Getting Professionally Cool with Hot Media:

Teaching the Videotaped Interview

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Abstract

Oral communication skills are increasingly important for technical professionals. As new media allow for more fluid and more interactive communication in the workplace, engineers with good oral skills can benefit from video-conferences, on-line real-time "talk" and other "hot media." While the formal engineering report continues to be important, new media offer real advantages: In global market environments and in flattened organizational structures, efficient and coordinated decisions are essential to technical productivity. Skilled use of electronic media by engineers can be fostered by supporting oral communications in the engineering curriculum. Teaching the videotaped job interview is described as one such opportunity. A critical feature of that assignment is the high motivation that students bring to the task because they understand the potential for immediate benefits.

1 Introduction

In a recent assessment of existing instruction in communications, the School of Mechanical Engineering at Purdue University tabulated current assignments in the School, noting content and format requirements as well as modality--whether assignments were written or oral. An outcome of this effort was a decision to embed more opportunities for students to develop oral communications skills. The "embedding strategy" is an effort to fold communications instruction into existing course work as a reflection of the belief that technical communications are inherently part of technical work.

While the first year engineering curriculum incorporates two semesters of communications course work, one written and one oral, these courses replicate communications assignments from secondary school curriculum, e.g., general interest essays and informal short speeches, all intended for peer audiences. Engineering students, if they are to move toward competence in an increasingly media-intensive workplace, need experience with more professional tasks, e.g., technical collaboration on design projects. Considerable instructional investments already support written communication skills; engineering schools have long emphasized formal laboratory reports. The agenda now is to find ways to build better oral communication skills.

2 Design in the Curriculum

The increased emphasis on design in engineering curricula does offer an important opportunity to support oral skills. One implication of incorporating more design work into the curriculum, especially design projects carried out with small teams, is that students must do more oral work. Teams spend time in planning meetings, in informal consultations in front of computer terminals, and in verbally exchanging information with faculty advisors and industry sponsors. Design work also entails some formal presentation, an analog to the formal written report. The emerging and most pressing demand, however, is to support more informal and more

interactive communication modes--meetings and interviews, conferences-at-a-distance, and voice-only conversations--all of which are increasingly electronic, and in media parlance, hotter. The investment in design experience brings to the faculty the additional challenge of supporting the oral communications skills so critical for effective collaboration and teamwork. Providing useful feedback is difficult because of the interplay of personality and teamwork issues, compounded by imperatives growing out of the technical work.

Oral communications used to mean giving speeches; now, oral communications is more often a matter of relating conversationally one-to-one, if not face-to-face. The formality inherent in one-to-many communications is unproductive. Increasingly, oral communications are likely to be "hot''--open to interaction. The following materials detail one assignment used this past year to help students become more effective oral communicators, especially in the interactive one-to-one situations they can expect to encounter as engineering professionals.

2 Professional Issues in the Curriculum

An existing course, the Sophomore Seminar, already provides space for professional issues. Outside speakers are usually mechanical engineers describing their career decisions and discussing professional options. Speakers from inside the school provide information about plans of study and special opportunities within the school. As homework for the course, students complete a series of assignments in professional genres--letters, memos, and short reports, all relating to professional issues.

A discussion of professional ethics is also part of the Seminar, usually developed with reference to both codes of ethics (American Society of Mechanical Engineers) and case studies of actual workplace events. The interview assignment is used as one assignment in the Sophomore Seminar.

The premise of that interview assignment is that the student is being interviewed by a company where a "whistle blowing" employee has been fired. Students have the complex task of finding out whether the situation is as it seems and also conveying their own stance in a way that keeps the interaction open without compromising their own integrity. The interview assignment requires a response to specific questions for an identified audience. Although the audience is only assumed, "case study" information is provided so that students have some basis for anticipating audience issues--what is important to the audience, what might be disputed by the audience, and so on. The intent is to make audience issues as vibrant as possible. Students are immediately engaged by the opportunity to practice was is clearly an important performance.

Questions are provided several weeks ahead of the actual interview sessions. Students plan their responses out ahead of time and these responses are reviewed by students working in pairs and also by the instructor. Students then write a memo detailing how they will develop the discussion and how they will respond to audience perspectives. The memo is drafted, reviewed, and revised. The actual verbal response is videotaped and subsequently critiqued by the student.

The interview, while intended to be similar to actual job interviews, incorporates a special complication, specifically, the ethical problem. Students are asked to discuss what they might do if they were confronted with a given conflict of interest, in this case, a conflict between loyalty to an employer and the professional mandate to put public interest first.

The assignment is personal in two ways. First, the student is asked to take a stand as an individual. Ethical issues, because of the connection to the individual acting in a professional capacity, actions, require justification with individual values. Individuals, to act responsibly, must have both an awareness of choice and a

rationale for choosing. The interview assignment requires students to work on both awareness and performance levels. Students welcome the challenge because they recognize the importance of professional standing and, in general, welcome the responsibility it entails.

From the student perspective, the most important feature of the interview assignment is the connection to real world selection processes. Students are concerned about an increasingly competitive technical employment market and as a result, are highly motivated to seek technical employment on a part time or summer internship basis, especially if they are not participating in a cooperative education program. Students are aware that major corporations do use such "in-training" job opportunities to screen for full-time employment candidates. Furthermore, technical experience outside the classroom is highly valued by faculty and students alike as a complimentary experience to academic course work in engineering. Students readily accept the interview assignment as relevant to their development as engineering professionals.

From a communications perspective, the interview is a complex package. The face-to-face interaction is multi-dimensional--not just words but also non-verbal communication, including both intended and unintended expressiveness (e.g., style, emotive content, and body language). The substantive content entails a careful delineation of issues and the development of a responsive argument in order to convey the rationality underlying the stance presented. The non-verbal content should convey the investment of the speaker/author and establish competence and credibility, "authority." Speakers must know what they are talking about and have a personal investment in their statements.

3 The Interview Assignment

To help students manage the package, the assignment is divided into three phases: (1) persuasive argumentation, (2) rehearsal and performance, and (3) feedback and critique. Argumentation is introduced as a way of formalizing or acknowledging connections as well as of discovering new implications. Audience is brought into the process by the requirement that students anticipate the reaction of the audience and that the concerns (perspectives) of the audience be addressed. The requirement to "role-take" the audience in advance allows the student to build in evidence of that awareness as well as use those perspectives as fuel for further invention, again the richness of the thesis-anti-thesis invention heuristic. An emphasis on the rhetoric of the situation helps students generate materials they can have confidence in. Students are asked to formalize their materials first in the form of a memo to the instructor. In the memo, students present an argument, a defense of their stance. They state the position they take and why they are taking it.

The memo, a planning document, allows for external feedback from the instructor and also provides on-going support for student reasoning. Students benefit too from the time-lag introduced by the written component of the interview assignment, a build-in incubation period. Students find that their ideas have continued to evolve even after the planning memo is submitted; the final shape of the material is often the result of not just one but of several revisions.

During the actual taping of the mock interview, the supportive text is set aside. However, the preparation that it represents allows students to perform at levels that would be impossible if the situation were looked at as a just-do-your-best winging operation. The formalized investment in having something to say transforms the mock interview into an important validation of student abilities. They can succeed because of the scaffold put into place ahead of time.

as a follow-up to the mock interview, students write another memo which details their analysis of their own performance and which also presents a plan for future work. Both the analysis and the plan stress positive aspects of the performance.

4 Conclusion

When the conversation turns to enhancing the technical communication skills of engineering students, the first concern is typically report writing. Can they turn out a quality document that is useful in the technical workplace? Will their written communications contribute to getting the engineering job done or will infelicities and misspelling call into question not only their writing competence but also the quality of their technical credentials?

While it maybe premature to declare formal engineering reports relics of an earlier age, changes in the technical workplace have fundamentally altered the way technical information is generated and used. In a word, technical communications have become "hot." As concurrent engineering with its cross-functional teams and electronic work spaces has dramatically cut the "time to market" in the product development cycle and as six sigma quality has become a benchmark in the global marketplace, the fluidity of on-line communications and virtual meetings have challenged engineering educators to prepare students for an expanding range of engineering communications. Hotter media, video-conferencing and on-line interactivity, demand different skills. Engineering students can benefit from an acknowledgment of these on-going changes and from opportunities to develop skills in new media.

A shift in emphasis toward orality may bean important way to prepare students for a range of "hot" technical media. Oral communication, in contrast to written communication, is more immediately action-oriented, more fluid, more interactive, "hotter." It is also more personal in that it is a performance rather than a (document) product--people instead of paper. Oral communication is also more situated, more mired in time and place, and often more meaning-full.

In contrast to the highly constrained formal report, the technical discussion that is conducted orally is much less well defiied and on occasion is just plain wild. Giving students ways of analyzing oral exchanges and strategies for orally participating prepares students for hotter media.

5 Bibliography

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