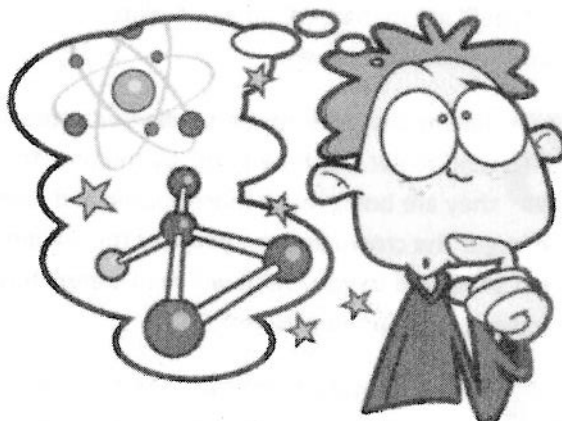


Top ten mistakes made by researchers when presenting to young people

“Will you come in and just say a few words to the students?”

This innocuous request has been known to send many well-respected scientists and engineers scampering to their labs for cover. The fear of public speaking is a condition experienced by many of us. When the “public” becomes an assembly hall full of unpredictable and brutally honest teenagers, these fears escalate wildly. As the STEM community increasingly reaches out to engage the public, more researchers are likely to find themselves standing in that assembly hall, feeling horribly ill-prepared for the role.



Like many of our biggest fears of the unknown, the reality is rarely as bad as our imagined fate. As you become more familiar in talking with young people about your research, your confidence and competence will quickly grow. The key is to monitor your audience carefully and let their interests, reactions and questions shape your presentation as it develops over time. There are, however, certain common pitfalls, and being aware of these can make the process of engaging young people easier for you – and for your audiences.

These are ten of the most frequent problems I’ve encountered when researchers present to audiences of children and young people:

10 assuming that the students are more interested in your topic than they are in you as a person – Specialists tend to be passionate about their subject, and can be surprised to find that their audience are usually more interested in them than their research. People are more interested in people than anything else. Take advantage of this universal human trait - share personal stories; explain why you are so passionate about your subject; let your personality “leak out”. Get them to like you as a person. Smile.

9 offending or embarrassing the audience in any way - Teenage audiences, in particular, can be very sensitive to any possibility of being embarrassed or patronised. You need to win their trust quickly, and treat them with respect at all times. It should go without saying that, like any professional presentation situation, you need to take account of the nature of the audience and avoid any inappropriate language or content. The brain, however, has a strange way of responding to stress and I have seen presenters fall into this trap.

8 trying to be cool – Again this may seem obvious, but if you’re not 10 years old, don’t act as if you are. You don’t need to change your dress style or adopt their slang – just share your interests with them in a conversational and relaxed manner. Making references to popular culture to help you connect with them can be helpful, but if you do, make sure you research your references properly. Celebrity trends, music, and technology change *very* quickly in the world of a child.

7 trying to do too much – Most presenters commit this mistake every time they speak. Less is often more. With younger audiences it is particularly important to identify a couple of key messages and concentrate on conveying these in a variety of different ways as powerfully as you can. If you cannot sum up your central point in a single sentence in your head, you probably haven’t thought about it enough. Presentations are good at persuading, conveying emotions and giving the “big picture”. They are very poor at communicating details.

6 not being interactive enough – Children crave constant interaction. If you take the risk to be interactive with them, they will respond if they like you and trust you. Ask lots of questions; bring volunteers up to help you; encourage them to ask you questions (unless they are very young in which case you'll get myriad enquiries unrelated to your subject); and get the audience to raise their hands to have collective votes on issues.

5 letting the presentation dull your enthusiasm – When you present in front of people your emotions tend to get “flattened out” by the time they reach the audience. This is why many presenters feel that they are being much more vocally and physically expressive than they actually appear to the students. The larger the crowd and the younger the audience the more animated you can afford to become. It will seem unnatural to you, but it will read completely normally to the audience. They will, in fact, become infected with your enthusiasm.

4 failing to make them care – Self-interest is a very strong motivator. You must search for interesting examples and applications of your subject that the students can relate to in their everyday lives. These connections will help to bring your research alive for the audience.

3 forgetting that you are “cursed by knowledge” – As an expert it is very hard to genuinely appreciate what it was like before you had this deep level of understanding. The greater your expertise, the more “cursed” your explanations can become. You therefore need to think very carefully about all your explanations – introduce jargon alongside other more accessible phrases; chunk your explanations into smaller steps; and give time for new information to be absorbed. Judging the correct level to pitch your ideas at is difficult without a lot of experience in working with students of different ages. So make it easy for yourself – talk to the students before the presentation if you can; ask questions during the talk to sense where they are coming from; and always consult the teacher before the visit about how much they may already know about the subject.

2 showing your fear – Unlike most adults, children have not learnt to disguise their feelings of boredom in the presence of speakers they cannot relate to. They also tend to be more unpredictable in their behaviour. Try not to let these concerns show when you present to them. Remember that the audience almost always wants you to succeed - your insecurities will just make them uncomfortable too. Adopt confident body language, slow your delivery down, and use strong eye contact. You *can* fake it.

1 ignoring the reality that “attention is king” – Regardless of the goals you have set for your presentation (eg. communicating information, engaging in dialogue, changing attitudes), remember that you cannot achieve *any* of these objectives until you first gain and hold the attention of the students. Attention is a necessary, but not sufficient, condition for any learning outcome. Some students may already have an inherent interest in your subject. The majority, however, will not, and the most effective way for you to motivate these students is to provoke their emotions with “hooks” throughout your presentation. Use hooks to create curiosity, uncertainty, anticipation, surprise, amusement, amazement, joy of understanding, wonder, and to evoke their imaginations.



Paul McCrory runs training courses to help science, engineering and maths researchers present effectively to young people and the public.
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