MAKING SUCCESSFUL ORAL PRESENTATIONS

A Guide

I. NIRDOSH
Lakehead University • Thunder Bay, Ontario, Canada P7B 5E1

Good communication skills are critical for successful professional performance in the areas of plant operations, project planning, research, design, management, and sales—the jobs most frequently held by today's engineers. An engineer must communicate with his subordinates to get things done, with his superiors to get projects and budgets approved, and with the public to maintain his company's good image. Industry's constant lament is that the universities are not developing adequate communication skills in their students.

Skilled communication is an art to be learned and developed through hard work and practice. An orator may be born, but a good communicator is made. Many universities now include courses on making oral technical presentations,[1-3] and even some industries, realizing the importance of communication in getting things done profitably, have started relevant training courses for their employees in interpersonal communication skills and social styles.[3]

Engineering students at Lakehead University take at least one course in technical writing. Even though there is currently no required course devoted to oral communication in the curriculum, instructors in the Chemical Engineering Department introduce students to the art of successful speaking in their courses.

The purpose of requiring oral presentations is to give each student in the class the opportunity to do original research in a specified area and to collectively exchange knowledge through informal discussions. This exercise helps the students develop their powers of communication and persuasion. It not only prepares them for making effective presentations for their final-year undergraduate degree research projects (a course requirement), but it also helps them acquire confidence for their eventual entry into the mainstream work force. The following steps are used to achieve the above objectives:

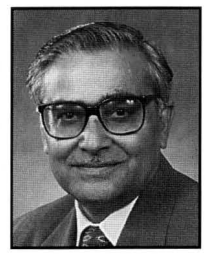
► *Guidance is provided for making oral presentations through the use of a Handout (see next page). The students are asked to present individual and/or group seminars on a lab they have done. Sometimes a list of topics relevant to the course is prepared and the students are asked to choose the topic of their liking (e.g., they are encouraged to select an area in which they have some practical experience through a summer job). Guidance is given on how to obtain information/data from literature, how to screen the data for selecting the most appropriate information, and how to present the seminar.*

► *Extra time is spent with students who are extraordinarily shy or fearful of the thought of having to face an audience to make a formal presentation (there are occasionally some students who belong in this category). This usually takes about three to four practice runs before the student becomes comfortable in making a presentation—the student is asked to first present the seminar to another person (a friend or instructor) on a one-to-one basis and more than once if necessary, and then to group partner(s), followed by the final presentation in front of the entire class.*

► *After each presentation, detailed written feedback is given to the students on the strengths and weaknesses of each presentation. This assists them in maintaining the strengths and working on the weaknesses for improving their overall seminar presentation skills.*

The following is the handout given to the students. It is discussed in detail in class and practical demonstrations are made to indicate the effectiveness of different relative font sizes, bold letters, icons, borders, personal shadows on the screen depending on the standing position, etc.

Inder Nirdosh *received his BSc and MSc in chemical engineering from Panjab University (India) and his PhD from Birmingham University (United Kingdom). He joined Lakehead University in 1981, and his research interests are in the fields of mineral processing and electrochemical engineering.*



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HANDOUT

Written and oral communication skills are important if one is to succeed as a practicing engineer. This handout will assist you in delivering a good seminar.

Please note the following:

- ❒ Review the handout carefully in the light of the demonstrations made in class to observe selection of proper borders, relative fonts, use of pointer, standing position, etc.
- ❒ Discuss the draft-slides with me at least two weeks before the seminar
- ❒ If so desired, practice the talk over and over by yourself, out loud, and then present it to another person (a friend or instructor). This step is strongly suggested.
- ❒ After the seminar, you will be given detailed written comments highlighting the *strengths* as well as the *weaknesses* of your presentation according to the checklist given at the end of this handout.

Research

- Acquire suitable technical information from books, manuals and journals. Make a note of appropriate reference(s) for a subsequent citation.
- Exercise judgement in choosing the most relevant data from the information collected.
- Review this data with your group members (if applicable) and with the instructor.
- Prepare informative slides.
- Ensure that your talk will answer the three main questions: (1) What was done? (2) How was it done? (3) What was the significance of the study?

Preparing Visual Aids (Overheads or Slides)

- Prepare the overheads/slides in an interesting manner. Preferably, box each slide with appropriate borders.
- The first slide should contain the title of the talk and the name(s) of the speaker(s).
- The second slide should give an *overview* of the talk. This slide will give the introduction to the topic and prepare the audience as to what to expect in the seminar.
- The second-to-last slide should describe explicit *conclusions.*
- The last slide should give an *overall summary* of what was presented. (Sometimes, the last slide may be dedicated to *Acknowledgments.*)
- Use different colors to distinguish different items on the same overhead, but do not over-color any slide.
- Do not put too much information on any one slide, and avoid overcrowding. Five to eight lines per slide should be considered as maximum. (If the audience cannot easily read it, it is not worth presenting!)
- Never photocopy full pages from books or journals. The print is too small to be easily read.
- Use a larger font or big lettering—the writing should be legible from the back of the room. Print in bold letters. The titles and subtitles should be in fonts larger than those used for the text.
- Arrange various items (*e.g.,* in a flowsheet) on the overhead/slide in the same manner as you would like an interior designer to arrange your living room. Your audience should enjoy your display.
- Use appropriate and relevant *icons* (*e.g.,* a $ sign when discussing the economic analysis). These make the slide and the presentation lively and interesting. Icons should be used sparingly, however, and only if they do not clutter the slide(s).

Mental Preparaion

- See yourself as a "Specialist" or an "Expert" in the area of your talk.
- Plan your presentation carefully. Give extra thought to your opening and closing remarks.
- Compose an outline and work within its domain.

- Plan on involving the audience.
- Always remember that your purpose is to share information, to inform or to persuade, and not to impress or overwhelm your audience.
- Be confident. Confidence is an automatic by-product of hard work. Do your best.
- Rehearse your talk in your mind. Practice the talk over and over, out loud, by yourself. When confident, make a mock presentation to friends. Always aim to finish the talk *on time.*
- Always remember that you may have an excellent idea, but unless it is communicated effectively, its worth will remain unexplored.

Presenting the Talk

- Dress up for the role of an "Invited Keynote Speaker" (always dress up for the role you have to play).
- Gracefully walk to the podium and take a deep breath.
- Feel the crowd so that you can work with the energy of the audience.
- Make eye contact with all and greet them with a smile.
- Express thanks to the person who introduced you and invited you to speak.
- Stand tall and straight and introduce yourself (and your group members if it was not already done).
- Have your opening remarks committed to memory and begin your talk on a positive note such as, "Good Morning (afternoon/evening) ladies and gentlemen. I would like to thank you for coming out today (this evening/tonight) to listen to my (our) presentation . . ."
- Always remember to smile (smiling is contagious). Refrain from looking too serious or panic-stricken. A cheerful speaker is liked by all. (Please note that a certain degree of nervousness is inevitable, and always remember that your audience is made up of real people with sensitivity, emotions, and feelings.)
- Present the talk in your own individual and innovative manner.
- Keep the presentation technically sound and remain enthusiastic about the topic. Maintain good humor. Do not, however, dilute the gravity of the talk by too much humor. The audience should not get the impression that you are frivolous. Use your judgement.
- Maintain good eye contact with the audience. Refrain from looking only at one individual or group of individuals in the audience, or at the walls, the ceiling, or the floor. Look right into the eyes of the audience.
- Check, and adjust if needed, every display on the screen. Make sure that the display is properly centered on the screen, not carelessly placed at an angle or partially above or below the screen, and that it is in perfect focus.
- Be cautious of your standing position in relation to the screen and the audience. Stand near the screen, on one side. This prevents obstructing the view of some audience members.
- Give a guided tour of each slide, using a pointer (rather than hands and fingers), so that the audience can understand and enjoy it as much as you do.
- Explain each display with patience. Take your time and do not change the slides too quickly. As a rule of thumb, keep the display on for at least 50-75 seconds.
- While explaining a graph, first explain the x- and y-axes fully (variables, dimensions, range of variation, etc.), followed by the legend, if any, and then the plot(s).
- If you have finished discussing a slide and do not wish to display the next slide right away, switch off the projector to bring the focus of the audience wholly on you.
- *Know the material you are presenting.* Avoid continuous reading from notes and cue cards. Remember that you are presenting a seminar and are not participating in a paper-reading contest. Reading breaks the continuity of the talk, decreases eye contact with the audience, and gives the appearance of being unprepared. Use your slides as your reference text. You may, however, make up a keyword outline on one sheet of paper to serve as a road map of your talk. Remember the three golden rules: practice, practice, practice!
- State the conclusions explicitly, and summarize the talk.
- Thank all those who helped you in your research and preparation.
- Clearly identify and acknowledge data obtained from any other group and thank other members or groups for sharing their data for your presentation.
- Remain standing while answering any questions after the seminar. Answering questions while sitting is rude. When answering a question, you should repeat the questions, if necessary, so that everyone in the audience hears it. Your manner should show that questions are welcomed.
- Extend a proper invitation to the next speaker from your group, when needed. Introducing a speaker nicely is a very responsible job because it affects the way the audience perceives and receives the speaker. Know the speaker, his/her school, year of graduation, expertise, hobbies, achievements, and the title of his/her talk.

Do Not . . .

- Leave the projector on without any slide being displayed.
- Stand between the audience and the screen (blocking the view of the audience) or between the projector and the screen (throwing a shadow on the screen).
- Speak in a low voice or drown the voice toward the end of a sentence.
- Continue to read from notes, especially while describing the apparatus or the experimental procedure.
- Look at only the audience or only the screen—alternate attention between the two.
- Remove the display too quickly.
- Mention key numerical values of results/data only orally without displaying them on the screen (depriving the audience of the audiovisual effect).
- Prepare some (or all) slides in a hurry, or in freehand.

- Refrain from smiling
- Answer questions while sitting.
- Forget to organize the slides before the seminar and fumble through them to find the one you need.
- Whisper to the chair, to a group-partner, or to anyone on the podium, or pack your papers and slides when someone is asking a question. This not only shows disrespect to the audience but also poses the risk of your not understanding the question fully.

Checklist for Giving Feedback to the Students

- Personal appearance and approach to the podium
- Greet the audience and thank the introducer
- See to quality of overheads/slides
- Be sure of technical content
- Check the screen display
- Reading from notes
- Maintain eye contact with the audience
- Invite and formally introduce the next speaker
- Originality of style
- Voice clarity
- Use appropriate colors
- Smile
- Use humor
- Turn off projector when not in use
- Use the pointer appropriately
- Stand throughout the presentation and question period
- Display data and numerical values of results
- Organize slides
- Do not whisper; pay full attention to questions
- Thank all who helped
- Avoid any specific conspicuous gestures/habits, such as tapping the table, grinding the feet on the floor, playing with objects such as a pen, a keyring, or a pointer, frequent nervous coughing, standing still with hands clasped behind, etc.

DISCUSSION

The students work hard and take interest in preparing for and making a good presentation. The alumni invariably express appreciation for having undertaken this exercise at school, as is evident from the following excerpt from a letter written by a former student:

> *". . . since I have been working, there is only one person who can deliver a presentation properly . .. . . I am almost tempted to give my notes (to others) so that I can follow what they're trying to do. . ."*

The feedback from students has also been encouraging. The following are examples of typical comments made by them:

> *"The comments on our presentations are very helpful. There were things I didn't realize I did, such as hit the overhead screen, leaving it shaking. The statement of our good points for the presentations were a must and are much appreciated . . ."*

> *". . . oral presentation of the work is a perfect learning opportunity . . . it also provides an opportunity to learn the weaknesses and strengths one has . . ."*

It should be emphasized that a proper "Introduction" and effective "Conclusions" are the two most important sections in a presentation. The readers are encouraged to refer to Osborne and Osborne[4] and Peabody[5] for helpful directions on preparing these two sections.

CONCLUSIONS

The author feels that training in oral presentations in engineering courses should be part of the curriculum. There are no hard-and-fast rules for how the training should be given, however. It depends on factors such as class size and the nature of the students. In the author's experience, even the shyest student starts feeling comfortable in making an acceptable presentation by the second seminar he or she delivers. Although providing a one-to-one audience is not always possible unless the class size is fairly small (as is the case at Lakehead University), the author has found that it goes a long way in bringing the students to their best potential. Similarly, written feedback on the students' presentation is quite helpful to them, but this is also possible only with small-size classes. For larger classes, students may be encouraged to practice the talk on their own, or with a friend, and should be advised to keep the checklist in mind in lieu of written feedback by the instructor.

ACKNOWLEDGMENTS

Thanks are due to the many students who participated in oral presentations over the years and who have helped evolve the handout.

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