

Excellence in Oral Presentation for Technical Speakers

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“One of the Most Important Aspects
to be Successful in Your Research,
Your Job and Your Career (in America) is

**Excellent Oral and Written
Communication “**

Citation comes from Prof. Sherman Frankel and it is full confirmed by
Klara Nahrstedt 😊

We will talk today about Oral Communication

- Exercising Your Presentation Muscle
- Overcoming Speech Anxiety
- Openings and Closings of a Presentation
- Presentation Organization
- Visual Assistance
- Presentation Delivery
- Technical Talk Types

Often You May Experience

“Although he could boast of a **PhD** in his field, he was a poor communicator.

He showed dozens of transparencies crammed with complex equations and text descriptions.

He delivered, at times read, his narration in a monotone tone addressed to the screen, oblivious to us, the audience.

I tried not to, but **I fell asleep.**”

Myths and Mistakes of Technical Presentations

- Popular Myth: A technical audience requires a lot of technical details in order to evaluate the speaker's ideas
 - In 1989 HP conducted a survey to determine what technical presenters want to hear from other technical presenters.
- Result: Listeners want talks easy to follow and well organized; they want simplified message “less is more”
 - Studies showed that **simplifying and repeating the main idea** will result in increased attentiveness and retention

Myths and Mistakes of Technical Presentations

- Popular Myth: Content is everything. Style is unimportant and enthusiasm is offensive
 - HP study indicated that technical audience wanted more enthusiasm and effective style, which included better visual assistance.
 - Often unenthusiastic delivery will ruin a speaker's effectiveness
- Mehrabian, a communication theorist, showed that
 - **Body language and tone of voice** together supply 93% of the overall message impact
 - **Actual words** only supply 7% of the overall impact

Myths and Mistakes of Technical Presentations

- Popular Myth: The text on the visuals is more important than the speaker.
 - Technical presenters traditionally rely too much on slides
 - Often, technical audiences find the slides distracting and boring
- Remember, the **speaker is always the focal point** of presentation, visual assistance helps
 - Pace of the presentation
 - Flow of the information presented

Myths and Mistakes of Technical Presentations

- Popular Myth: Strategic organization is not necessary for technical talks.
 - Technical presenters often think that as long as they supply all the details, the audience is capable of drawing the appropriate conclusions.
 - Technical speakers often jump into the body of the presentation and start discussing data
 - Often the objective of the talk is not stated until the end of the talk
- Technical speaker **must not rely on the audience** to fill in gaps and reach appropriate conclusions.
- Technical speaker **must understand** different **types of presentations, organization, and strategies for a particular type of speech.**

Exercising Your Presentation Muscle

- Do you exercise your presentation muscle?
 - Need practice good speaking skills by delivering oral presentations on a regular basis
- Why?
 - Person with a strong presentation muscle can think a problem through and communicate his/her analysis
 - She can express her thoughts well enough to persuade others to see her point of view
 - She can efficiently instruct others
 - She can speak effectively before an audience of any size
 - Often promotion/salary depends on speaking skills!!!

Breath Correctly

Just as proper breathing is important for a physical workout, you need to properly breathe as a speaker

Always breathe deeply from your diaphragm

Useful Tips and Tools to Overcome Speech Anxiety

- Symptoms of Speech Anxiety:
 - Nervous when asked to give a speech?
 - Before speech your heart is racing?
 - Are you fearful that you will begin to shake
 - Are you fearful that your words will somehow be lost?
 - Are you afraid that you are not going to be understood?

Useful Tips and Tools to Overcome Speech Anxiety

- Skills Training
 - Do practice your speech at home (practice, practice, practice)
 - Do forget about forgetting – think about your topic not your future!
 - Do force yourself to breathe slowly and deeply before and during your speech
 - Do try to keep your body relaxed be releasing the tension in your arms, neck, legs, torso and jaw

Useful Tips and Tools to Overcome Speech Anxiety

- Skills Training
 - Do memorize your first and last few sentences
 - Do divert your nervous energy into helpful gestures and movements, do not repress your nervousness
 - Don't pace
 - Don't fumble with a pencil, watch, or ring while you speak
 - Don't speak too rapidly

Useful Tips and Tools to Overcome Speech Anxiety

- Cognitive Modification
 - Set yourself a goal
 - Mentally practice your speech
 - Imagine the room, where you will be sitting, imagine what you will be wearing
 - Visualize actually giving the speech, the pace, your gestures, breathing, where you will be standing
 - Think about how the audience will be reacting to you
 - Think about how you will feel after you sit down
 - Final image should be of you successfully completing the goal you set for yourself

Presentations – Opening and Closings

- Each presentation (as good stories) have an
 - Introduction (tell them what you are going to tell them)
 - Body (tell them)
 - Conclusion (tell them what you just told them)

Openings

- Purpose
 - Grab the audience's attention so that they will want to hear what you have to say
 - Should be a “grabber” or “attention seeker”
 - Not only arouse interest, but also suggest the theme of the speech
 - Openings can be dramatic, emotional, humorous or rhetorical
 - Opening does not have to have words, you can use gestures, demonstration, silence – related to the topic

Good Openings

- Startling question
- Challenging statement
- An appropriate short quotation or illustration
- A surprising generalization
- An exhibit – object, article, picture
- Personal story

Poor Openings

- A long or slow-moving quotation
- A self introduction
- An apologetic statement
- Story, joke or anecdote which does not connect to the theme
- A stale remark
- A statement of your objective

Closings of Presentation

- Purpose
 - Accent your speech objectives
 - Leave the audience with something to remember
 - Closing is the “whip-cracker”, the “clincher”, ultimately the “result getter”.
 - Closing can be dramatic, emotional, humorous or rhetorical
 - Closing does not have to have words; you can use props, gestures, a demonstration or silence
 - Closing must tie with your opening and your theme
 - Poor closing can seriously detract from an otherwise excellent presentation

Good Closings

- A call or an appeal for definite action
- An appropriate short quotation or illustration
- An exhibit – an object, article, picture
- A personal challenge

Poor Closings

- A commonplace statement delivered in a commonplace way
- An apologetic statement
- A trite or stale remark
- Solicitation of questions

Presentation Organization

- **Strategic Presentation Plan**
- Ask yourself questions:
 - “What kind of approach can best bring your message across?”
 - “Will it be better to ‘beat around the bush’ or to be direct?”
 - “What kind of support will be most effective?”

Presentation Strategy (Deductive Strategy)

- Decide on what sort of message you will be delivering
- **Deductive Strategy**
 - Speaker immediately presents the main idea, provides the supporting detail, then recaps her main idea.
 - Usually used to present good news or routine statements
- Example:
 - Main Idea: My grant proposal was funded
 - Detail: This means more money for research ...
 - Recap: Hard work is rewarded.

Presentation Strategy (Inductive Strategy)

- Speaker begins only by hinting at the main idea, then presents details leading to the main ideal
 - usually from most easily acceptable details to more “controversial” details
- After details the main idea is communicated
- Speaker concludes with recap
- Example:
 - Hint: We compliment your research efforts and would like to explain some recent events – NSF funding was cut, strategic direction was changed, ..
 - Main Idea: Although it was a good effort, we must pull the funding from this line of research.
 - Recap: You will need to switch directions of research.

Formulas for Speech/Presentation Organization

- **OIBCC** – Basic Formula
 - Opening – grab attention
 - Introduction – “Why bring this topic up?”
 - Body – bulk of the presentation
 - Remember that for every important point that you make, you must provide support and this support can take the form of
 - **Statistics, analogies, testimony, illustrations, or specific examples.**
 - Conclusion – summarize briefly points
 - Close – last strong sentences that leave the audience with something to remember
 - **Must tie to your main idea and should tie to your opening to be effective**

Harvard School Formula

- For persuasive speeches
- **PREPY**
 - Point of View – “*Smoking is hazardous for your life*”
 - Reasons – “*Smoking causes cancer*”
 - Examples/Evidence – “*50,000 people die per year from cancer*”
 - Point of view restated – “*If you want a long full life, give up cigarettes*”
 - “You” oriented – “*Take the first step tonight and sign up for ‘no more smoking’ seminar*”

Visual Assistance

- Studies show that people store and access information in three primary ways:
 - Visually, auditorially, kinesthetically
- Adults absorb, retain and learn:
 - 10% of what they read
 - 20% what they hear
 - 30% what they read and hear
 - 50% what they hear and see
 - 90% what they do

Visual Medium for Presentations

- Visuals support the speech, they are NOT the primary message
- Visuals are only used to dramatize and clarify the message
- You must practice your main points of the presentation without relying on the visuals
- Visuals should assist you in controlling
 - Pace of the presentation
 - Flow of the information
- **Important! – When you transition from one visual to the next, introduce the topic area of the next visual before it is revealed.**

Creating Your Visuals

- 14 lines per visual (max)
 - Do not put too much information within a single visual
- A title for each visual
 - Title must be meaningful
- Simple readable labels
 - Labels on charts or graphs should be specific and precise (balance with simplicity)
 - Labels must be meaningful yet simple
- Readable from the rear
 - Print size at least 20 points
- No more than 3-5 major points
 - Each point must be easily identifiable
 - Use highlights, colors, bullets, different text size

Creating Your Visuals

- Consistency is a must
 - Consistency of graphic layout of your visuals is a must
 - You should limit yourself to one or two type styles, type sizes and colors all within one presentation
 - You should limit yourself to one or two type styles and three type sizes at most
- Use colors appropriately
 - Never use the color **red** for your main text, title or labels, red color is difficult to read from distance
 - Use **red** as a highlight color, indicating problem area
 - Use **green** as a highlight color
 - Two of the most common and readable colors are **blue** and **black**
 - Blue color (especially light blue) is the most soothing color on an eye.
- Visuals Must be organized
 - Your visuals must have introduction, body and closing

Presentation Delivery

Albert Mehrabian, a well-known communication theorist, specifies that message impact can be divided into three factors:

- Body language
 - Contributes 55% toward message impact
- Tone of voice
 - Contributes 38% toward message impact
- Actual words
 - Contributes 7% toward message impact

Body Language

- Eye Contact
 - In **United States**, eye contact is a primary and vital part of interpersonal communication
 - By gazing directly into another's eyes we establish link/closeness
 - When speaking to audience, maintain eye contact with audience members
 - In fact, studies show **perception of distrust** are created **when eye contact is NOT maintained**.
- Facial Expression
 - Speaker must be certain that her words and her face are communicating the same message. If not, she will leave the audience confused and uncertain of the true message.
- Gestures
 - Most expressive part of body language
 - Speaker uses his hands and arms to illustrate his words
 - Basic gestures show things such as: **weight, shape, direction, importance, comparison, contrast**

Tone of Voice

- Volume in speech
 - Speaker should express excitement and enthusiasm for the topic
 - Volume should be varied in strength and intensity to add emphasis and dramatic impact to your presentations
 - Through volume control, the audience can infer the speaker's message
 - Many speakers control voice to “**sound professional**”, **but professionals do just the opposite!!**
- Consistent loudness – tendency to talk too loudly or softly
 - Common problem is ‘fading voice’. Make certain to maintain a consistent loudness.
 - Mostly deliver presentation in a clear voice at a conversational level
 - Consider the room where you are speaking
- Convey life, color and melody
 - Voice should **not sound flat or wooden**, beginners tend to speak on too high a pitch.
 - A **thin high-pitched tone lacks authority and appeal**; it is harsh and unpleasant.
 - Cultivate deeper tones.
 - “**one-note**” pitch is also a problem – boring.

Tone of Voice

- **A good speaker will use as many as 25 different levels of pitch to convey variety and meaning.**
- Rate of Delivery
 - Is often linked with your personality and/or cultural origin
 - Relates to how you think and behave
- Variety of rate reflects changes in emotion and mood and can greatly enhance your presentations
 - Plan rate intentionally
 - Fast rate – sense of excitement; rapid sequence of events
 - Avoid extremes (too slow or too quickly)
 - In case of slow speakers, listeners start daydreaming
 - In case of fast speakers, listeners become frustrated and “tune out”.
- Most effective speaking rate falls within the range of 120-160 words per minute.

Technical Talk Types (Technical Paper)

- Purpose at conference
 - to present technical paper orally to peers and colleagues
- Challenge
 - Convert paper into speech
 - Reduce number of main points into a manageable number
 - 15-20 minutes presentation
 - No more than 4-5 main points could be covered adequately
 - Audience expects only highlights
- Oral Presentation should include
 - Statement of research problem
 - Research methodology
 - Review of results
 - Conclusions
 - Future applications
- **Ultimate Goal: Provide highlights of your research to stimulate intellectual thought and discussion**

Technical Briefing

- Purpose for briefing (most common in industry)
 - To provide pertinent facts in such a way that the audience can grasp them quickly, understand their application , use them as a basis for making important decision
 - To convey technical information to a critical audience
- Challenge
 - Analyze audience
 - Determine the result you want your presentation to achieve
 - Reduce main points to a manageable number
- Purpose must be stated in a single sentence
 - Serves as the focal point for the entire presentation
- Conclusion should summarize the main message and primary points
- **Ultimate Goal: Don't waste others time, make your points simply, clearly and quickly.**

Non-technical Audience

- Purpose
 - To interpret the world of high technology to a non-technical audience
 - To persuade, to inform, to build support for an idea or to generate action
- Different from previous talks
 - How you present the information is more important than the actual content!
- Organization of Speech
 - Begin this speech by capturing audience attention and interest;
 - Speaker **very early on** must specifically **state how this topic is related** to audiences interests.
 - Use every day language, avoid jargon
 - If you use jargon, make sure to introduce/define it.
 - Use short crisp sentences with active verbs
 - Make heavy use of examples, analogies, metaphors, and comparisons to clarify and support your main points
 - Gain audience attention, win their interest and finally build understanding
- **Ultimate Goal: unravel “high-tech” mysteries for your audience**

Team Presentation

- Purpose
 - Similar to technical briefing
 - Large team involved to present larger projects, crossing many functional areas involving higher stakes
 - Need multiple presenters
- Challenge
 - Besides challenges for the speaker in a briefing, the **coordination of successful team** is a challenge
- All aspects of presentation must be coordinated
 - Members must establish unified objectives, strategy, organization and visual assistance
 - **Practice is critical for the team presentation!!!**
- **Ultimate Goal: the team leader must be certain that members of the team do present overlapping information and the flow of the presentation is cohesive and unified.**

Summary

- Pay very much attention to oral communication in every technical communication
 - Email
 - 5 minute presentation of your research (on the way to the train station or in the elevator)
 - 15 minute presentation of your research (in conference)
 - 45-50 minute presentation of your research (in job talk, invited talk, keynote)
 - 55-100 minute presentation of your research (in classroom)
- Asking good questions is also oral and memorable communication
- Approach: Practice, Practice, Practice
- **Ultimate Goal: Be effective Communicator in every Situation**

Speaker Introductions

- Purpose of speaker introductions
 - Establish rapport and speaker credibility with the audience
 - Well done introduction will warm up and ready the audience for this particular speaker
 - Weak introductions are a disservice to the audience and the speaker.
 - Successful introductions consider
 - Content, timing and delivery

Speaker Introductions (Content)

- Speaker should always prepare her own introduction
- As a moderator you should request a speaker introduction from the speaker well in advance of the program
- If the speaker does not provide bio, prepare the introductions from the biographical material on the web
- Present
 - Speaker's full name (at least twice, perhaps more)
 - Source of credibility (e.g., current job, experience)
 - Education/background
 - Speech title

Speaker' s Introductions (Delivery)

- It is speaker' s responsibility to check with the moderator concerning name, dates, pronunciation
- If you have difficult name, put the phonetic spelling of your name in parentheses
- Preserve proper form

Speaker's Introduction (Timing)

- An introduction should be proportionate to the speech being introduced
- Most professional speakers apply the “one-tenth maximum” rule of thumb of introduction
- For 10 minutes speech – 1 minute introduction
- Never go over 12 minutes of introduction even for a 1 day seminar

Friendly Effective Evaluation

- “Evaluate? I am no expert!”
- “He/she is a better speaker than me, get someone else to evaluate.”
- **It is not necessary to be an expert speaker to offer a friendly effective evaluation**
- Purpose of Evaluation:
 - Offer your honest reaction to the speaker
 - Done properly, it can also provide information to the audience and improve your own speaking skills
 - Evaluation is NOT nit-picking
 - **A good evaluation is characterized by (1) precise language, (2) tactful delivery, (3) clear organization**

Precise Language

- Evaluations are brief – make every word count to provide useful feedback
- Use precise, well-edited words
- Stimulate mental images of how the speaker appeared and how you felt listening to the speaker
- Evaluate the speech precisely in terms of the goals and objectives as you understood them

Tactful Delivery

- Phrase your comments tactfully and carefully
- Avoid phrases such as
 - “You should ...”
 - “You could ...”
- Use phrases as
 - “I felt (blank) when ..”
 - “When I saw you (blank) I ...”
- Offer encouragement whenever possible, be practical and positive
- When the speaker has faults, be sure to point them out diplomatically and considerately along with explicit practical advice on how to improve
 - **Oral evaluation (e.g., after presentation) should emphasize 1-2 areas of improvement**
 - **Written evaluation (e.g., via email) should report strengths and areas for improvement equally**

Clear Organization

- One common method of evaluation is the “sandwich approach”
 - Positive comments first
 - Suggestions for improvements second
 - Words of encouragement third
- Some evaluators think of evaluation as a mini-speech with opening, body and closing
 - Opening – introduce the area that your evaluation will focus on
 - Body – specify strong and weak points with specific suggestions for improvement
 - Conclusion – include 1-2 highlights from the body and final word of encouragement