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Organizing and Managing Successful Technical Presentations

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Abstract

In recent years, the emphasis on communication skills in collegiate technology programs has been significantly expanded. Despite this, leaders in industry, business, and government continue to lament the poor oral and written communication skills of technical graduates. Indeed, the problem is so significant, and so prevalent, that the Society of Manufacturing Engineers has listed communication skills as a critical competency gap in the 1999 update of the Manufacturing Education Plan. The purpose of this article is to offer technology educators a classroom tested means of helping their students become adept and successful oral communicators. The article specifically addresses the organization and management of the formal presentation, and describes a simple, easy to use, and effective means for technology students at all levels and in all specialties, to develop and deliver successful and memorable oral presentations.

Organizing and Managing Successful Technical Presentations

Joseph (1989) maintains that, in this time of unprecedented technological change, it appears that at least one factor has remained unchanged,

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namely, that technical people, from Ph.D. researchers to shop floor craftspeople, continue to be egregiously poor technical communicators. Despite an increased emphasis on reading, writing, and speaking skills in high schools and colleges, leaders in industry, business, and government continue to lament the poor technical communication skills of graduating technical graduates (Asbrand, 1986). The problem is so significant and so prevalent, that the Society of Manufacturing Engineers has listed communication skills as a critical competency gap in the 1999 update of the Manufacturing Education Plan (Rogers, Stratton, and King, 1999).

It appears that poor communication skills are more ubiquitous and more obvious in technical people. This is because technical people must effectively communicate more, and more often, than those in other fields, and must do so much earlier in their careers. In fact, most technical people typically spend nearly 50 percent of their time communicating (Asbrand, 1986). The purpose of this article is to help technology educators help their students become adept and successful at what is probably one of the most difficult and stressful chores in technical communication, the formal oral technical presentation. The article specifically addresses the organization and management of the presentation, a topic that may often be ignored in speech, rhetoric, public speaking, professional communications, and similar courses in high schools and colleges.

Importance of Technical Communication

In the modern workplace, no one argues the importance of communication skills in the careers of technical people. Anyone seeking a career in the technologies must plan on oral and written communication assuming a dominant and continuing role in their professional lives.

Crowdell (1999) states that technologists must utilize many soft skills such as communication. However, it is these very skills that have largely been ignored or minimized in many technical curricula. Moreover, the presentation of technical information in today's high-tech environment requires skills that have seldom been a part of the technical person's repertoire of tools (Sides, 1999).

Everyday experience further confirms the importance of communication in today's fast-paced world. A quick perusal of the employment section of most newspapers reveals that well developed oral and written communication skills are a highly desirable commodity. These skills are so important in the workplace because, as Drucker notes, technical people must convey detailed and specialized knowledge about technology to other professionals, and must relate this same information to the general public as well (National Science Foundation, 1999).

The problem of poor communication skills is further compounded by the fact that the ability to communicate effectively assumes a much larger role as one advances in a technical career. For example, at Hughes Aircraft, many senior technical people spend as much as 70 percent of their time communicating (Owen, 1999).

According to Joseph (1989), many technicians and technologists can recall cases of ambitious and technically adept colleagues who were passed over for promotion because they could not speak or write well enough to meet the demands of the higher position. Obviously, superior communication skills, both oral and written, are highly valued by those who hire and promote technical personnel (Davis, 1997).

A technical presentation to an audience that understands and appreciates the importance of the subject matter is a relatively pleasurable task. However, presenting a complex technical topic to influential audiences who may lack the background, time, and inclination to fully understand the importance of the topic can be daunting. Yet, the importance of such presentations cannot be overstated.

Those who are unprepared for the technical communication task—who give poorly organized and managed presentations—also run the risk of losing both the respect of the audience, and potential grant money as well (Todoroff, 1997). Clearly, there is no aspect of technical work that is not impacted by the ability to effectively communicate. No two oral presentations are exactly alike, except in one aspect. The purpose of every presentation is to inform, not to impress. However, it is also a fact that a truly informative presentation is also a very impressive presentation.

Organization of the Presentation

Highly informative presentations that make a lasting impression on the audience share some common organizational elements. These characteristics are discussed below.

Introduction

Every presentation must have a clear introduction, which may be the most important part of the process. The introduction “primes” the audience for the rest of the presentation.

A good introduction details the content of the presentation, and the sequence of events that will occur. The introduction also explains the purpose of the presentation, tells the audience

why the subject is important, and states what is to be learned from the presentation. In short, the introduction sets the audience up to derive the maximum benefit from the presentation. For the most part, what the speaker lays out in the introduction, and how it is presented will determine the overall success of the entire event. For this reason, the introduction must be meticulously crafted, and should consist of several components.

Start on time! Starting a presentation late evinces poor organization and management of the event, and more importantly, a lack of respect for the audience. Always start the presentation at the announced or advertised time. In the real world, time is at a premium because it is the only non-renewable resource. Those who have made an effort to arrive on time deserve the courtesy of not having their time wasted by a late start.

Welcome. The presenter must be cordial, and in both words and actions, make the audience feel welcome. Begin with a short statement welcoming the members of the audience, and conveying appreciation for their attendance. Moreover, it is always appropriate to acknowledge the sponsor of the event. Close the welcome by introducing yourself, briefly giving the highlights of your qualifications, and stating the title of the presentation. It is also appropriate to describe the intended audience, and to mention any others that might be interested in the topic of the presentation. Throughout, the speaker must come across as sincere and inclusive.

Agenda. After the welcome, present the overall agenda for the event. This is a critical item because it lets the audience know what is going to be covered, how it will be covered, and how long it will take. The agenda should have its own individual transparency or slide, and be included in the handout for the event. A written agenda, with timetable, also serves to keep the presenter on task and on time.

Purpose. The agenda is followed by a brief statement of the purpose of the presentation. This is a prime opportunity to tell the attendees what

information the presentation will convey, what it will teach them or what they will be able to do as a result of attending the presentation.

Importance of the Topic. Next, the importance of the topic to the audience should be stated in clear and unambiguous terms. Together, purpose and importance must constitute a good reason for the members of the audience to attend the presentation.

Objectives. Finally, state the specific objectives of the presentation. Clear, and clearly stated, objectives let the audience know exactly what they should derive from the presentation, enables the members of the audience to focus their attention on the most important points, and enhances retention of the subject matter. In sum, it is the responsibility of the speaker to help the audience derive the maximum possible benefit from the presentation. This is the point of the introduction, which always includes: (a) a welcome, (b) an agenda, (c) the purpose of the presentation, (d) the importance of the topic, and (e) the objectives of the presentation.

Body of the Presentation

The body of the presentation is the “meat and potatoes”, that is, the substance of the topic. The body of the presentation must include sufficient information for the members of the audience to attain the stated objectives of the presentation. However, it is important not to overwhelm the audience with information. Clear objectives will prevent this by keeping the presenter focused on the needs of the audience.

Handout. In most formal presentations, it is a common practice to provide the audience with a handout covering the salient points of the presentation. A handout is important because it enables the audience to focus on what you are saying rather than on note taking, and is also good advertising.

A well crafted handout also facilitates note taking and retention; helps the listeners keep track of the presentation, and provides a permanent source of information. The handout

should be of the highest quality, attractive, and well organized, with the name, title, and contact information of the presenter prominently displayed. Contact information should include voice, fax, and mobile telephone numbers, as well as an e-mail address and/or a Web URL.

Organization. The body of the presentation should be logically organized into an appropriate number of “bite-size” sub-topics. As a rule, the organization of a presentation is determined by the information being presented. However, the speaker should not hesitate to reorganize the material to suit the specific informational or learning needs of the intended audience.

Regardless of how the presentation is organized, it must follow the written outline provided to the audience. Otherwise, the audience will have to struggle to follow the speaker, and will be unable to derive maximum benefit from the presentation.

Transitions. The transition from sub-topic to sub-topic should be smooth and coherent, and not run together in a disorganized jumble. Provide a brief summary of each “bite-size” sub-topic as it is completed. A good summary consists of two or three well chosen sentences that reemphasize the important points, and heightens the audience’s anticipation for the next topic.

To summarize, the body of the presentation is the “guts” of the subject. It must be (a) logically organized into “bite-sized” sub-topics, (b) coherent, (c) follow the written outline, (d) move smoothly from topic to topic, and (e) summarized at the end of each topic.

Summary of The Presentation

The summary of the presentation is just as important as the introduction. A good summary helps the audience remember the important points covered in the body of the presentation.

Announce the summary. Remember to begin the summary by telling the audience that you are summarizing the topic. This helps the audience make the transition from the many details in the body of the presentation to the more general ideas that will be painted in broader strokes in the summary. A

good summary also aids retention, and highlights information that may have been missed or misunderstood.

Reiterate purpose and importance. Next, reiterate the purpose of the presentation and its importance to the audience. These points help the audience to put the entire presentation in perspective, and enhances seeing the “big picture”.

Summarize each “bite-size” sub-topic. Purpose and importance are followed by a concise summary, perhaps two or three sentences in length, of each of the “bite-sized” sub-topics covered in the body of the presentation. Limit this summary to the most apposite and important points.

Summarize the entire presentation. Finally, summarize the entire presentation in a few well chosen sentences. In general, the summary should relate the “big picture” of the topic to the specific needs of the audience. A good rule of thumb is that the summary should contain what you want the audience to remember about the topic five years from now.

In short, the summary must (a) repeat the purpose of the presentation, (b) reiterate the importance of the presentation, (c) summarize each of the “bite-sized” sub-topics in the body of the presentation, and (d) close the presentation with the “big picture” of the subject related to the needs of the audience. Overall, a good presentation should conform to the old speaker’s maxim: “Tell ‘em what you’re gonna tell ‘em; then tell ‘em; and then tell ‘em that you told ‘em”.

Management of the Presentation

The organization of a formal presentation largely deals with the structure of the information being presented, and the informational needs of the target audience. In essence, the preparation for this portion of the event is the sole responsibility of the presenter.

Conversely, the management of the event includes those portions of the presentation in which the presenter directly interacts with the members of the audience. Hence, the presenter must be prepared to allow the members

of the audience to assume an active and meaningful role in the event.

Question and Answer Period

A presentation is typically followed by a period in which the speaker gives the audience the opportunity to interact with him or her on a one-to-one basis. This is the question and answer, or QA session. The QA session provides the speaker with a significant opportunity to establish a true rapport with the audience, and make the presentation a real success. The presenter should pay particular attention to questions from the audience. These questions usually illuminate areas in the presentation that can be improved upon the next time the subject is presented.

Invite the audience to participate. First, open the presentation to comments and questions by formally inviting the audience’s participation. Remember, this is an invitation to the audience to actively participate in the event, so be cordial. Give the audience some time to reflect upon the presentation, and to frame questions and comments. The usual rule of thumb is to give the audience a slow count of 10 after you have asked for questions and comments before going on. This type of waiting before a large group of possibly influential people can be disconcerting for the speaker, however, patience and composure here will pay big dividends in terms of audience participation.

Responding to comments. In some cases, a member of the audience may simply want to comment upon, or relate a personal experience regarding the topic of the presentation. Always acknowledge and accept the individual’s opinion at face value, for it is exactly that, an opinion. In many cases, comments from the members of the audience will provide a valuable additional perspective on the subject. Acknowledge and use it.

In other cases, an individual may want the presenter to agree or disagree with his or her position on an issue, and state the reasons therefor. Always handle such instances in an attentive and polite manner. However, it is well to remember that a formal presentation

is not a debate. Although some give and take here is both permissible and desirable, the presenter should never allow a member of the audience to dictate the agenda for a presentation.

Responding to questions. Questions fall into three general categories. First, the individual simply did not understand what was presented. In responding to this type of question, a reiteration of this point may suffice. In other cases, it may be necessary to explain the same point in a different manner.

In the second type of question, the individual understood the factual portion of the presentation, but is uncertain of the context of a specific point. This is particularly true when presenting to audiences composed of technical experts in an esoteric discipline, or when presenting a highly technical topic to a general audience. In these cases, a simple explanation or description of the background or essential concepts of the topic will usually suffice. Bear in mind that general audiences are more interested in the scope and impact of a topic than in its technical aspects. Respond to questions accordingly.

In the third type of question, the individual understood what was presented, but asks for expansion or additional information. If sufficient time is available, or other members of the audience have the same question, go ahead and respond. Otherwise, invite the individual concerned to meet after the presentation to discuss his or her question. Always keep the presentation on track and moving per the timetable in the published agenda.

In responding to any type of question, stay focused, coherent, and on task. Respond to the question clearly and without tangent. If you are uncertain as to what the question is, say so. Tell the individual that you don't understand, and ask him or her to repeat the question. Asking the speaker to repeat his or her question is also a valuable technique if you need to gain some time to frame a response. However, use this ploy carefully and infrequently.

When taking questions, remember to focus attention on the speaker by looking directly at him or her, leaning

slightly in his or her direction, and nodding from time to time to indicate your understanding. Always remember that good oral communication includes listening attentively. Some speakers make it a habit to repeat the question in their own words to ensure that they have understood the question. This is a matter of personal preference, however, anything that the presenter can do to demonstrate to the audience that he or she is listening carefully will go a long way toward making the event a success.

Summary

In the modern workplace, no one argues the importance of communication skills in the careers of technical people. A quick perusal of the employment section of most newspapers reveals that well developed oral and written communication skills are a highly desirable commodity. Yet, it is these same skills that have largely been ignored or minimized in many technical curricula. To complicate matters, the ability to communicate effectively assumes a much larger role as one advances in a technical career. Indeed, superior communication skills are highly valued by those who hire and promote technical people.

This article describes a simple, easy to use, and effective method that can be used by technology students and professionals, at all levels and in all specialties, to develop and deliver successful and memorable oral presentations. The details of the method described herein are summarized in Appendices A and B, which show the evaluation sheet developed by the author and his students for use in college and university technology classes.

This same sheet is also provided to students before their presentations to serve as a check list in preparing for the event. Students appreciate being able to prepare their presentations according to the same definite criteria upon which they will be evaluated. In addition to being evaluated by the course instructor, this same sheet is also provided to each of the students in the class, as well as any guests that attend the event.

The grade for the presentation is determined by averaging all the evaluation sheets for the event. This procedure provides a more balanced evaluation of the presentation, enhances the perception of participation and fairness in grading, and helps students become self-evaluating and self-teaching.

Item 9 on the evaluation form asks each attendee to categorize themselves. The purpose of this categorization is to afford the presenting student a valuable opportunity to receive three levels of feedback: (a) from the members of the class (peers), (b) from industrial and academic visitors (superiors); and (c) from less experienced junior classmen (subordinates).

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Appendix A

Content and Layout of Evaluation Form for Technical Presentations (Front)

| | |
|--|--|
| West Virginia Northern Community College | Industrial Technology Program |
| STUDENT PRESENTATION EVALUATION (Front) | |
| Topic _____ | |
| Date _____ Presenter _____ | |
| | Ineffective Somewhat Effective Effective Very Effective Highly Effective |
| (1) INTRODUCTION TO PRESENTATION | |
| Started presentation on-time | 1 2 3 4 5 |
| Welcomed audience to presentation | 1 2 3 4 5 |
| Distributed Handout early and efficiently | 1 2 3 4 5 |
| Subject of presentation clearly stated | 1 2 3 4 5 |
| Importance of subject clearly established | 1 2 3 4 5 |
| Stated a clear purpose for presentation | 1 2 3 4 5 |
| Stated clear objectives for presentation | 1 2 3 4 5 |
| Presented a definite agenda for presentation | 1 2 3 4 5 |
| Comments _____ | |
| (2) BODY OF PRESENTATION | |
| Logically organized into bite-sized topics | 1 2 3 4 5 |
| Organization followed written outline | 1 2 3 4 5 |
| Smooth transition from topic to topic | 1 2 3 4 5 |
| Quick summary of each topic | 1 2 3 4 5 |
| Comments _____ | |
| (3) SUMMARY OF PRESENTATION | |
| Purpose of presentation reiterated | 1 2 3 4 5 |
| Importance to audience repeated | 1 2 3 4 5 |
| Each section summarized in one or two points | 1 2 3 4 5 |
| Several concise closing statements over entire topic | 1 2 3 4 5 |
| Comments _____ | |
| (4) QUESTION AND ANSWER | |
| Audience invited to comment or ask questions | 1 2 3 4 5 |
| Gave audience time to reflect on topic | 1 2 3 4 5 |
| Responded clearly, concisely, and completely | 1 2 3 4 5 |
| Maintained control of event at all times | 1 2 3 4 5 |
| Comments _____ | |

Appendix A

Content and Layout of Evaluation Form for Technical Presentations (Back)

| | | | | | |
|---|---------------------------------|--|------------------------------------|--|---------------------|
| West Virginia Northern Community College | Industrial Technology Program | | | | |
| STUDENT PRESENTATION EVALUATION (Back) | | | | | |
| Topic _____ | | | | | |
| Date _____ Presenter _____ | | | | | |
| | Ineffective | Somewhat Effective | Effective | Very Effective | Highly Effective |
| (5) GENERAL | | | | | |
| Clear Introduction, Body and Summary | 1 | 2 | 3 | 4 | 5 |
| Presentation was clear, concise, and complete | 1 | 2 | 3 | 4 | 5 |
| Adhered to agenda - stayed focused, no tangent | 1 | 2 | 3 | 4 | 5 |
| Language level appropriate to audience | 1 | 2 | 3 | 4 | 5 |
| Visual aids effectively used | 1 | 2 | 3 | 4 | 5 |
| Comments _____ | | | | | |
| (6) PRESENTER | | | | | |
| Was thoroughly familiar with topic | 1 | 2 | 3 | 4 | 5 |
| Used good verbal communication techniques | 1 | 2 | 3 | 4 | 5 |
| Effectively managed presentation | 1 | 2 | 3 | 4 | 5 |
| Spoke authoritatively - inspired confidence | 1 | 2 | 3 | 4 | 5 |
| Demonstrated professional appearance and manner | 1 | 2 | 3 | 4 | 5 |
| Demonstrated enthusiasm for task | 1 | 2 | 3 | 4 | 5 |
| Evinced thorough preparation for task | 1 | 2 | 3 | 4 | 5 |
| Comments _____ | | | | | |
| (7) MATERIALS | | | | | |
| Transparencies - Organization appropriate to topic | 1 | 2 | 3 | 4 | 5 |
| Transparencies - Content appropriate to topic | 1 | 2 | 3 | 4 | 5 |
| Transparencies - Format appropriate to topic | 1 | 2 | 3 | 4 | 5 |
| Transparencies - Number appropriate to topic | 1 | 2 | 3 | 4 | 5 |
| Handout - Organization of appropriate to topic | | | | | |
| Handout - Information content appropriate to topic | 1 | 2 | 3 | 4 | 5 |
| Handout - Format generally per Technology Handout 1 | 1 | 2 | 3 | 4 | 5 |
| Handout - Length appropriate to topic | 1 | 2 | 3 | 4 | 5 |
| Comments _____ | | | | | |
| (8) OVERALL RATING OF PRESENTATION | 1 | 2 | 3 | 4 | 5 |
| (9) EVALUATOR CATEGORY: | | | | | |
| <input type="checkbox"/> Faculty | <input type="checkbox"/> Staff | <input type="checkbox"/> Administrator | <input type="checkbox"/> Industry | <input type="checkbox"/> Government Agency | |
| <input type="checkbox"/> Consultant | <input type="checkbox"/> Senior | <input type="checkbox"/> Junior | <input type="checkbox"/> Sophomore | <input type="checkbox"/> Freshman | |