.1](#)), and so their final impression will be of a very uninteresting slide containing no useful information.

The second, thanking the audience, is a standard way to signal that the presentation is over. One of my students said that she always uses it because “*It seems impolite not to do it because everybody else does it.*” This could in fact be a good reason not to use it as it is very much overexploited, and will probably not be appreciated by an audience who may have already seen 20 presentations in the last 24 hours that end in such a way.

The third one is an effective, though again overexploited, way to begin a question and answer session.

The last one (contact details) gives vital information. But it could be expressed in a way that will really encourage people to contact you, for example

Please get in touch! adrian.wallwork@gmail.com

If you use the second, third or fourth solutions, either individually or in combination, it's nice to superimpose the words on a photo in one of the ways suggested in [Section 15.4.1](#).

I have seen many great ‘thank you’ slides in which the ‘thank you’ appears to be being said by the person or animal shown in the background photograph. For example, I watched a medical researcher from Kenya do a presentation on possible treatments for diseases that affect millions of African children. Her ‘thank you’ was a bubble coming out of the mouth of an African child. Another presentation was on planting wildflowers in the middle of roundabouts. In this case the ‘thank you’ was ‘said’ by some butterflies that were fluttering above the flowers!

15.6 Prepare a sequence of identical copies of your last slide

Typically if you hit the advance button while showing your last slide you drop out of the presentation program. This then means the audience will see the smaller window of the presentation and your desk top—this does not look very professional. Duplicate two or three copies of your last speaking slide so that if you accidentally advance one too many times at the end of your presentation, the slide looks like it has not changed.

After these slides, you should include some slides that answer questions that you expect to be asked. These slides will be useful during Q&A sessions after the presentation.

Chapter 16

Questions and Answers

You will learn how to

- anticipate questions from the audience
- deal with difficult questions
- react when you don't understand a question
- exploit “useful phrases” to extricate yourself from difficult situations

Why is this important?

If you know you have prepared well for this difficult part of the presentation, it will give you confidence. In addition, the questioners may be the same people that could help you clarify important points about your research or who may want to collaborate with you or invite you to their lab.

16.1 Don't underestimate the importance of the Q&A session

Questions from the audience may inspire you to give interesting insights into your research that may not have come up during the main part of the presentation, and may stimulate ideas for future research.

You may feel that the worst is over and you can relax. But don't feel too relaxed because you need to be completely focused to answer questions, particularly difficult ones. If you are very hesitant or seem unsure about your answers in a Q&A session, then much of the positive impact of your presentation will be lost.

Be very careful of your body language. For example presenters who fold their arms may be perceived as being defensive.

16.2 Prepare in advance for all possible questions

The Q&A session may be the part that you are worried about the most, as it seems that you have no control over the questions the audience might ask you. In reality you do have some control, as long as you give yourself time to prepare before the presentation.

Practice your presentation in front of colleagues, friends, and relatives, and get them to write down three questions that they would like you to answer. Choose the ones that you think are the most relevant, then prepare answers to them.

If you have thought of all the questions your audience are likely to ask, it will enable you to

- seem professional in your immediate ability to answer a question
- stand a better chance of understanding (in terms of the words the questioner uses) such questions when they are asked
- prepare in advance extra slides to answer such questions
- prepare yourself mentally for difficult questions from difficult people, and during the session remain calm and polite

16.3 Learn what to say before you introduce the Q&A session

Some things you might want to say before the question and answer session are

- tell the audience where they can find the relevant documentation, handouts etc.,
- tell them whether they can/should contact you (give your details) or someone else
- thank the audience
- ask them if they have any questions. Note: if you are at a conference and the chairperson is present, then he or she will generally invite the audience to ask questions

16.4 Give the audience time to respond to your call for questions

It is normally the chairperson's job to ask if anyone has any questions. If he/she doesn't, then you can ask the audience yourself.

When you say, "*Does anyone have any questions?*" give the audience more than just a few seconds, even if you secretly hope that no one will ask you anything so that you can finish and return to your hotel room!

On the other hand, if you are worried that no one will ask you a question, you can

- arrange for one of your colleagues to ask a question that you have already prepared for him/her
- ask yourself a question, e.g., *One question I am often asked is . . .*

16.5 Get the questioner to stand up and reply to the whole audience

Sometimes the reason you or the audience can't understand the question, is because the questioner is sitting down and he/she cannot be seen or heard very easily. Simply say

Do you think you could stand up and speak a bit louder? Thank you.

This has the added advantage that you have a second chance to hear the question yourself!

Answer not only the questioner but the whole audience. Good presenters tend to maintain eye contact with all the audience, but keep going back to the questioner to check from their body language (e.g., nodding, positive smiling) that he/she is satisfied with the answer.

16.6 Repeat the questions

If your audience is quite big, repeat any questions from the audience so that

- the rest of the audience can hear the question clearly—this is particularly true if the question comes from someone in the front row, as the back rows will not be able to hear it
- you can reformulate any contorted questions
- you have time to think about an answer
- the questioner can check that you have understood his/her question

In any case, give yourself two to three seconds to formulate your answer before responding.

16.7 Remember that it is not just your fault if you can't understand the question

Your ability to understand the questions depends not just on you. It is also the responsibility of the questioner to phrase and enunciate the question in a way that you will understand it.

So, if you don't understand a question, particularly from a native speaker of English, simply say

I am sorry, but like many people in the audience, I am not a native English speaker. Could you speak a little more slowly please? Thank you.

Alternatively you could say,

Would you mind emailing me that question, and then I will get back to you?

Do you think you could ask me that question again during the coffee break?

Sorry, I really need to check with a colleague before being able to answer that question.

16.8 Don't interrupt the questioner unless . . .

Most people don't appreciate being interrupted when they are asking a question. However, if they are clearly having difficulty in expressing themselves and you feel it would be right to help them, you could say, "*So you are asking me if . . .*" Basically you are anticipating what they want to say, and saying it in your own words for them.

If their question is taking a very long time to ask (particularly if it seems that they are just using the opportunity to talk themselves), you can say

Sorry, I am not exactly sure what your question is. I think it might be best if you asked me at the bar.

If you realize that the question has limited interest for the rest of the audience, respectfully say to the questioner,

For me this is a fascinating topic, but I think it might be best if we discuss this during the break. If that's okay with you. Now, does anyone else have any questions?

16.9 Be concise

When answering a question it helps to be concise, particularly as you might otherwise forget what the original question was.

If the question only requires the answer yes or no, you can be suitably brief and move on to the next question.

Sometimes you will get two-part questions. It's generally the best option to choose the part of the question that is simplest to answer first. If you forget the other part of the question, you can ask them again, or move on to another question, and then go up to the person after the presentation and talk to them directly.

There are some questions that you could discuss for hours, but the questioner is not asking you to tell them everything you know about the topic, but just what is relevant to now. If you are tempted to begin a long conversation with someone in the audience, offer to meet up later.

16.10 Always be polite

Very occasionally questioners in the audience seem to want to provoke us, and one natural tendency is to become defensive. However, if you watch professional presenters they never say anything negative about other researchers or their findings. Likewise, you don't need to take any criticisms or objections personally. Simply say

I think you have raised an interesting point and it would be great if we could discuss it in the bar.

I was not aware of those findings. Perhaps you could tell me about them at the social dinner.

Be aware that some people just ask questions to demonstrate their own knowledge. In this case, you can say,

You are absolutely right. I didn't mention that point because it is quite technical/because there was no time. But it is covered in my paper.

For more on handling questions and understanding native English speakers, see the companion volume *English for Academic Correspondence and Socializing*.

Chapter 17

Useful Phrases

You will learn how to

- use the most appropriate phrase in different stages of your presentation
- recognize, and thus understand, the typical phrases used in other people's presentations

Why is this important?

Selecting some of the phrases below will give you confidence when you move from slide to slide and topic to topic. They will also enable you to deal with unexpected situations and with difficult questions that the audience may ask you.

Note: You don't need to learn all the phrases listed in this chapter, just choose the ones you find easiest to say and remember.

17.1 Introductions and outline

Introducing institute/department

Hi. Thanks for coming ...

I am a PhD student/researcher/technician at ...

I am doing a PhD/a Masters/some research at ...

I am part of a team of 20 researchers and most of our funding comes from ...

The work that I am going to present to you today was carried out with the collaboration of the University of ...

Telling the audience what point your research has reached and in what context it is

What I am going to present is actually still only in its early stages, but I really think that our findings so far are worth telling you.

We are already at a quite advanced stage of the research, but I was hoping to get some feedback from you on certain aspects relating to ...

Our research, which we have just finished, is actually part of a wider project involving ...

Giving a general outline (formal)

In this presentation I am going to/I would like to/I will
discuss some findings of an international project
examine/analyze/bring to your attention
introduce the notion of/a new model of
review/discuss/describe/argue that
address a particular issue, which in my opinion, ..
give an analysis of/explore the meaning of
cite research by Wallwork and Southern

Giving your agenda (traditional)

I will begin with an introduction to ...

I will begin by giving you an overview of ...

Then I will move on to ...

After that I will deal with ...

And I will conclude with ...

Giving your agenda (less formal)

First, I'd like to do x/I'm going to do/First, I'll be looking at X.

Then we'll be looking at Y/Then, we'll focus on Y.

And finally we'll have a look at Z/Finally, I'm going to take you through Z.

So, let's begin by looking at X.

Giving your agenda (informal)

So this is what I am going to talk about ...

... and the main focus will be on ...
 ... and what I think, well what I hope, you will find interesting is ...
 I'm NOT going to cover P and Q, I'm just going to ...

Giving your agenda (more dynamic)

This is what I'm planning to cover.
 I've chosen to focus on X because I think
 it has massive implications for ...
 it is an area that has been really neglected ...
 I'm hoping to get some ideas from you on how to ...
 that what we've found is really interesting
 I think we have found a
 radically new solution for ...
 truly innovative approach to ...
 novel way to ..
 We are excited about our results because this is the first time research has
 shown that ...
 Why is X is so important? Well, in this presentation I am going to give you
 three good reasons ...
 What do we know about Y? Well, actually a lot more/less than you might
 think. Today I hope to prove to you that ...

Referring to handout

I've prepared a handout on this, which I will give you at the end - so there's
 no need to take notes.
 Details can also be found on our website. The URL is on the handout.

17.2 Transitions

Moving on to the main body of the presentation

Okay, so let me start by looking at ...
 So first I'd like to give you a bit of background.
 So why did we undertake this research? Well, ...
 So what were our main objectives? Well, ...

Introducing a new element or topic

With regard to x ...
 As far as x is concerned ...
 Regarding x ...

Signaling that the topic is about to change

Before I give you some more detailed statistics and my overall conclusions,
 I am just going to show you how our results can be generalized to a wider
 scenario.

In a few minutes I am going to tell you about X and Y, which I hope should explain why we did this research in the first place. But first I want to talk to you about . . .

Showing where you are in the original agenda

Okay so this is where we are ..

This is what we've looked at so far.

So, we're now on page 10 of the handout.

Referring to previous topic to introduce next topic

Before moving on to Z, I'd just like to reiterate what I said about Y.

Okay, so that's all I wanted to say about X and Y. Now let's look at Z.

Having considered X, let's go on and look at Y.

Not only have we experienced success with X, but also with Y.

We've focused on X, equally important is Y.

You remember that I said X was used for Y [*go back to relevant slide*], well now we're going to see how it can be used for Z.

Getting the audience interested in the next topic

Did you know that you can do X with Y? You didn't, well in the next section of this presentation I'll be telling you how.

Direct transition

Let me now move onto the question of . . .

This brings me to my next point . . .

Next I would like to examine . . .

Now we're going to look at Z. // Now I'd like to show you Z. // Now I'd like to talk about Z.

Okay, let's move on to Z.

Now we are going to do X. X will help you to do Y.

17.3 Emphasizing, qualifying, giving examples

Emphasizing a point

I must emphasize that ..

What I want to highlight is . . .

At this point I would like to stress that . . .

What I would really like you to focus on here is . . .

These are the main points to remember:

The main argument in favor of/against this is ..

The fact is that . . .

This is a particularly important point.

This is worth remembering because . . .

You may not be aware of this but . . .

Communicating value and benefits

So, the key benefit is. . .
One of the main advantages is. . .
What this means is that . . .
We are sure that this will lead to increased . . .
What I would like you to notice here is . . .
What I like about this is . . .
The great thing about this is . . .

Expressing surprise in order to gain interest

To our surprise, we found that . . .
We were surprised to find that . . .
An unexpected result was . . .
Interestingly, we discovered that . . .

Qualifying what you are saying

Broadly speaking, we can say that . . .
In most cases/In general this is true.
In very general terms . . .
With certain exceptions, this can be seen as . . .
For the most part, people are inclined to think that . . .
Here is a broad outline of . . .

Qualifying what you have just said

Having said that . . .
Nevertheless, despite this . . .
But in reality . . .
Actually . . .
In fact . . .

Giving explanations

As a result of . . . Due to the fact that . . . Thanks to . . .
This problem goes back to . . .
The thing is that . . .
On the grounds that . . .

Giving examples

Let's say I have . . . and I just want to . . .
Imagine that you . . .
You'll see that this is very similar to . . .
I've got an example of this here . . . *show slide*
I've brought an example of this with me . . . *show object*
There are many ways to do this, for example/for instance you can . . .
There are several examples of this, such as . . .

17.4 Diagrams

Making initial reference to the diagram

Here you can see . . .

I have included this chart because . . .

This is a detail from the previous figure . . .

This should give you a clearer picture of . . .

This diagram illustrates . . .

Explaining what you have done to simplify a diagram

For ease of presentation, I have only included essential information.

For the sake of simplicity, I have reduced all the numbers to whole numbers.

This is an extremely simplified view of the situation, but it is enough to illustrate that . . .

In reality this table should also include other factors, but for the sake of simplicity I have just chosen these two key points.

This is obviously not an exact/accurate picture of the real situation, but it should give you an idea of . . .

I have left a lot of detail out, but in any case this should help you to . . . if you are interested you can find more information on this in my paper.

Indicating what part of the diagram you want them to focus on

Basically what I want to highlight is . . .

I really just want you to focus on . . .

You can ignore/Don't worry about this part here.

This diagram is rather complex, but the only thing I want you to notice is . . .

Explaining the lines, curves, arrows

On the x axis is . . . On the y axis we have . . .

I chose these values for the axes because . . .

In this diagram, double circles mean that . . . whereas black circles mean . . . dashed lines mean . . . continuous lines mean . . .

Time is represented by a dotted line.

Dashed lines correspond to . . . whereas zig-zag lines mean . . .

The thin dashed gray line indicates that . . .

These dotted curves are supposed to represent . . .

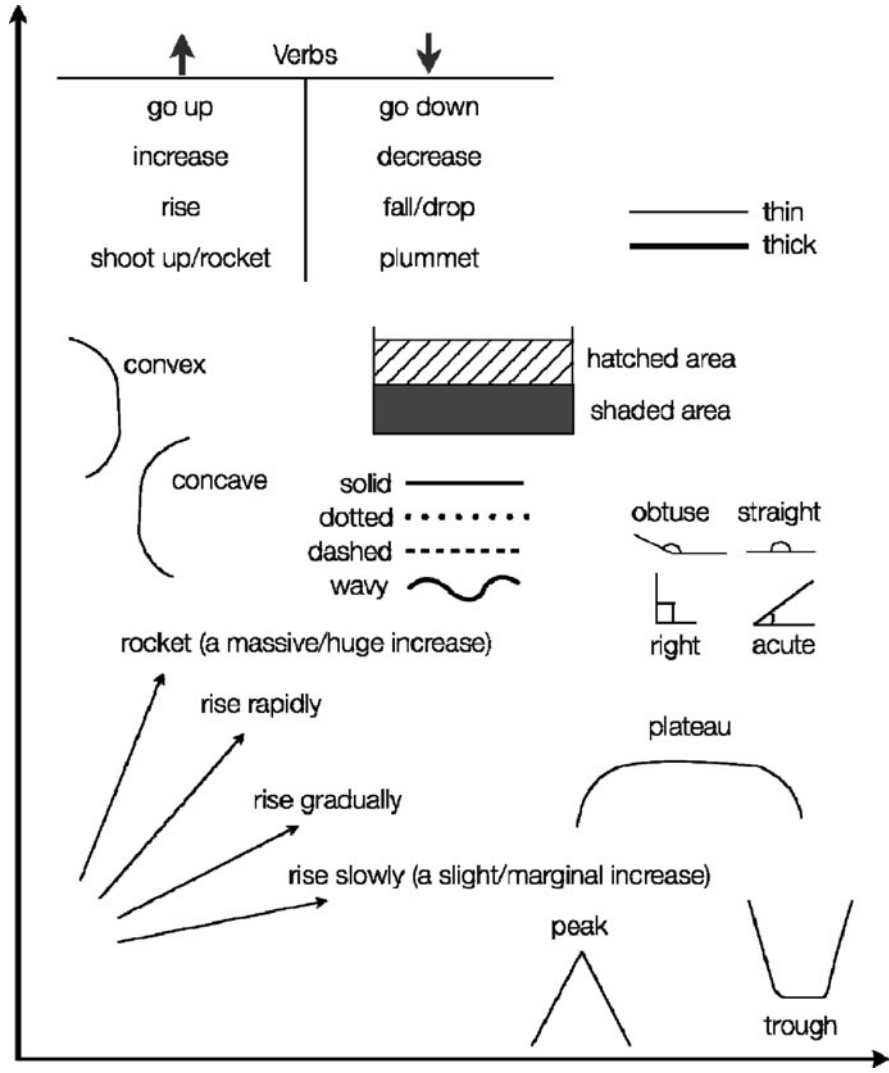
The solid curve is . . .

These horizontal arrows indicate . . .

There is a slight/gradual/sharp decrease in . . .

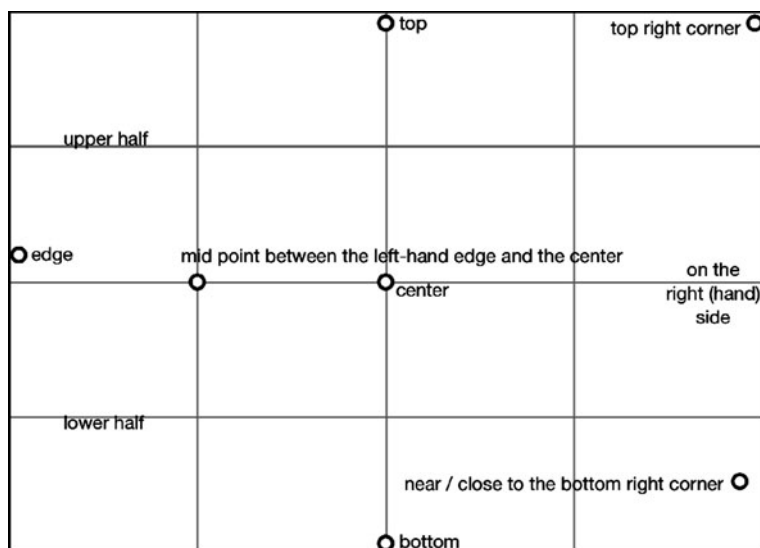
The curve rises rapidly, then reaches a peak, and then forms a plateau.

As you can see, this wavy curve has a series of peaks and troughs.



Explaining positions

- on the left is ... on the left side here ...
- in the middle ...
- here, at the top ...
- down in this section ...
- over here is a ...
- the upper/lower section ...



17.5 Making reference to parts of the presentation

Referring forward

I'm going to do X, Y, and Z.

I'm not going to cover this aspect now, I'm just going to ...

I'll go into a bit of detail for each concept.

I'll explain this in a moment/I'll talk about that later.

As we will see later ...

Referring backward

As I said before ...

Remember I said that ...

The concept I mentioned earlier ...

As I mentioned a moment ago ...

To return to my earlier point ...

If we go back to this slide ... (*shows an earlier slide*)

Referring to current slide

Here you can see ...

Notice that it has ...

As you can see ...

17.6 Discussing results, conclusions, future work

Very strong affirmations (but see [Section 14.4](#))

These results definitely prove that ...

We are convinced that our results show that ...

What these results prove is ...

Tentative affirmations

Our results would seem to show that ...

What these findings seem to highlight is ...

I think that these results may indicate that ...

It seems probable from these results that ...

I think it is reasonable to assume that ...

Under the hypothesis that $x = y$, what these results probably mean is ...

We are assuming that the reason for this discrepancy is ...

We are presuming that this nonagreement is due to ...

This may indicate that ...

A possible explanation is ...

I believe this is due to ...

Future work

So, we've still got quite a long way to go. What we need to do now is ...

Given these results, it seems to us that the best thing to do now is ...

A promising area for future research would probably be ...

What we are planning to do next is ...

Eliciting audience help

To be honest, we are not exactly sure what these results may implicate ...

We think our results show that $x = y$, and we were rather hoping to find other people who may be doing similar research to confirm this for us ...

We are not really sure why the results appear to be so contradictory, and we were wondering whether someone here might be able to help us out with this.

We are actually looking for partners in this project, so if anybody is interested, please let us know.

17.7 Ending

Warning audience that presentation is near the end

Okay, we're very close to the end now, but there are just a couple of important things that I still want to tell you.

Final summary

Well that brings me to the end of the presentation. So, just to recap ...

Telling the audience where they can find further information

I am afraid that I don't have time to go into this in any further detail. But you can find more information about it on this website (which is on the back page of your handout).

If you would like more information on this, then please feel free to email me.
 My address is on the back page of the handout./My address is in the congress notes.

Thanking the audience

Thanks very much for coming.
 Thank you for your attention.

17.8 Questions and answers

Beginning a Q&A session

Does anyone have any questions on this?
 I'd be really interested in hearing your questions on this.
[If no one asks as a question] One question I am often asked is . . .

Referring to level of English just before Q&A session

If you ask any questions I would be grateful if you could ask them slowly and clearly, as
 - my English is a bit rusty
 - many attendees here today are not native speakers of English

Handling the session

Okay, could we start with the question from the gentleman/lady at the back.
 Yes, you.
[Interrupting someone] Sorry, first could we just hear from this woman/man at the front.
 Do you mind just repeating the question because I don't think the people at the back heard you.
 I think we have time for just one more question.
 Okay, I am afraid our time is up, but if anyone is interested in asking more questions I'll be in the bar and at the social dinner tonight.

What to say when you don't understand a question from the audience

Sorry, could you repeat the question more slowly please?
 Sorry, could you speak up please?
 Sorry, I didn't hear the first/last part of your question.
 Sorry, I still don't understand—would you mind asking me the question again in the break?
 Sorry, but to answer that question would take rather too long, however you can find the explanation on my web pages or in my paper.
 I'm not exactly clear what your question is.

Going back to the presentation after taking questions mid presentation

Okay, would you mind if I moved on now, because I've still got a couple of things I wanted to say?

Interpreting the questions

If I'm not wrong, I think what you are asking is ...

Can I just be sure that I understand? You are asking me if ...

So what you are saying is ...

So your question is ...

Avoiding difficult questions

I'm not familiar with the details regarding that question.

I can't give you an exact answer on that, I am afraid.

That's a very interesting question and my answer is simply I really don't know!

That's a good question and I wish I had a ready answer, but I am afraid I don't.

You know, I've never been asked that question before and to be honest I really wouldn't know how to answer it.

I would not like to comment on that.

I am sorry but I am not in a position to comment on that.

I am not sure there really is a right or wrong answer to that. What I personally believe is ...

Asking for time or deferring

I think it would be best if my colleague answered that question for you.

Can I get back to you on that one?

Could we talk about that over a drink?

I need to think about that question. Do you think we could discuss it in the bar?

You've raised a really important point, so important that I think I would rather have a bit of time to think about the best answer. So if you give me your email address at the end, I'll get back to you.

At the moment I don't have all the facts I need to answer that question, but if you email me I can get back to you.

Offhand, I can't answer that question but if you ...

Commenting on audience questions

I know exactly what you mean but the thing is ...

I take your point but in my experience I have found that ...

You're quite right and it is something that I am actually working on now.

I'm glad you raised that point, in fact one of my colleagues will be able to answer that for you.

Yes, the additional experiments you suggest would be very useful. Maybe we could talk about them over lunch.

Suggesting that Q & A session can continue at the bar

Does anyone fancy going for a drink? because it would be very helpful to have your feedback.

Would anyone like to go for a drink? because I'd be really interested to hear your views on this.

17.9 Things that can go wrong

Equipment doesn't work

I think the bulb must have gone on the projector. Could someone please bring me a replacement? In the meantime let me write on the whiteboard what I wanted to say about . . .

The microphone/mike doesn't seem to be working. Can everyone hear me at the back?

I don't know what has happened to my laptop but the program seems to have crashed. Please bear with me while I reboot.

Okay, it looks as if I will have to continue my presentation without the slides. Let me just look at my notes a second.

You realize that a slide contains a mistake

You know what, there's a mistake here, it should be . . .
Sorry this figure should be 100 not 1,000.

Your mobile phone rings and you have to turn it off

I'm really sorry about that. I thought I had switched it off.

You forget where you are in the presentation

Sorry, what was I saying?
Where were we up to? Can anyone remind me?
Sorry I've lost track of what I was saying.
Sorry, I seem to have forgotten what I was saying.

If you are about to go over your allocated time

It looks as if we are running out of time. Would it be okay if I continued for another 10 minutes?
If any of you have to leave straight away, I quite understand.
I am really sorry about this. But in any case, you can find the conclusions in the handout.
I will put a copy of the presentation on our website.

17.10 Posters

Getting the person interested

Hi, would you like some more information?
Would you like me to take you through the process?
I have a short demo here if you would like to look at it.
Would you like to hear some more details on the methodology?

Offering further help

Would you like a copy of this handout/brochure/document? It basically says the same as the poster but in a lot more detail.

Here is my paper, if you would like a copy.

You can find more details on my website, which is written on my card here.

Asking questions about the person's research

May I ask what field you are in?

Where are you based?

How long have you been working in this field?

Opening up possibilities for further contact

Would you like to give me your email address?

Are you giving a presentation yourself?

Are you going to be at the dinner tonight?

Might you be interested in setting up a collaboration?

Saying goodbye

Thank you very much.

It was very nice to meet you.

Hope to see you around.

Hope to see you again.

I'll email you the website/my paper/the documentation.

Let's keep in touch.

Goodbye.

For good websites on the art of creating posters see page 163.

Links and References

Introduction

Tips for trainers. An interesting experience of getting undergraduates to give presentations can be found at

<http://www.aimath.org/mathcommunity/studenttalks.pdf>

Tips for oral presentations that are read directly by the author of the paper:

www.cgu.edu/pages/864.asp

www.easternct.edu/smithlibrary/library1/presentations.htm

Tips on creating posters:

searchworks.stanford.edu/view/6287189

www.swarthmore.edu/NatSci/cpurrin1/posteradvice.htm

www.flickr.com/groups/368476@N21/pool/

www.easternct.edu/smithlibrary/library1/presentations.htm#posters

http://writing.wisc.edu/Handbook/presentations_poster.html

www.asp.org/education/howto_onPosters.html

Part I: Preparation and Practice

The quotation was kindly provided by Jeffrey Jacobi and can be found in his book: Jacobi J, (2006) How to say it ® - Persuasive Presentations, Prentice Hall Press, New York (see his website at: jacobipersuasivespeaking.com)

Chapter 2

The 20% redundant word statistic comes from my personal observations.

2.1 There are many agencies that edit and revise scientific documentation. The first agency below is my own. The other two are agencies that my clients have also used and found to be very professional.

englishforacademics.com (English for Academics, Europe)
oleng.com.au (OnLine English, Australia)
sfedit.net (San Francisco Edit, US)

In any case, you can find a more complete list of agencies by doing an Internet search with the key words “scientific editing.” Note that there is considerable variation in prices among agencies, and within the same agency the prices depend not only on the length but also how quickly you want your document revised. The price will also be affected by the currency (dollars, euros, sterling, etc.).

Chapter 3

3.2 Good online dictionaries with audio are

<http://m-w.com/> (The Merriam-Webster dictionary US English)
www.howjsay.com (a British and American English pronunciation dictionary)

3.16 Jeffrey J, (2006) How to say it ® - Persuasive Presentations, Prentice Hall Press, New York (see his website at: jacobipersuasivespeaking.com)

Chapter 4

Tips on how to relax: www.mindtools.com

Chapter 5

The quotation about 90% nervousness was kindly provided by Andrew Mallett of Present Action (present-action.com).

5.3 Statistic from my own data based on scripts of presentations taken from my own students and a sample of presentations from ted.com.

Part II: What to Write on the Slides

The quotation was kindly provided by Professor Trevor Hassall and Professor John Joyce of Sheffield Hallam University in the UK.

Chapter 6

6.3 The original quotation from The Record can be found at <http://news.therecord.com/article/354044>)

Chapter 7

7.15 The full quotation can be found at hrlr.oxfordjournals.org/cgi/content/full/5/1/57.

Chapter 8

8.1 For more on the dangers of PowerPoint type applications see http://en.wikipedia.org/wiki/Death_By_Powerpoint

Chapter 9

The statistics come from a variety of sources and are quoted in Wallwork A (1999) Business Options, Oxford University Press, Oxford, UK

For more on the visual aspect of slides see www.garreynolds.com/Presentation/slides.html

9.2 The statistic derives from my personal observations.

9.9, 9.10 Information about persuasive power of fonts, and website colors, taken from Goldstein NJ, Martin JS, Cialdini RB (2007) Yes! 50 secrets from the science of persuasion, Profile Books, London

9.11–9.14 Please note that the data presented in the figures should not be seen as scientifically accurate, though I do believe that they reflect reality to some extent.

The figures were created by Michele Barbera of Net7 (netseven.it).

For more details on describing statistics, plus an example of a presentation in action see <http://sixminutes.dlugan.com> (type in “presenting data” in the search window, and then you will be able to see and read an analysis of a wonderful presentation on ted.com given by medical doctor and researcher, Hans Rosling).

Chapter 10

Shay McConnon kindly gave me permission to quote from his book: McConnon S (2005) Presenting with power, How to Books Ltd, UK

10.3 The statistic comes from Milo, FO (1994) How to get your point across in 30 seconds - or less, Corgi Books, London

10.9 Gladwell M (2008) *Outliers*, Penguin Books, London

10.10 The first two quotations come from emails to me from Professor Chandler Davis and Professor Martin Chalfie. Thomas Gilovich kindly gave me permission to quote from his book, Gilovich T (1991) *How We Know It Isn't So - The Fallibility of Human Reason in Everyday Life*, The Free Press, New York

Part III: What to Say and Do at Each Stage of the Presentation

Quotation from an email to me from Osmo Pekonen, Finnish author and mathematician.

Chapter 11

11.4 The statistics are based on the following quotation: “Every day 20,000 new scientific papers are produced (Peters, Hohensee: 1996, 129)” in Austermül F, *Between Babel and Bytes - The Discipline of Translation in the Information Age*, http://areas.iued.uni-heidelberg.de/artikel/Band16_2.pdf . My statistics are not supposed to be entirely accurate (and the first and last are totally imaginary!) but just serve to show how the same statistic can be presented in many different ways.

11.7 Professor Maria Skyllas-Kazacos kindly gave me permission to use this quote. The quotation was originally in an interview with her: www.science.org.au/scientists/msk.htm

11.10 Bjørn Lomborg kindly gave me permission to use this quote. His complete presentation, which is well worth watching, can be found at ted.com/talks/lang/eng/bjorn_lomborg_sets_global_priorities.html

Chapter 13

The statistic that your audience will only absorb about 20% of the information you give them was kindly provided by Andrew Mallett of present-action.com

Chapter 14

The statistic that any audience will forget more than 75% of what they hear within 24 hours comes from Wallwork A (1999) *Business Options*, Oxford University Press, Oxford

14.8 The first quotation is from *New Scientist* (December 16, 2009). The second quotation was kindly provided by Ben Goldacre and is from his fascinating book

on “Dodgy Science”: Goldacre B (2008) *Bad Science*, Harper Collins, London. See also videos on Goldacre’s website: www.badsience.net

Chapter 15

15.5 The statistic is based on my personal observation of hundreds of presentations.

Other Sources

While researching this book, I also consulted the following works:

- Anholt RRH (2006) *Dazzle 'em with Style: The Art of Oral Scientific Presentation*, Elsevier Academic Press, Burlington, MA
- Goldbort R (2006) *Writing for Science*, Yale University
- Jay A (1993) *Effective Presentation*, Pitman, London
- Leech T (1982) *How to Prepare, Stage and Deliver Winning Presentations*, Amacom, New York, NY
- Peoples DA (1988) *Presentations Plus*, Wiley, New York, NY
- Arredondo L (1994) *36-Hour Course: Business Presentations*, McGraw-Hill, New York, NY

Acknowledgements

My biggest thanks go to Anna Southern who considerably improved the quality of the manuscript and gave me many useful insights into the art of communicating and presenting.

I would like to thank all my PhD students from the last ten10 years without whom this book would have been impossible. In particular, the following PhD students allowed me to use extracts from their presentations and advised me on various aspects of the project:

Sergiy Ancherbak, Cristiane Rocha Andrade, Jayonta Bhattacharjee, Michele Budinich, Nicholas Caporusso, Cynthia Emilia Villalba Cardozo, Lamia Chkaiban, Begum Cimen, Angela Cossu, Emanuel Ionut Crudu, Annalisa De Donatis, Chiara Ferrarini, Karolina Gajda, Sven Bjarke Gudnason, Ali Hedayat, Lei Lan, Dmitri Lee, Ana Ljubojevic, Arianna Lugani, Leanid Krautsevich, Nirupa Kudahettige, Leonardo Magneschi, Ahmed Said Nagy, Nadezda Negovelova, Mercy Njima, Rossella Mattera, Peng Peng, Chandra Ramasamy, Pandey Sushil, Md. Minhaz-Ul Haque, Michael Rochlitz, Irfan Sadiq, Tek B Sapkota, Igor Spinelli, Giovanni Tani, Yudan Whulanza

Thanks to the following authors for personally giving me permission to quote from their books, presentations, and interviews:

Thomas Gilovich, Ben Goldacre, Trevor Hassall and Jon Joyce, Jeffrey Jacobi, Bjørn Lomborg, Andrew Mallett Shay McConnon, Maria Skyllas-Kazacos

The following researchers and professors shared their thoughts with me on the art of giving presentations and also helped in getting this book published:

Robert Adams, Francesca Bretzel, Martin Chalfie, Chandler Davis, Wojciech Florkowski, David Hine, Marcello Lippmann, William Mackaness, Osmo Pekonen, Pierdomenico Perata, Beatrice Pezzarosso, Roberto Pini, Magdi Selim, Enzo Sparvoli, Eliana Tassi, Robert Shewfelt (thanks for your encouragement), and Donald Sparks

About the Author

Since 1984 Adrian Wallwork has been editing and revising scientific papers, as well as teaching English as a foreign language. In 2000 he began specializing in training PhD students from all over the world in how to write and present their research in English. He is the author of over 20 textbooks for Springer Science+Business Media, Cambridge University Press, Oxford University Press, the BBC, and many other publishers. In 2009 he founded English for Academics (englishforacademics.com), which provides an editing and revision service for researchers (particularly speakers of the following languages: French, Italian, Portuguese, Romanian and Spanish) who wish to publish their work in international journals.

Contact the Author

I would welcome comments on improving this book. I also hold short intensive courses for PhD students and researchers on how to write and present their research.

Please contact me at English for Academics: adrian.wallwork@e4ac.com

Index

Index by Section

Note: This index is organized by chapters and sections. Occasionally page references are given for those items that do not correspond to a section or chapter.

A

Adobe ‘read aloud’, [3.2](#)
Agencies (proofreading and editing),
 page [166](#)
Agenda slide, [12.1–12.2](#), [17.1](#)
Animations, [9.6](#)
Answering questions, [16](#)
Audience attention, [10](#), [13.1](#)

B

Beginning, [11](#)
Body language, [4.3–4.6](#), [10.4](#)
Bullets, [8](#)

C

Charts, [9.14](#), [13.10](#), [14.2](#), [17.4](#)
Color, [9.10](#)
Conclusions, [15](#), [17.6–17.7](#)

D

Debate, [14.9](#)
Diagrams, [9.14](#), [13.10](#), [14.2](#), [17.4](#)
Dictionaries, *page* [166](#)
Discussion, [14](#), [17.6](#)

E

Editing and proofreading agencies, *page* [166](#)
Ending, [15](#), [17.7](#)
Examples, giving, [17.3](#)

F

Fonts, [9.9](#)
Formality, [2.16](#)

G

Graphics, [9](#), [13.10](#), [14.2](#), [17.4](#)
Graphs, [9.12](#), [13.10](#), [14.2](#), [17.4](#)

I

Intonation, [3](#)
Introductions, [12.1–12.2](#), [17.1](#)
Introduction slide, [12.1–12.2](#), [17.1](#)

M

Maps, [9.8](#)
Methodology, [13](#)

N

Negative results, [14.8](#)
Nerves, [5](#)
Notes, [2](#), [4.1](#)

O

Outline slide, [12.1–12.2](#), [17.1](#)

P

Photos, [9.5](#), [15.4.1](#)
Phrases, useful, [17](#)
Posters, *page* [viii](#), [17.10](#), *page* [165](#)
Practicing, [4](#)
Preparation, Part 1
Preparing slides, [1](#)
Preparing what to say, [2](#)
Presentation software, [4.3](#), [7.1–7.2](#), [7.17](#), [8.1](#),
 [8.5](#), [10.7](#), *page* [103](#), [13.8](#)
Problems, [5.12–5.14](#), [17.9](#)
Processes, explaining, [13.2–13.9](#)

Pronunciation, 3
 Proofreading and editing agencies, *page* 166
 Punctuation, 8.10, 9.13

Q

Questions and answers, 16

R

Relaxation, 5.9, *page* 166
 Results, describing, 14, 17.6

S

Sentence length, 2.4–2.5, 5.8
 Slide preparation, Part 2
 Slide writing and editing, 7
 Speech, 2
 Spelling, 6.7, 7.17
 Statistics, 10.8, 11.3–11.4, 15.4.3

Index by Page Number

Note: This index is organized by pages.

A

Adobe ‘read aloud’, 29
 Agencies (proofreading and editing), 166
 Agenda slide, 118–120, 152
 Animations, 84
 Answering questions, 145–149
 Audience attention, 95–101, 124

B

Beginning, 105–115
 Body language, 38–40, 97
 Bullets, 75–79

C

Charts, 92–94, 129–130, 132, 156–158
 Color, 86
 Conclusions, 137–143, 158–160

D

Debate, 136
 Diagrams, 92–94, 129–130, 132, 156–158
 Dictionaries, 166
 Discussion, 131–136, 158–159

E

Editing and proofreading agencies, 166
 Ending, 137–143, 159–160
 Examples, giving, 154–155

T

Tense usage, 2.18
 Timing, 5.14, 10.5
 Titles, 6, 7.9
 Transitions, 12.3–12.9, 17.2

U

Useful phrases, 17

V

Visuals, 9
 Vocabulary, 2.6–2.15
 Voice, 3

W

Watching other presentations, 4.9
 Websites, 4.9, *pages* 165–169

F

Fonts, 86
 Formality, 19–21

G

Graphics, 81–94, 129–130, 132, 156–158
 Graphs, 90–92, 129–130, 132, 156–158

I

Intonation, 27–36
 Introductions, 118–120, 152–153
 Introduction slide, 118–120, 152–153

M

Maps, 85–86
 Methodology, 123–130

N

Negative results, 135–136
 Nerves, 47–53
 Notes, 11–25, 38

O

Outline slide, 118–120, 152–153

P

Photos, 83–84, 140–141
 Phrases, useful, 151–163
 Posters, viii, 162–163, 165

Practicing, 37–45
 Preparation, 3–53
 Preparing slides, 3–9
 Preparing what to say, 11–25
 Presentation software, 38–39, 66, 73, 76–77, 98–99, 103, 127
 Problems, 52–53, 162
 Processes, explaining, 124–129
 Pronunciation, 27–36
 Proofreading and editing agencies, 166
 Punctuation, 79, 92

Q

Questions and answers, 145–149

R

Relaxation, 50–51, 166
 Results, describing, 131–136, 158–159

S

Sentence length, 14–15, 50
 Slide preparation, 55–101

Slide writing and editing, 65–73
 Speech, 11–25
 Spelling, 62, 73
 Statistics, 99, 108–110, 141

T

Tense usage, 22–25
 Timing, 52–53, 97
 Titles, 57–63, 70
 Transitions, 120–122, 153–154

U

Useful phrases, 151–163

V

Visuals, 81–94
 Vocabulary, 15–19
 Voice, 27–36

W

Watching other presentations, 42–44
 Websites, 42–44, 165–169

Index of Names

Note: Names of people mentioned in the book, by page number.

A

Andrade, Cristiane Rocha, 106

C

Castenas, Elena, 85
 Chalfie, Martin, 100

D

Davis, Chandler, 100

G

Gilovich, Thomas, 100
 Gladwell, Malcolm, 99
 Goldacre, Ben, 135, 168–169

H

Haque, Minhaz-Ul, 110
 Hassall, Trevor, 55, 166

J

Jacobi, Jeffrey, 1, 36, 165–166
 Joyce, John, 55, 166

L

Lomborg, Bjørn, 114, 168

M

Mattera, Rossella, 111
 McConnon, Shay, 95, 167

P

Pekonen, Osmo, 103
 Perez, Horazio, 113

S

Skyllas-Kazacos, Maria, 112