

Introduction to the Special Issue on New Case Studies for Technical and Professional Communication Courses

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Abstract—*This special issue of the IEEE TRANSACTIONS ON PROFESSIONAL COMMUNICATION focuses on developing new case studies for use in technical and professional communication courses. The term “case study” used here refers to descriptions of real world events that illustrate particular communication problems through collections of primary documents and secondary materials. While case study pedagogy provides students with many benefits, such as concrete applications of technical communication theory, there are distinct challenges that may prevent instructors from developing case studies, such as collecting primary documents as they become available in the media. The case studies treated in the special issue focus on the following events: the crash of Air Midwest Flight 5481, the accounting scandals of the Enron corporation, the communication crisis at the Brookhaven National Laboratory, the leaking of nuclear material at the Davis-Besse Nuclear Power Plant, the Texas A&M bonfire collapse, and airline press releases in the wake of the attack on the World Trade Center.*

Index Terms—*Case study, pedagogy, personal communication, technical communication.*

The idea for this special issue of the IEEE TRANSACTIONS ON PROFESSIONAL COMMUNICATION evolved out of a particular problem we have recently seen in our technical and professional communication classrooms. For years, both of us have used the Challenger as a case study in our courses for a very good reason. We could begin discussion with a question that makes the case relevant to each student: “Where were you on the day when the Challenger exploded?” After establishing this connection, we could use the wealth of important materials in class. The primary materials include the memos that were exchanged between NASA and Morton Thiokol, one of the shuttle subcontractors, as well as the sets of visuals prepared by engineers to demonstrate, albeit unconvincingly, the likelihood that the O-rings would fail at cold launch temperatures. The secondary materials come from the various theorists—visual design experts such as Edward Tufte, technical communication specialists such as Dorothy Winsor and Paul Dombroski, and later the excellent Challenger materials repository on the Association of Teachers of Technical Writing site, to name only a few—who focused on the various failures that led up to the technical disaster [1]–[4]. The availability of primary materials and the theoretical insights of the secondary materials allowed us, as instructors, to bring a real world case into our classrooms. As

a result, we could demonstrate the application of communication principles that might otherwise remain at the level of mere theory for our students.

Unfortunately, we have seen our initial question—“Where were you when the Challenger exploded?”—become increasingly obsolete. As students’ experience grows more distant from the actual event, we find we cannot make the same case for its relevance to our classes. Even the recent Columbia disaster now deserves its own development as a case study, rather than seeing it as just another instance of the same communication problems that surrounded the Challenger. We also see that other, more current events are familiar to our students through reports in the media, such as the Enron accounting scandal, and the attacks on the World Trade Center Towers. These events also produced an array of primary documents that reveal a complex communication situation emerging in the real world. At this point, however, the important secondary materials do not exist that would help communication instructors bring these events into the classroom. This special issue of *Transactions* is intended to represent the first stage in the development of new cases for teaching technical and professional communication. The articles assembled here provide collections of primary documents with analysis, and they also represent the first efforts to develop critical materials that support teaching cases. We hope that technical and professional communication instructors will find the cases of use in their classrooms.

WHAT IS A CASE STUDY?

Even as we call these case studies, we acknowledge that the term has been defined in various ways in different fields. A quick survey of articles

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published in the field of technical and professional communication indicates that, in our discipline at least, the term is meant to imply the first hand experience of the authors during the development and/or implementation of a particular technical communication application, for example, "Migration to a Paperless Office: A Case Study." The focus is on a very localized event, usually described in narrative fashion ("First we had to toss out all our document printers"), with the implication that the value of the study lies in the potential similarities between the authors' experiences and the needs of the reader who may be facing the same circumstances. In other instances, cases may be offered that are purely fictional versions of workplace situations. In these cases, students may be asked to assume a fictional role ("You are the only technical communicator in a small software development organization") and then conduct an analysis of communication practices that would seem suitable to that situation. Unfortunately, the use of the term "case study" here is contrary to how it is defined by others in our field and by other disciplines entirely.

The disparity between definitions of case study within technical communication was Mary Sue MacNealy's subject in "Toward Better Case Study Research" in 1997 [5]. Making distinctions between what many technical communicators call case studies—case history, problem case, or case material—MacNealy defines a case study as follows:

Case study research is a qualitative tool: as such, it aims to provide a rich description of an event or of a small group of people or objects. Because the scope of a case study is so narrow, the findings can rarely be generalized; but a case study can provide insights into events and behaviors, and it can provide hypotheses for testing. [5, p. 183]

MacNealy's definition, drawn as it is from the field of qualitative research, does not, however, reflect the use of the term in other disciplines and its significance for pedagogy rather than strictly for research. Case studies have been used as an important pedagogical tool in a number of academic fields for many years. Medicine and law were the first disciplines to use case studies as a teaching tool. Schools of psychology and sociology were also early adopters of this method. Seeing the value of this methodology, the Harvard Business School began using case studies in its management courses in the early 1900s. Today, the case study method of teaching has become common in a variety of other fields. The teaching of ethics, for example, often relies on case studies that recount specific events (e.g., the engineering problems that caused the collapse of the suspended walkways at the Crown Hyatt Hotel in Kansas City). The ethics cases allow students to study primary documents such as engineering drawings, and then use ethical principles to analyze the case and apply theory

to a real world situation. In schools of business, business case studies, based on real companies, help students understand the inside workings and ultimate failures of corporations like Enron. Thus, when we call the articles in this special issue CASES, we refer to them as descriptions of real world events that illustrate particular communication problems through collections of primary documents and secondary materials.

The literature of case study pedagogy suggests that cases offer students particular benefits not possible with other modes of learning. According to Naumes and Naumes, "Case studies provide a means by which readers can learn through the discussion of actual situations and circumstances, by following the actions and analyzing the thoughts and decision process of real people, faced with real problems, in real settings" [6, p. 36]. Case studies provide timely and interesting materials for students to analyze, especially when recent or current cases are used. As a result, cases engage students from the beginning of the classroom discussion. Perhaps more importantly, cases provide a solid connection between the real world—the news students hear every day—and the writing they do in the classroom. Thus, the instructor can bridge the theoretical information offered in textbooks and lectures to the everyday application of those theories in the workplace. Case-based instruction also offers greater intellectual rigor than some other pedagogies because of the inherent nature of real and often evolving events. With cases, students see that communication is never wrapped up in tidy packages as is the case with most class assignments. Students must confront and learn to manage ambiguity and complexity, learning that there is not a single right answer to the situation at hand. This exposure makes it easier, therefore, for them to correlate real world events with the actual writing they will be called upon to do on the job after graduation.

CHALLENGES TO DEVELOPING CASE STUDIES

While instructors may agree on the potential benefits of case study pedagogy, the challenge for most of us lies in developing good cases. First, an instructor may need to recognize the long-range significance of an event while it is still emerging in the news media. If the instructor is aware of the potential of a particular event to become a case study, he or she can collect primary materials as they become available in print or on television. For instance, an instructor may cut out articles from the *New York Times* or the *Wall Street Journal*, or record television interviews from news programs. The problem here is timing: if the instructor does not recognize the potential for a case study as the event is unfolding, then much of the primary material may not be available later in the same form. News programs may, for instance, run additional interviews months after the events,

but these interviews will be colored necessarily by the subsequent analysis that follows any event. Another difficulty may lie in the regional nature of the particular event. While it is easier to follow an event with national significance, such as the Columbia disaster, there are other regional events that offer good primary documents, but the instructor may not be aware of them.

In addition to tracking and collecting primary materials, the instructor must have the time to analyze the primary materials and develop some preliminary interpretations of the texts. The instructor must also develop a pedagogy for bringing the case into the classroom. In each of these instances, time is the necessary requirement, something that every instructor wishes he or she had more of. So many instructors rely on established cases, or they regret that they do not have the resources available to develop a potentially useful case, or they do not use cases at all. This issue is designed to resolve all three challenges.

INTRODUCTION TO THIS ISSUE

We begin the special issue on case studies with an event that may not have gained national attention when it first occurred. On January 8, 2003, Air Midwest flight 5481 crashed shortly after takeoff from the Charlotte, North Carolina, airport. As Julie Staggers and Meredith Zoeteway argue, their case “asks students to look past the technical cause of a commuter airplane crash to get inside the complex web of policies, practices, actions, and events” that constitute real communication practices. Their case offers instructors both analysis of the crash and student assignments that can facilitate the use of the case in the classroom.

Unlike the Air Midwest crash, the collapse of the Enron corporation has continued to invite national media attention. Most recently, Kenneth Lay, the chief executive officer of Enron, was indicted for his role in the accounting practices in the company. The case study by Richard House, Anneliese Watt, and Julia Williams begins with a close reading of the text of the internal letter that brought the scandal to light: the whistleblowing letter written by Sherron Watkins. House, Watt, and Williams take up the concept of whistleblowing and use it to analyze the rhetorical moves Watkins makes in the letter. The assignment this case offers asks students to compare the persona Watkins creates for herself in her original letter to the persona created for her by subsequent articles in the *New York Times* and *Time* magazine.

The next two cases take up the relationship between the technical and nontechnical communities, a communication situation that frequently creates conflicts and disagreements in the public arena. Maria Cochran’s “‘Cynical politics’ vs. ‘scientific truth’: Communication crisis at Brookhaven National Lab” explores a complex system of communication problems surrounding a release of tritium into local groundwater. While the release itself was not lethal, the reactions of Brookhaven scientists to the community’s demands for information was the source of conflict: “The scientists’ rational claims, supported by sound calculations, were lost on angry and scared people; the lab’s lack of openness about the crisis . . . was perceived as a lack of integrity.” Likewise, Carol Nelson-Burns discusses the case of the Davis-Besse Nuclear Power Plant, another case in which public access to information, particularly in light of fears of nuclear power, created a communication crisis.

This special issue ends with two cases surrounding tragic events: the collapse of the student bonfire at Texas A&M University and the terrorist attacks on the towers of the World Trade Center. Lyn Gattis has collected the most important primary document that constitutes the case: the final recommendation report of the commission appointed by TAMU President Ray Bowen to investigate the causes of the accident and to recommend future action. As a result of studying this case, students gain significant insight into the nature of the recommendation report genre, understanding how established criteria can produce particular conclusions and actions. Finally, Judith Strother uses the press releases produced by American Airlines and United Airlines in the hours and days after the airplane attacks on the World Trade Center Towers to analyze the ways in which public relations representatives in the two companies handled crisis communication.

CONCLUSION

While the work of these articles represents a beginning in the development of new case studies for use in the classroom, there is more work to be done. As instructors adapt these cases for use in their own classrooms, they will contribute to the growing body of knowledge and pedagogy for each case. In order to serve the development of the cases, therefore, the Education Committee of the IEEE Professional Communication Society (PCS) plans to maintain the cases on the society’s website: <http://www.ieeepcs.org>. In the months to come, we invite reactions, input, and feedback to the cases via the website and through the PCS online community.

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