



研究成果を英語で伝えるスキルに磨きをかけたい皆さんへ：このシリーズでは、東京大学のウッドワード先生が、あなたの今の英語能力を使って成果をより効果的に上手に伝えるためのアイデア、作戦、ヒントを紹介します。また、日本語でのプレゼンにも役立つ多くのアイデアも見つかるでしょう。

By Invitation of the Editor-in-Chief

English Scientific Communication

Part 3—Body and Mind

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As part of an ongoing series of articles on presenting science in English, this month we continue looking at some fundamental principles of effective communication before we move on to more detailed and practical examples and tips in later articles. Specifically, we focus this time on making use of often forgotten aspects of presenting such as controlling our voice, along with various forms of non-verbal communication.

Multichannel communication

In the first article of this series we highlighted the idea that communication is multichannel—when we communicate most effectively with people, we use a number of different, parallel mechanisms to transmit information effectively. If we use restricted forms of communication, like speaking on the telephone or writing an e-mail, it can be difficult to communicate as effectively as when we speak to somebody face-to-face. Giving a scientific presentation in person provides us with the opportunity to exploit all the different parallel communication channels to achieve our goal. Therefore, when preparing, it is worth being aware, in advance, of how we can make use of the sometimes forgotten extra channels. When presenting in English as a non-native speaker, being able to enhance communication through the other channels can allow us to communicate more effectively without any improvement in our language ability, by thinking carefully about and practicing the four following elements.

Voice

When we speak, we generate sounds that form words and through language generate meaning. However, when focusing too much on the language we are using, it is sometimes easy to not pay enough attention to the more physical

aspects of speaking, which are a very important part of an audience being able to both understand us and be interested by us.

There are four main aspects to speech, which we will consider briefly: speed, pitch, volume and clarity. In each case, the very best presenters can use each of these aspects in quite a sophisticated way, but to begin with, let us focus on the basics.

Speed. One of the biggest mistakes that people make when presenting is to speak too quickly. This is mainly down to being nervous, along with a fear of the presentation going over the allocated time. An ideal speaking rate to aim at is 120–140 words per minute, which is slower than usual speech. Speaking too quickly makes it difficult for the audience to understand and follow, undermining all the hard work done in delivering a presentation in English in the first place!

A second key aspect to consider when it comes to speaking speed, is the use of pauses. When nervous, people tend to speak in a continuous stream, while the best presenters will speak in short, focused bursts with gaps to allow the most recently delivered point to be processed and understood by the audience (time to sink in). Sometimes, the ability to know when not to speak is the most effective way of communicating.

Pitch. Native speakers employ variations in pitch to add emphasis and interest to their speech. The human brain has to distinguish signal from noise—the important from the unimportant (as we discovered last month—this happens by means of a perception filter). Speaking uniformly at a single pitch makes it diffi-

cult to distinguish signal from noise and the brain will rapidly lose focus on the speech. The simplest effective techniques we can practice easily are as follows. First, try to change pitch when moving onto a new section or idea to break up the information. It is worth watching newsreaders on TV as they always change pitch on moving from one story to another. The second is to think carefully about your sentences and try to emphasize the key word in every sentence. As you gain in experience, there are many advanced techniques in pitch modulation that can be practiced, for example using a long falling pitch to suggest finality and confidence and to mark the end of a section or a speech, or using rising pitch to indicate that a statement should be treated as a question.

Volume. We touched on the importance of volume last week. Although a very obvious issue, it is a very common mistake. A typical reaction of non-native speakers if they are afraid of making a language mistake is to speak more quietly. This just makes it more difficult for the audience to understand. Even when using a microphone, speaking in a withdrawn voice can make words more difficult to understand.

Once you have mastered speaking at an appropriate volume, you can start to use volume to add emphasis and nuance. Natural speakers use a combination of pitch and volume changes to indicate to the audience which things are the most interesting and important.

Clarity. It is possible to speak at an appropriate speed, pitch and volume and still be difficult to understand! There are two main reasons for this. The first is that it is essential to speak to your audience. A very common mistake is to talk

to the projector screen or poster, or to the floor. Again, this is largely a result of being nervous, but it can make words difficult to hear and in some cases cause the audience to feel disconnected and thus lose interest. The second is due to mumbling or failure to enunciate words correctly. This again results from nerves or lack of confidence and is best dealt with by practice.

Eyes

Eye contact is very important in all oral communication. Have you ever spoken to someone using Skype? Very often the camera is located above the screen that they are looking at and the effect can be quite disconcerting—it feels like somehow the other person is not speaking directly to us. Watch newsreaders on television—they speak directly to camera to generate the sense of eye contact in the viewer. In addition, eye contact is bi-directional—you can use it to get information on your audience's reaction to your presentation.

Once again, nerves and lack of confidence often stop speakers from trying to make eye contact with an audience. If this is something new to you, a good tip is as follows. Just before you begin your presentation, choose 3 people in completely different parts of the audience. Then, at the points in your presentation where you wish to engage with the audience, look directly at the faces of the three selected people in turn. All the other audience members sitting close to the selected people will think that you are looking directly at them! As you become more experienced (and relaxed), you can start to make eye contact with more people around the room.

Hands

The use of hand gestures can be highly effective in making an audience focus on what you are saying. However, poor use of hand gestures can be both distracting and irritating for an audience. As with most things in life, hand gestures are best used in moderation. The most effective presenters use gestures that are specific, deliberate and that focus attention on what is being said. Watch online videos of great orators and you will see the precision with which they use their hands in concert with what they are saying.

The main problem with hand gestures is that they are perfect detectors of nervousness, and often the speaker is not in control of them at all! Perhaps the most common example of this is the much observed "laser pointer wiggle" in which the nervous presenter's hand is shaking so much that as they direct the laser pointer at the screen, the spot moves around frenetically! We will discuss the best strategies to avoid laser pointer wiggle (and indeed laser pointers) when we look in detail at the effective use of presentation software later in this series.

Body

In fine-tuning a presentation, posture is something to be considered. A good posture for presenting is to be not tense, but not too relaxed and to stand up straight and address the audience. It is best to avoid holding onto lecterns or other large objects or leaning against furniture. Sometimes as presenters improve their skills and become more confident, they adopt a very relaxed posture, which tries to signal their confidence. This should be avoided where possible as it can create an impression of lack of seriousness or even unprofessionalism.

As a beginner, the best advice is probably to stand still, but this is not always necessary. Indeed, some movement can refocus the audience's attention on you and break up the presentation. The best movement is from stillness to stillness. If the venue allows for movement, change from one location to another and then stay there for a while. It is sometimes good to get close to the audience for emphasis, but never move closer than an arm's length from the front row. Excessive movement or wandering around aimlessly (again both signs of nervousness) are far worse than no movement at all, so stick with standing still until you feel confident and comfortable enough to make movements that are effective rather than distracting.

Confidence and practice

The combination of the effective use of voice (through establishing an optimal standard pitch, volume and pace and carefully applying modulations for interest and emphasis), effective eye contact, deliberate and specific hand gestures

and appropriate body movement can make a significant difference to an audience's engagement with and ability to understand a presentation. In most cases, paying attention to the most basic rules for each element can provide substantial rewards, with fine-tuning necessary for only the most accomplished speakers.

The main barrier to successfully using these techniques is lack of confidence. In fact lack of confidence is the main barrier to giving a presentation for anyone and particularly for people presenting in a non-native language. By far the best way to build confidence in presenting is through experience and in many cases, by making mistakes and understanding that the mistakes happen for simple reasons that can be resolved through practice, better understanding the audience and better planning and preparation. Being an effective presenter is a skill that anyone can learn and become good at. The statement, "I'm just not good at presentations" is not a legitimate one.

The experience of delivering presentations to a real audience is a very valuable one, but building confidence and practicing techniques is not limited to doing only this. The widespread availability of modern smartphones, pocket cameras, tablets and webcams means that everyone can easily record videos of themselves practicing presentations in English. Although it can be quite hard to face watching a video of yourself presenting, once you get past the initial discomfort, it is an extremely powerful tool for improving (and improving very quickly). It forms an excellent method to complement practicing in front of friends. Similarly, watching other people present and then critiquing (preferably to yourself and not out loud!) their presentations can make you aware of what works well and what doesn't. You can then look out for such things when observing yourself.

With some important fundamental principles under our belts, next month we will start to think about how to start planning a presentation.

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