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EDITORIAL

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**Behind Every Great Science
Communication: Planning, Practice, and
Passion**

Introduction: Sharing new research findings with a colleague from the same discipline is an exciting experience, but presenting the same research findings to an audience with a plethora of different disciplines is an altogether different ball game. Public speaking fear can undermine delivery; present your ideas with confidence and clarity—they deserve attention. This editorial provides advice from the best scientific speakers, tips on creating your own talks, advice on using technology properly, and resources that are cost-effective and useful in becoming a good speaker.

Plan with the guidance of experts: My voice exudes confidence and enthusiasm as I began my talk by displaying a slide of an octopus, the most famous of all, who predicted the 2010 FIFA football World Championship finalists and the champion of the tournament with accuracy. The audience moved edge of their seats, wondering what it could be. Then I connected it to the story yet to be unfolded, making none could get their eyes away. Audience attention fades quickly, so deliver something compelling early or risk losing them to other priorities. These skills aren't innate—they're built through consistent effort and commitment. You can achieve the same through continuous learning, practice, and exposure to great presentations. As a researcher, every talk—from brief pitches to keynotes—is a chance to impress and create opportunities.

"Goal number one should be to educate the audience—It's about them. But goal number two is to convince them that your science and the people who generated it are the best thing since sliced bread..." says Dr John Boothroyd, microbiologist at Stanford University in California. As such, tips on how to make slides, how you managed to survive your own stories, and how to communicate your science successfully, learning from the brightest health scientists working today, is the best way forward.

Plan the slides: Plan your slides with a clear structure and purpose. Frame the talk around key questions and guide the audience step by step. Use storytelling or a big-picture → details → takeaway approach to keep it engaging and easy to follow.

Before you create your slides, planning is necessary. There are two essential rules: (i) know the expectation of the talk, (ii) know the audience. How

much time do you have to talk? Is there a question-and-answer (Q&A) session? If so, how much time do you have for that? Will there be experts in your field in the audience? Questions that must be answered during planning.

Use simple analogies and avoid jargon—clarity makes your science more engaging and appreciated. Keep slides concise and purposeful. Aim for about one slide per minute and ensure each supports your story. Focus on key data and omit anything unnecessary or unrelated. Use transition slides and recurring visuals to maintain flow and clarity when shifting topics.

Going over time undermines your impact—finish strong and on time to leave a lasting positive impression.

Practice makes perfect: Practice thoroughly with and without slides. Identify weak points and manage your timing. Be ready to adapt, skip slides, and deliver a clear takeaway if needed. Rehearse repeatedly with a timer and mentors to refine flow and storytelling. Use practice to correct errors and optimise visuals, fonts, and colour schemes. Focus on strong nonverbal communication. Maintain steady eye contact and use purposeful gestures at chest level. Minimise unnecessary movement and project confidence within the space you have.

“Be yourself!” This is the one final suggestion I would like to recommend. For more in-depth information on presentation-delivering skills, you can read *“Effective Business Presentation”* by Judy Tisdale (2000, Prentice Hall publication).

Managing Nervousness and Anxiety: Manage anxiety by preparing a clear script. Practice and refine it with feedback to build confidence. Avoid reading from a script—focus on key points and messages. Review recorded rehearsals (or use a mirror) to identify and correct bad habits.

Dress professionally and set up your microphone before starting. Use practice to refine voice modulation and delivery. Address the chair appropriately to add energy and emphasis to key points.

Avoid unnecessary apologies—show preparation and confidence. Always acknowledge others’ contributions, however small.

Smart Tools for Stronger Scientific Storytelling: Use experience to optimise tools and settings—lighting, audio, and visuals—to match the venue and enhance your presentation. Audiovisual setup can make or break your presentation. Familiarise yourself with the venue and rehearse with the full setup in advance.

Today, several AI-integrated software platforms—such as Gamma, Prezi AI, Canva (Magic Design), and Plus AI—have made slide design remarkably

simple. However, experienced speakers emphasise that each slide must remain purposeful and add value to the presentation. It is important to resist the temptation to create overly flashy slides and instead adhere to fundamental principles, such as the KISS (Keep It Simple, Stupid) theory.

Use clean, readable fonts—Arial, a sans-serif typeface designed for readability at a distance—and consistent sizing—The title font size is 36, subtitles at 28, and body text at 20—for clarity. Choose simple, high-contrast designs suited to the environment. Avoid unnecessary effects or animations that distract from the message. Keep slides concise with minimal text and limited bullet points. Ensure slides support, not duplicate, your speech. Use simple animations and maintain a consistent visual theme.

Complex visuals are hard to interpret—simplify data and highlight key messages. Use clear, meaningful visuals to enhance understanding, especially for diverse audiences. Under the Creative Commons license, image-sharing platforms such as Flickr (<https://www.flickr.com>) provide access to high-quality images that can be used without explicit permission, provided appropriate attribution is given. To develop skills in effective visual communication, the website <http://infovisualization.pbworks.com> is highly recommended. Additionally, platforms such as <http://chartle.com> enable users to create simple interactive charts in various formats, including motion graphs.

End with a concise summary slide highlighting key points rather than just “Thank you.” This encourages discussion and strengthens audience engagement.

More tips on Data Visualisation: Several expert resources offer practical guidance on presenting data effectively in PowerPoint, including Microsoft Office support and training (<https://support.microsoft.com/office>), Slidesgo (<https://slidesgo.com>), Storytelling with Data (<https://www.storytellingwithdata.com>), and Canva (<https://www.canva.com>).

Sketch ideas first, then design clear, standalone visuals. Include only elements that directly support your message and narrative. Present real data clearly and reduce visual clutter. Eliminate unnecessary design elements and make graphics easy to interpret quickly.

Choose colours carefully for clarity and accessibility. Ensure visuals work in black and white and avoid problematic combinations like red–green. Developing basic skills in design tools such as Adobe Illustrator® and Adobe Photoshop® can significantly enhance the quality of visual presentations. Rather than distributing printed slide decks, it is more effective to provide a concise handout containing contact details, selected key graphics or tables, main conclusions, and references.

Simplicity can be powerful—clear, distraction-free slides often make the strongest impact.

Handling questions gracefully: Prepare for questions by rehearsing answers in advance. Repeat each question to ensure clarity and understanding before responding. Prepare backup questions to prompt discussion if needed. Use them to break the silence and keep the audience engaged. It is fine to admit when you do not know the answer. Use prepared, tactful responses to handle such moments professionally and maintain credibility.

Effective scientific presentations are not defined by the volume of data shared, but by the clarity, structure, and impact of the message delivered. With thoughtful preparation, simplicity, and respect for the audience's time and attention, every presentation becomes an opportunity to inform, engage, and inspire.

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