The Role of Historical Study in Technical Communication Curricula

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Abstract.   Historical study within academic disciplines is often used to invest students in their own futures and to create a sense of community among practitioners. As technical communication programs continue to develop, program designers must make decisions about how much historical study should be included. The current study examines information about how much value teachers of technical communication place upon historical study and the reasons for its inclusion in or exclusion from academic programs. Survey results show that attention given to historical study varies by program but that a few resources dominate study within many programs. The authors make recommendations for integrating historical study into technical communication curricula and offer an outline for a technical communication history course.

Keywords.   history of technical communication, teaching of technical communication, study of history, survey, professional issues

Technical communication programs are frequently forced to make curricular decisions based on a variety of needs, wants, and desires. Students, employers, and administrators often have specific desires concerning student training, and those desires, taken as a whole, may outpace the available number of credit hours within any given degree program. Courses covering topics such as technical communication history are often not what students, employers, or administrators have in mind when they think of highly trained graduates who are "business ready." Translated, the phrase "business-ready" usually refers to graduates trained in using the software of the moment and skilled in aiding production of various types.

Whether students need to be more skilled in these areas than they are in theoretical and historical concepts depends on whom you ask. Many academics see a value in studying theory and history, but these subjects often have to be justified to university outsiders. Even among academics, historical study is seldom given curricular priority: there are few university courses devoted to technical communication history or technical communication programs that weave historical study throughout their courses. In technical communication journals, historical studies have proliferated since 1990 (see, for example, the items listed in Rivers, 1999; and Tebeaux & Moran, 2011), but these studies have not found a firm place in our teaching (Todd, 2003).

We believe that the study of the history of technical communication is justified in academic programs, either as a stand-alone course or units within several courses in a curriculum. Students and faculty members alike need a sense of professional identity and purpose that cannot be derived from mere mastery of technical skills. Members of the profession require an understanding of the historical trends that gave rise to the practice, profession, and academic discipline to fully appreciate their value. Academics are fond of saying that theory is an integral part of technical communication study, but historical study moves even beyond the realm of knowing why we do things. It contributes to the profession's development of a shared historical consciousness: "the emergence of a particular collective, historical consciousness—in this case a professional consciousness—and the emergence of historical narratives that make a case for the legitimacy of the identity by which such consciousness is signified, are reciprocal" (Savage, 1999, p. 374).

This article makes a case for the integration of historical study into technical communication curricula. Although the Society for Technical Communication Technical Communication Body of Knowledge (STC TCBOK) includes not only the history of technical communication but also the histories of rhetoric and technology under "History," we use "historical study of technical communication" to mean the study of the history of technical communication as a practice, profession, and discipline. The practice of technical communication is ancient, no doubt predating the earliest written records. The profession of technical communication is relatively recent, emerging during and immediately after World War II. Although universities were offering courses in technical writing in the early 1900s, the academic discipline of technical communication began with the creation of the first university degree programs in technical writing in the 1950s.

We have divided our discussion into five main parts. First, we provide a review of the literature on our topic from the major journals and confer-

ence proceedings in our field. Second, we present and analyze the results of a 2007 survey of program administrators about the role of historical studies in their programs and the value of historical studies to teachers, students, and practitioners. Third, we examine online syllabi and course descriptions for evidence of current use of history in technical communication curricula. Fourth, we make recommendations for further integrating historical studies into technical communication curricula. Lastly, to illustrate how a stand-alone course might be structured, we describe a course in the history of technical communication at our university. We hope that our article will contribute to ongoing conversations about this topic and will inspire more teachers of technical communication to make pedagogical use of the growing body of literature about the history of technical communication.

Literature about Historical Study in Technical Communication

Despite any misgivings that university outsiders might have, technical communication scholars have asserted the value of historical study. For example, in arguing for a more humanistic approach to technical communication, Russell Rutter (1991) claimed that, "One part of a broader, more liberal approach to technical communication is acquiring perspective that follows study of the profession's history and development" (p. 143). Rutter believed that historical study is necessary to retain in current practice what has been good about previous practice, both ethically and practically. R. John Brockmann (1998) made a similar argument when stating that, "in a profession that gets things done, the payoff for technical communicators is how to make decisions based on a perspective offered by historical analogies" (p. 391). Both Rutter and Brockmann viewed historical study as a means to improve current practice.

But if we assume that historical study is of practical value to current practitioners, is it necessarily of value to teaching and research? Jennifer Connor (1991) made a case for historical studies as a part of teaching:

> In individual technical communication courses, they may help orient humanities students to the different cognitive approach required; at the same time, they can show technical students the important role that effective communication has always played in their fields. In an academic program devoted to technical communication, historical studies (including, perhaps, readings in the history of science, technology, and information) seem appropriate ways to examine in-depth the various issues identified in the field.

> In short, the history of technical communication can be a "medium of education," used to increase understanding and develop judgment. (p. 5)

This type of perspective can be used to instill in students, especially in new students, a sense of professional identity, and to clear up mistaken assumptions, such as the assumption that technical communication began after World War II (Brockmann, 1988). In fact, the practice of technical communication has a long and storied tradition that begins in ancient history or even prehistoric times. And there is some evidence (beyond what many of us suspect instinctively) that students lack this sense of historical identity. Roger Masse and Patrick Kelley (1977) noted many years ago that technical writing students at New Mexico State University lacked a sense of historical perspective concerning scientific and technical writing. In response, they assigned readings ranging from Hippocrates and Harvey to Copernicus and Kepler.

Carol Lipson (1982) lamented the glaring gap in our collective body of knowledge concerning technical communication history, stating that "I feel strongly that future teachers and scholars in the field need a background in the history and theory of our field, and books should be available to help them acquire it" (p. 5). Similarly, Robert Johnson (1994) called for "more broad-based implementation of theoretically and historically based curricula in technical and scientific communication programs" (p. 48). In a later article, Johnson (1998) reiterated his belief that technical communication programs would be paid more serious attention within academia if they were able to produce more historical research. Schnakenberg (1998) pointed out that staying current with recent technologies is "an endless task with relatively short-term benefits" (p. 65), while teaching the evolution of communication technologies and strategies produces more long-term, problem-solving skills within students.

 Seemingly in response to these types of calls for more focus on history, studies into the history of technical communication have become prominent in recent years. Gerald Savage (1999) noted that "although we are in the early stages of historicizing technical communication, the relatively sudden appearance of so many ambitious historical studies may hold the greatest promise for the shaping of a professional consciousness in the field of technical communication" (p. 375). But this promise does not seem to be a sufficient justification in itself for publishing historical research. The authors of most studies continue to follow Brockmann's (1998) recommendation that "if the field of technical communication is instrumental communication, communication that gets things accomplished, so

must its history" (p. 386). Max Loges (2011) suggested that his study of a Civil War general's verbal abuse of his underlings may help workplace professionals "realize that cursing, threatening, and belittling are not effective measures for improving morale or efficiency" (p. 170). Elizabeth Tebeaux (2010) challenged readers of her study to use history to find ways to produce more "effective tractor operator manuals and warnings" (p. 4).

There have been other attempts to justify historical study in instrumental terms. Edward Malone (2007), for example, identified four important uses of historical study under the headings of invention, precedent, distance, and context. Technical communicators can call upon history for inspiration and ideas, precedents to defend choices and proposed solutions, distance to gain better perspective, and context for understanding the evolution of current practices.

This literature hardly represents the complete body of ruminations about the value and place of historical study in technical communication, but the sources are representative of the attitudes concerning historical study in technical communication's body of knowledge. History is seen as a relevant course of study for practitioners and academics alike, and one is hard pressed to find any direct challenge to this notion within the literature, despite our well-documented struggles to stay current with the technological pace of our times. Still, we wondered how these principles were being applied within technical communication programs, and to what extent this historical sentiment was being put into practice pedagogically.

Survey of Program Administrators[1]

In 2007, the Council for Programs in Technical and Scientific Communication (CPTSC) funded a survey of technical communication program administrators in the United States to determine the role of historical studies in technical communication curricula. Survey Methods (surveymethods.com) was selected to host the survey, which was launched on September 16, 2007. Invitations were sent to 72 people who had been identified in either the STC Academic Database or the CPTSC Programs List as program administrators or points of contact for their programs. Several programs listed by STC and/or CPTSC were eliminated because they did not provide valid contact information. Our program at Missouri University of Science and Technology (Missouri S&T) was also excluded from the study.

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[1] A version of part of this section was published in the 2007 CPTSC conference proceedings (see Malone & Bryan, 2007). Former Missouri S & T graduate student Tara Bryan (now Tara Bryan de Cañellas) assisted with the design and implementation of the original survey.

Each invitation contained a unique link that took the recipient directly to the Web survey. Although the names of the recipients and programs remain confidential, they were not anonymous. It was possible to associate each ‹ address with a completed survey and to eliminate multiple surveys originating from the same email link. However, it was not possible to ensure that the person who completed the survey was actually the person listed in the STC database or CPTSC list as the program director or point of contact. At least one recipient of the invitation forwarded it to a colleague, who in turn completed the survey.

Before beginning the survey, each respondent was told that we were trying to determine the role (if any) of historical studies in technical communication curricula at colleges and universities in the United States. They were also directed to interpret the term *history of technical communication* to mean not only the history of the practice of technical communication but also the history of the technical communication profession and the history of the teaching of technical communication.

The 72 invitations mailed on September16 yielded 33 fully completed surveys and 1 partially completed survey—a return rate of 47%. The partially completed survey is not reflected in the data or analysis that follows.

Survey Results

The 33 people who responded to the September 16, 2007, invitation indicated that their programs offer one or more of the following degrees in technical communication or a closely related field:

Degrees Offered	Number of Programs Responding
BA	21
BS	9
MS	14
PhD	16
Other	13

The "other" category included undergraduate minors and graduate certificates. Examples of closely related fields are professional writing, science/scientific writing, English with a technical communication emphasis, rhetoric (or rhetoric and composition), and technical journalism.

Eighteen of the 33 respondents (55%) described themselves as the "official" directors of their programs, while four (12%) described themselves as the "unofficial" directors of their program. The remaining 11 respondents (33%) are assumed to be neither the official nor unofficial directors of their programs.

According to the responses, most programs are providing students with at least some exposure to the history of technical communication. Twenty-four of the 33 respondents (73%) said that their students receive "some" curriculum-based exposure to technical communication history; five said "much exposure"; and four said "no exposure."

Of the programs that answered "some" or "much" (29 of 33 or 88%), almost all said that they provide this exposure either "in a unit within a course devoted to a broader topic" (24 of 29 or 83%) or throughout their curricula (3 of 29 or 10%). Only 2 respondents (7%) selected "in an elective course devoted entirely to the history of technical communication," and no respondents selected "in a required course devoted entirely to the history of technical communication."

In fact, 23 of the 29 respondents (79%) said their programs "have never offered a course devoted entirely to the history of technical communication," while 4 said their programs have offered such a course at least once. Only 2 said their programs offer such a course on a regular basis.

Those who said their programs provide some or much exposure to technical communication history (29 of 33 or 88%) were asked why this exposure is provided. Twenty-seven people answered this question. Respondents generally believed that historical study provides context for both practice and the profession, provides precedents from the past for current problems, and will move technical communication toward recognition as a profession (see Appendix A).

The four people (4 of 33 or 12%) who responded that students do not receive any curriculum-based exposure to technical communication history explained that their programs have applied curricula with no time or space for the study of history. These programs seemed mostly concerned with providing employment skills (see Appendix B).

In a related question, all 33 respondents were asked what benefits (if any) a technical communication student derives from studying the history of technical communication. Eight respondents skipped this question, but 25 answered it. Respondents believed that studying history prepares students for the future, helps to refute the notion that technical communication began after WWII, and helps to integrate complex social, political, and economic factors into student strategies (see Appendix C).

Most respondents (97%) believed that historical studies are useful to practitioners, but they were divided about how useful these studies are. Eighteen of the 33 respondents (55%) said that historical studies are very useful to practitioners, while 14 respondents (42%) said they are somewhat useful to practitioners. Only 1 respondent felt that historical studies are not useful to practitioners. Fourteen respondents offered explanatory

comments. Those who believe in the usefulness of historical education for practitioners pointed to its ability to create a sense of self worth in practitioners, its power to prevent us from repeating mistakes of the past, and its inherent ability to provide practical examples within larger ethical contexts. The lone naysayer did not condemn historical study, but pointed out that students looking for job-related skills or promotion are often frustrated by theoretical courses (see Appendix D).

Most respondents (31 of 33 or 94%) also believed that the study of technical communication history was important in the training of technical communication teachers. Twenty-two respondents (71%) said it was very important, while 9 respondents (29%) said it was somewhat important. Only 2 respondents (2 of 33 or 6%) felt that it was unimportant. Only 7 respondents offered explanatory comments. Those supporting historical study for technical communication teachers felt that teaching practice should not be isolated from history and theory, that students need well-rounded instructors, and that student research without historical instruction is often narrowly focused (see Appendix E).

The respondents were divided about whether a technical communication program should create a course devoted entirely to the history of technical communication. Nineteen of the 33 respondents (58%) said that a technical communication program should not offer such a course on a regular basis, while 14 respondents (42%) answered that a technical communication program should offer such a course on a regular basis. Eighteen respondents offered explanatory comments. Those respondents opposed to a course focused on technical communication history cite already cramped degree requirements and the possibility of integrating historical studies into existing courses. Those in favor felt that PhD programs and programs devoted entirely to technical communication should offer the course to better prepare majors for the future (see Appendix F).

There were additional questions on the survey. Two of those questions focused on the relative importance of a stand-alone history course in a technical communication curriculum at the undergraduate and graduate levels. The responses are represented in the following bar graphs (see Figures 1–2). Although the responses indicate divergent views among program directors, in general the respondents felt that a stand-alone course was more important at the graduate level than the undergraduate level.

Analysis of Results

Some survey results are more expected than others. The fact that a high percentage of respondents feel that technical communication history
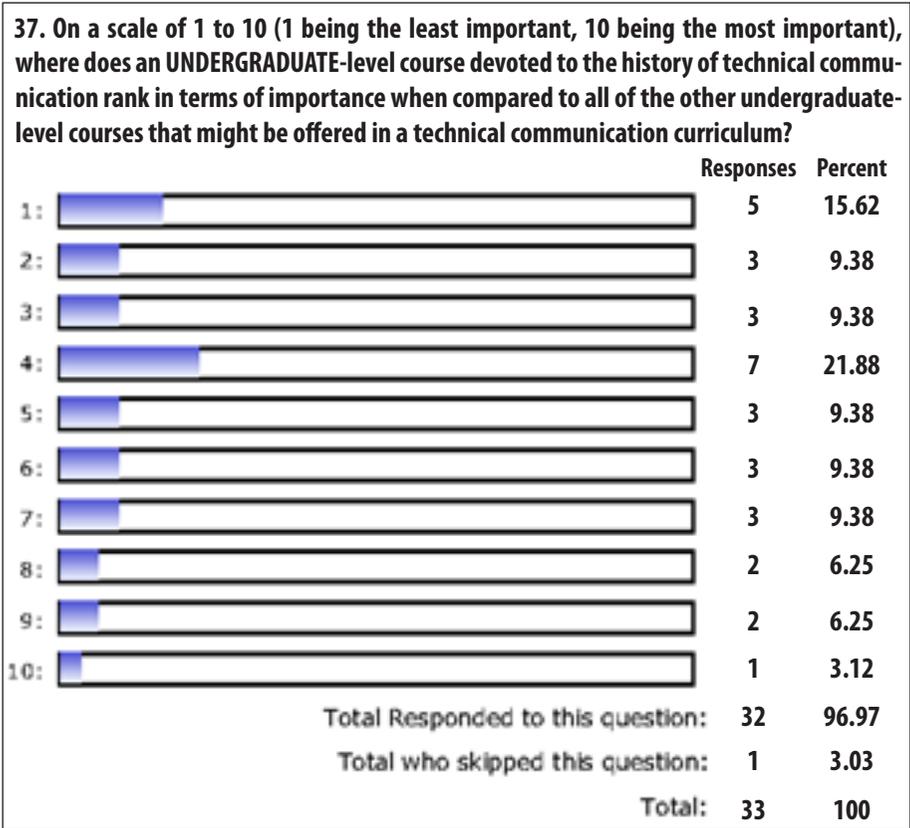
37. On a scale of 1 to 10 (1 being the least important, 10 being the most important), where does an UNDERGRADUATE-level course devoted to the history of technical communication rank in terms of importance when compared to all of the other undergraduate-level courses that might be offered in a technical communication curriculum?

	Responses	Percent
1:	5	15.62
2:	3	9.38
3:	3	9.38
4:	7	21.88
5:	3	9.38
6:	3	9.38
7:	3	9.38
8:	2	6.25
9:	2	6.25
10:	1	3.12
Total Responded to this question:	32	96.97
Total who skipped this question:	1	3.03
Total:	33	100

Figure 1. Relative importance of an undergraduate-level course in technical communication history

study is worthwhile seems expected, given the largely supportive literature base that exists. In addition, a large percentage of respondents report that historical study is included within their curricula, though usually as part of courses on other subjects, such as ethics or foundations. Very few programs currently offer a course devoted entirely to historical study. This finding is somewhat surprising, given the state of the literature in the field, and the comments from survey respondents. We might think that this enthusiasm over historical study would have led to more stand-alone history courses. Why has it not? Three distinct problem areas present themselves from the survey data.

The Role of History in a Curriculum

First, most respondents seem to believe that the historical study currently in place within other courses is sufficient, or that they are unable to offer an entire course on the topic for various reasons. Survey responses reveal

37. On a scale of 1 to 10 (1 being the least important, 10 being the most important), where does a GRADUATE-level course devoted to the history of technical communication rank in terms of importance when compared to all of the other graduate-level courses that might be offered in a technical communication curriculum?
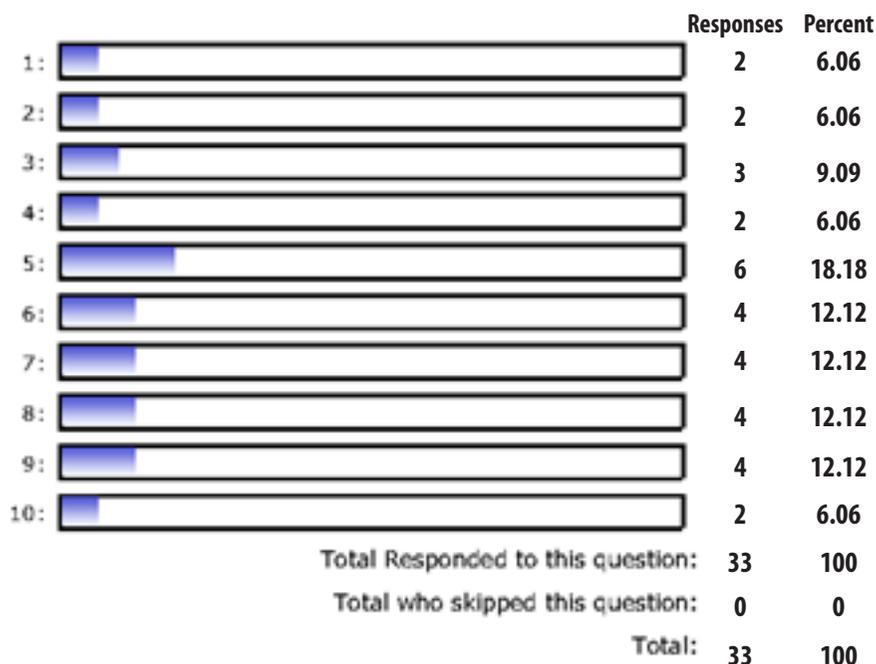
	Responses	Percent
1:	2	6.06
2:	2	6.06
3:	3	9.09
4:	2	6.06
5:	6	18.18
6:	4	12.12
7:	4	12.12
8:	4	12.12
9:	4	12.12
10:	2	6.06
Total Responded to this question:	33	100
Total who skipped this question:	0	0
Total:	33	100

Figure 2. Relative importance of a graduate-level course in technical communication history

that 79% have never offered a technical communication history course and 58% do not believe in offering such a course. Only two programs responding to the survey reported that they routinely offer a history course. Some reasons for the overall reluctance among faculty members to offer a history course are apparent from the survey comments. Respondents noted that fitting an entire course within the existing curriculum would be problematic because of credit-hour constraints. Many academics will recognize this situation both within their own discipline and without. Most of us teach courses designed for nonmajors from science, engineering, or agricultural fields. We routinely hear from colleagues in those disciplines that they would like to see their students become better communicators. But when we try to practically implicate more coursework into already crowded degree programs, things become more difficult.

Therefore, more research seems necessary to determine both technical communication history's place within academia and how best to imple-

ment historical study. Although the 2007 CPTSC survey and the literature in the field are largely supportive of historical study, the question of historical study within technical communication is by no means resolved. Questions about what qualifies as historical research and study remain. For example, we suspect that not everyone would regard the study of a company's communication practices over the last 10 years as a historical study. Should case studies of recent events, such as the communication failures during the Asian tsunami or Hurricane Katrina, be regarded as historical studies? (Some critics do regard them as such; for example, see Rivers, 1994, pp. 41-44; Kynell & Moran, 1999, pp. 8-9; Malone, 2007, p. 336.) What methods should distinguish historical research from other types of research? (Several critics have proposed methods for and/or approaches to historical research in technical communication: see Tebeaux and Killingsworth, 1992, p. 27; Connor, 1993, p. 212; Dillon, 1997, p. 72; Battalio, 2002, p. 23)

Also, we must question how valued historical study is outside academia. Most respondents (97%) agreed that historical study is either very useful or somewhat useful to practitioners, but do practitioners also believe that technical communication history is useful? How do practitioners actually use technical communication history? A survey of current practitioners might help us to answer these questions. A common response among the academics surveyed was that knowledge of history can help students (i.e., future practitioners) understand the present and predict the future. People in our profession are by nature prognosticators (Wright et al., 2011). Several respondents also noted that history can be used as a source of models for emulation, as evidence to support arguments, and even as vicarious experiences. (For discussions of the uses of history in technical communication, see Connor, 1991, p. 5; Brockmann, 1998, pp. 385–392; and Malone, 2007, pp. 342–344, among others.) But to this point, our understanding of exactly how those experiences are applied remains vague. An understanding of the actual and potential uses of history in the technical communication workplace might help us make better decisions about the role of historical studies in technical communication curricula.

Within academia, there is an ever-present pressure to maintain technical skill sets and practical applications that, on the surface at least, appear more directly tied to industry. Students are particularly aware of technical skills, especially if they plan to move into industry (rather than academia) upon completion of their degree. Comments from the 2007 survey indicating that credit hours "must address the skills and knowledge for creating technical documents," or that programs were originally introduced to

"provide viable career options," show that administrators and faculty have taken notice. So if we are to add a course in historical study to an existing graduate or undergraduate program, there is a sense that "something has to go." This belief may contribute to the fact that 93% of respondents report that students are receiving their historical education as part of an existing course such as pedagogy or foundations or from information dispersed throughout a curriculum.

However, we believe that administrators and members of our discipline are wrong to assume that students' desires (as well as some employers' desires for them) to become ever more technically literate will necessarily serve them better in the future. As authors have pointed out, problem solving and humanistic skill sets derived from historical study should be at least as important to students' long-term productivity as technical skills that come and go quickly. Furthermore, electives are common within technical communication programs, and even if a history course cannot be required, many students are likely to take advantage of an elective history course if they are aware of its implications for their future (presumably beyond a simple survey of dates and names).

Resource Constraints

A second reason for the lack of historical course proliferation appears to be a simple lack of resources. Teaching our history as a stand-alone course is the most divisive question within the survey, which shows 58% against stand-alone courses and 42% in favor of them. Respondents point to the fact that many programs have a limited number of faculty to cover numerous courses on a variety of subjects. Given this state of affairs, technical communication history courses may not yet have the critical mass needed to justify pulling instructor resources away from other subjects. Respondents against the inclusion of a full course clearly have a hard time seeing how that course would be justified under these circumstances, saying, "There are simply too many other areas to cover" and "Constraints of curriculum and faculty time make this nearly impossible." Many of us can certainly empathize with this state of affairs, and there is no doubt truth to these comments.

There is clear disagreement among academics on this subject, though it is not the only subject in need of address. In addition to resolving the question of whether technical communication history deserves its own course designation, we must address other issues. For example, where should the study of technical communication history begin—in ancient cultures, or after the emergence of modern English, or after World War

II? Should faculty in US programs focus on American texts, authors, and practices? (Several critics believe so; see Todd, 2003, p. 66, for example.) The answers to these questions are important because the way history is conceived and defined affects the way it is valued and studied.

Because 58% of the program administrators surveyed in 2007 do not believe that technical communication programs should offer an entire course about technical communication history on a regular basis—despite the fact that 97% of respondents rank historical knowledge as "useful" for practitioners—we might ask ourselves how we make decisions about which subjects should be given entire courses within our curricula. We have heard colleagues argue that research methods should be taught throughout a technical communication curriculum rather than as a separate course, but many programs offer a separate course in research methods. Should subjects such as international technical communication, Web authoring, and even technical editing be taught across the technical communication curriculum rather than as separate courses? Ironically, these types of curricular decisions are often based on historical precedents and contemporary examples rather than other forms of research and analysis.

Training Instructors

A third factor that may be in play is that few technical communication academics are qualified to teach a history course. Although 97% of those we surveyed believe that historical education is useful and 94% believe that historical training is important to technical communication teachers, the way we should act upon this consensus is pedagogically unclear. This state of affairs has resulted in few stand-alone history courses being created; in fact, only two programs offered such a course regularly among our sample. As we have seen, our own ranks have been bemoaning the lack of historical texts, research, and training for some time. If most academics have not been in the habit of reading or conducting historical research, we can hardly expect them to teach it or to pass on its value to students. It may be that most faculty, though they see a need for historical studies, are doing the best they can to fill that need, without ever really feeling qualified to take on a full course or to make historical studies a focus of existing courses. In fact, while 71% of our respondents rated training instructors to teach the history of technical communication as "very important," few seem to being doing so, at least by offering a course on the subject. This is in spite of comments such as, "I'm sorry to say that I still see too many teachers who see practice as isolated from both history and theory…" and "If teachers don't have adequate awareness of the history of tech com, we

can't very well expect practitioners to develop a sense of tech com as a historically- situated profession and practice."

Therefore, if we intend to promote historical studies within the discipline, we must be willing to train academics (at least at the PhD level) to teach our history. Some respondents seem to support this notion, saying, "We know embarrassingly little about our past" and "To cope with the present and to plan for the future, students need to understand the past."

However, incorporating these sentiments into our collective curricula may not require preparing future academics to teach semester-length history courses. We may be able to train instructors to better cover historical topics within existing courses. Yet this leads to another question: If historical topics are discussed as part of existing courses, how are we training instructors to approach the topic (if at all)? And if we are indeed including historical study within existing courses, how is that being accomplished? Are specific units within courses being devoted to history, or is historical education taking the form of anecdotal stories passed on from instructor to student?

Evidence from Online Course Catalogs and Syllabi

Answering these questions will undoubtedly require further research, but we sought to discover what we could by consulting online materials that describe current or recent technical communication course offerings. We were interested in finding course descriptions and syllabi that included references to history or historical study, especially graduate courses that offered some insight into what is being done to prepare future instructors to incorporate technical communication history into curricula.

In October 2011, we used Google to search university websites for catalog descriptions and online syllabi that mention the history of technical communication. Our search terms were "syllabus" and "history of technical communication" or "syllabus," "history," and "technical communication." We did find some evidence that technical communication instructors are incorporating history into existing courses. The search results are far from exhaustive, but they do offer some insight into what seems to be typical within programs. In Table 1, we identify some courses that mention historical study in their catalog descriptions or learning objectives.

Clearly, history has been—and is being—incorporated into graduate courses at some of our most prominent institutions, but many of these courses are of the foundations variety, and the readings about history are relatively uniform because instructors are often using the same anthologies, especially *Central Works in Technical Communication* (Johnson-Eilola &

Table 1: Representative samples from online course descriptions

Institution	Course	Year	Description
Michigan Tech University	HU 6080 Seminar in Technical Communication	2008	"May include study of the theoretical backgrounds of technical communication, the history of technical communication, rhetoric of technical communication, technical communication program administration, and technical communication pedagogy (Graduate, 2008, p. 138)
Auburn University	ENGL 7010 Technical and Professional Communication: Issues and Approaches	2009	An "introduction to the discipline and profession of technical and professional communication" that "covers the historical and current practices in technical and professional communication; the major forms, modes, and genres of technical and professional communication; and also the chief sylistic and rhetorical features of technical and professional communication" ("MTPC," 2009).
Texas Tech University	English 5371 Foundations of Technical Communication	Fall 2009	Designed to "introduce graduate students in TCR to the scholarly study of technical communication." Among the questions it sought to answer in 2009 was "What is the history of technical communication?" ("Foundations," 2009).
Texas A&M University-Corpus Christi	English 5364 Technical Writing Theory and Pedagogy	Fall 2009	One of the goals of this course was to "explore the history and theoretical foundations for the field of technical writing/communication" ("Syllabus," 2009).
University of Minnesota	WRIT 5001 Introduction to Graduate Studies in Scientific & Technical Communication	2011	One of the five courses required for the online graduate certificate in technical communication, WRIT 5001 foregrounds history in its catalog description: "History of technical communication. Different audiences, purposes, genres, and emerging trends. International/intercultural issues. Students participate within a community of technical communication professionals" ("Technical," 2011).

Selber, 2004). A quick survey of online syllabi shows that many courses are limited in historical study to a standard collection of articles. Table 2 shows a sample of those courses.

Two courses at Missouri Western State University included a broader range of historical readings. In Fall 2011, the instructor of ETC 600 Introduction to Graduate Studies in Technical Communication devoted a class period to the "History of the Field" and used readings by Russell Rutter (2004), Elizabeth Tebeaux (1999), and two chapters from Teresa Kynell-Hunt & Gerald Savage (2003) ("English/Technical," 2011). In another course,

Table 2. Sample of technical communication courses with class periods devoted to historical study

Institution	Course	Semester/Year	Length of Study	Included Readings
West Virginia University	English 605 Professional Writing Theory & Research	Fall 2008	One class period	Rutter (2004 Connors (2004) Durack (2004) ("English 605," 2008)
Texas A&M University-Corpus Christi	English 5364 Technical Writing Theory and Pedagogy	Fall 2009	Two class periods	Rutter (2004) Miller (2004) Connors (2004) Durack (2004) ("Syllabus," 2009)
East Carolina University	English 8780 Theory of Professional Communication	Spring 2010	Three weeks	Rutter (2004) Miller (2004) Connors (2004) Durack (2004) ("ENGL 8780," 2010)
Minnesota State University at Mankato	English 679 Rhetorical Theory Applied to Technical Documents	Spring 2010	Unknown	Rutter (2004) Miller (2004) Durack (2004) Tillery (2005) ("Syllabus," 2010)
New Mexico State University	English 572 Technical & Professional Communication Theory & Pedagogy	Spring 2010	One class period	Connors (2004) Durack (2004) ("ENG 572," 2010)

ETC 421 Worlds of Technical Communication, the same instructor devoted three class periods to technical communication history and used Brockmann (1996), "Geoffrey Chaucer" (2004), Robert Connors (1982), Matthew Honan (n.d.), Teresa Kynell (1999), Frederick O'Hara (2001), Katherine Staples (1999), Elizabeth Tebeaux (1999), & Mark Zachary (2001) ("ETC 421," 2010). The reading selections in these two courses suggest the pedagogical possibilities of tapping into the rich body of historical scholarship that exists in technical communication.

One possible explanation for the lack of diversity seen in most courses we located is adherence to a boiler plate approach to selecting sources for historical study. It seems reasonable to expect that the dominant four or five sources are the same historical sources that current instructors were exposed to in their graduate programs. But there are many more sources available to instructors and additional methods that can be employed to bolster historical study in technical communication. Our recommendations will point out some of those sources and methods.

Recommendations

At this point, we would like to suggest several ways to increase students' awareness and appreciation of history in technical communication courses. We are not the first teachers of technical communication to do so (see, in particular, Schnakenberg, 1998; and Todd, 2003), and we realize that our efforts here will not end debates about how much historical content is appropriate within technical communication degree programs. However, a lack of historical resources, including accessible primary sources and substantial secondary sources, can no longer be used as an excuse for ignoring our history. Perhaps a middle ground can be reached that will improve students' understanding without pushing already strained resources to the breaking point. A present solution might be to incorporate more of the available resources into more courses or to offer more than a few class periods of historical study within foundations courses. Toward this end, we recommend the following strategies:

1. Discuss the importance of historical study with students
2. Pay more attention to history in our textbooks.
3. Determine what history students should study.
4. Develop historical assignments and activities.

Discuss the Importance of Historical Study with Students

The portal map of the STC TCBOK is a tree-like structure with many branches. On the "About Technical Communication" branch, history is coordinate with the following topics: definition, career paths, value proposition, ethics, professional organizations, and future of technical communication. It is also coordinate with the following topics on other branches: business knowledge, using tools and technology to produce technical content, assessing and using research methods, and applying theory to improve practice. "History," in this case, refers not only to the history of technical communication, but also the history of rhetoric and the history of technology. Whether the organization of the tree means that history is as important as research methods, or theory, or even ethics in technical communication's body of knowledge is unclear. It is safe to say, though, that history occupies a position of prominence on the tree. Of course, the STC TCBOK is a work in progress, but it holds great promise (STC, 2011).

   If indeed there is general agreement that historical study is important to the discipline, as our survey seemed to suggest, then teachers of technical communication should help students understand the value of that kind of study. One way to do this is to discuss history's place in technical com-

munication's body of knowledge, perhaps in the context of a larger discussion about the role of a specialized body of knowledge in the definition of a profession. Vannevar Bush (1957) once wrote of a profession: "First and foremost, its members are the possessors and custodians of a special field of knowledge, acquired by long, assiduous study, and they are respected and accorded privileges because of that fact" (p. 50). If students conclude that history is an important part of a profession's body of knowledge, then they may be more receptive to its conspicuous presence in a curriculum.

Another way to broach the question of history's importance is to give students a sense of the sheer quantity of publications in this area—perhaps by using one of several bibliographies (e.g., Rivers, 1999; Tebeaux & Moran, 2011)—and to invite them to speculate about the purpose and implications of this scholarly activity. Not all the answers will lead to the conclusion that historical study is important, of course, but the ensuing discussions may provoke the kinds of questions we are raising in this article. Focusing students' critical thinking skills on the value of historical study as a scholarly pursuit and a curricular issue has residual benefits. They may feel more connected to our discipline as holders of the type of specialized knowledge that Bush (1957) referred to. In addition, an expanded view of our history will help to promote a more stable historical body of knowledge among students, thus further solidifying our collective consciousness as a discipline. Finally, historical study can only help students' research skills, perhaps leading to more historical publication and better recognition within academia (Johnson, 1998).

Other professions have strong historical consciousnesses, which are manifested in well-managed archives and museums (e.g., US Army, 2012; Smithsonian, 2012), active oral history projects (e.g., IEEE, 2012; WPCF, 2012; SWE, 2012), and even virtual halls of fame[2] (e.g., Fisher, 2012; ASE, 2012; ASCE, 2012). The notable practitioners featured in these projects have become the historical faces of their professions. To our knowledge, there are no oral history projects, museums, or halls of fame in technical communication. The absence of these sites and activities may be a symptom of our profession's relative immaturity, if not its recency (now 60+ years old), and its recurring identity problems. The fact that well-established, mature professions seem to value history in ways that we do

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[2] The New Jersey Literary Hall of Fame includes technical writers (Pristin, 1995). It was started by Herman A. Estrin, the now-deceased English professor at New Jersey Institute of Technology (NJIT) and one of the founders of the Association of Teachers of Technical Writing (ATTW) as well as the Committee on Technical and Scientific Communication of the National Council of Teachers of English (NCTE) (Cunningham, 2004; Kynell-Hunt & Tebeaux, 2009, pp. 120–121).

not suggest the importance of history in creating "an enhanced sense of self-identity and tradition," two "prerequisites for the establishment and continuance of any profession" (Shirk, 2000, p. 6). Thus, it may be in the best interest of "all technical communicators to become informed concerning the origins and history of their profession" (Shirk, 2000, p. 1). Students can and should participate in these kinds of discussions.

Pay More Attention to History in Our Textbooks

Instructors seem to be relying heavily on anthologies such as *Central Works in Technical Communication* (Johnson-Eilola & Selber, 2004) and *Teaching Technical Communication* (Dubinsky, 2004) for readings about the history of technical communication. These anthologies cover a broad range of topics and are appropriate for foundations and pedagogy courses. Other textbooks are probably influencing how—and even whether—historical perspectives are being taught in our courses. For example, Laura Gurak and Mary Lay's *Research in Technical Communication* (2002) includes a chapter titled "Historical Methods in Technical Communication"; however, a more recent research methods textbook by Michael Hughes and George Hayhoe (2007) does not discuss historical research. Karen Schriver's *Dynamics in Document Design* (1997) devotes a 137-page chapter to the "Evolution of the Field: Contextual Dynamics," including a 46-page timeline. This chapter should stand as an inspiration, if not a model, for other textbook writers. We wonder, though, how many instructors use this mammoth historical chapter or even the timeline in courses about document design.

Technical communication textbooks for lower- and upper-level university courses should include a strong chapter about the history of the subject, and instructors should assign it early in the semester to provide context for the study and activities that follow. A survey of definitions of technical writing/technical communication from the 1950s to the present might shed some light on how the discipline's view of itself has changed over the decades. A similar historical survey of relevant job ads in major newspapers might also be instructive. Students would see, for example, that the profession has had many names—e.g., publications engineering, technography, and professional communication—as well as many applicable job titles—such as engineering writer, information specialist, and content developer. At the very least, introductory technical communication textbooks should chronicle the emergence of the distinction between—to borrow Merrill Whitburn's (2000) terminology—"practitioners" and "professionals" of technical communication (p. 107).

A textbook for an upper-level course should also include an early chapter about the historical development of the subject. Take technical editing, for example. Neither Carolyn Rude and Angela Eaton's *Technical Editing* (2011) nor Nicole Amare, Barry Nowlin, and Jean Hollis Weber's *Technical Editing in the 21st Century* (2011) includes a chapter about technical editing history, but the latter textbook does include a brief section on the history of technical editing. The authors name Erasmus as the first technical editor, citing a short (but noteworthy) conference paper about technical communication history by Frederick O'Hara (2001). Then they make this unusual statement: "Don Jensen reports that over 450 years later, Bill Zielinski became a first on his own terms: in 1962, at the age of fifteen, high school sophomore Zielinski was named the first technical editor at NASA" (Amare, Nowlin, & Weber, 2011, p. 4) As long as readers (and the authors) understand that "NASA" in this context refers to the North American Shortwave Association (originally NASA, now NASWA), rather than the space agency (see Jensen & D'Angelo, 1999), then this statement is accurate. While we commend the authors for including a section about technical editing history, we hope they will add a full chapter to their next edition—a chapter along the lines of Thomas Warren's (2010) book chapter.[3]

Determine What History Students Should Study

Should students study primary sources (i.e., historical technical communication) or secondary sources (i.e., historical studies)? Evidence suggests that they are doing both—in some programs, to some extent. Before fall of 2009, the reading list for the master's degree option in technical writing at Oklahoma State University (OSU) included a substantial section of readings devoted to history, mainly books. Very few of the books were historical studies within technical communication proper. Most were historical texts by famous authors, such as Darwin, Galileo, Einstein, and Watson and Crick. Only one of the secondary sources was directly related to technical communication history: Teresa Kynell & Michael Moran (1999) ("Reading List for the MA," 2008). The current reading list for the master's degree option in professional/technical writing at OSU also includes a substantial section of

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[3] The National Advisory Commission on Aeronautics (NACA), the predecessor of the space agency NASA, had a technical editor as early as 1930s: Pearl I. Young. In July 1930, Young moved from the instrumentation laboratory, where she had been working as a Junior Physicist, to "editorial duties and began helping prepare reports for [the] printer and wrote [a] manual of style for engineers" (NACA, 1941, p. 3). In August 1935, her official job title changed to Assistant Technical Editor, and for many years she edited the reports of engineers, eventually becoming the head of an editing team (NACA, 1941). There is a theater named after Young at NASA's Langley facility (NASA, n.d.).

readings about "histories and future." All the items are secondary sources, including two books: Kynell (2000) and Longo (2000). The articles include Robert Connors (1982), Katherine Durack (1997), Russell Rutter (1991), Teresa Kynell (1999), and Katherine Staples (1999) ("Reading List for the MA," 2009). Thus, it appears that the program at OSU has shifted its long-standing interest in history from primary to secondary works, at least as far as its qualifying examination is concerned.

The decision about what works to study does not have to be either/or, of course. In an individual course, an instructor may use an extract from a historical document—such as the first few pages of the Herbert C. Hoover and Lou H. Hoover translation (1912) of Georg Agricola's book on mining (1561), or a translation of Chapter 8 of William Harvey's *De motu cordis*—in conjunction with relevant historical studies—such as Beverly Sauer's (1993) study of notions of expertise in Agricola and Hoover, or Jo Allen's (1991) study of thematic repetition in Harvey's book. An instructor might use S. Michael Halloran's (1984) analysis of James Watson and Francis Crick's "Molecular Structure of Nucleic Acids: A Structure for Deoxyribose Nucleic Acid" (1953) along with a copy of the 1953 article. Generally speaking, though, historical studies are easier for students to read and understand than primary sources. This is true not only of highly technical documents in a specialty field, but also of English language documents from several centuries ago. A document such as Benjamin Franklin's (1744) fireplace pamphlet (a predecessor of the modern-day white paper) is more difficult to read and understand than contemporary translations of Renaissance Latin works. We should not underestimate the difficulty that contemporary students have in reading documents written in earlier forms of English.

We question Jeff Todd's (2003) suggestion that students should study American texts in English at the expense of foreign-language texts in translation. In the increasingly global environments in which technical communicators work, students may benefit from studying historical examples of technical and scientific communication in translation and across cultures. See, for example, L. G. Kelly's (1991) bibliography of historical technical translations. For centuries, Latin was the common language of learned men in Medieval and Renaissance Europe. Studying these Latin texts in translation may reveal not only how these authors adapted their discourse to geographically and (to some extent) culturally diverse audiences but also how technologies and ideas passed from country to country. Studying multiple English translations of the same work (see Connor, 1993, p. 217) will indeed bring us closer to the original text, but it will also show us how

translations vary and make us aware of the kinds of linguistic decisions that technical translators make on a day-to-day basis. If indeed the roles of technical communicators and technical translators are converging (Gnec-chi, Maylath, Mousten, Scarpa, & Vandepitte, 2011), then it behooves us to learn more about technical translation. Typically, there are not multiple English translations of a technical document unless it is old and famous.

In recent years, scholars have begun to look at the history of tech-nical communication in non-European countries, focusing on texts in many languages, and these studies offer opportunities for cross-cultural comparisons as well as places of rhetorical invention. Technical commu-nication artifacts from China's past have received such attention recently in our scholarly journals. Daniel Ding (2003, 2010) analyzed two Chinese technical communication artifacts: *I Ching*, an ancient technical manual, and *On Technological Subjects*, a 17th-century book about various tech-nologies. Han Yu (2009) looked at the culinary instruction genre in China from ancient times to the present. There have also been studies of the *Talmud* (Weiss, 1998), Soviet Lysenkoist discourse (Dombrowski, 2001), and Nazi technical documents (Katz, 1992; Ward, 2010)—all involving texts in languages that would be regarded as "foreign" from the perspective of a "native" English-speaking American student. The field has begun to look at the history of the study of international technical communication (ITC). A graduate student (Huang, 2011) recently completed a literature review of ITC studies before the 1990s—the decade when, arguably, ITC became a specialization within technical communication (Cardon, 2008, p. 412).

Develop Historical Assignments and Activities

Besides reading assignments and in-class discussion, instructors can allow students to do oral history interviews, obtain documents through Freedom of Information Act requests and analyze those documents, and respond to film documentaries about technical communication artifacts. People who worked as technical writers and editors in the 1960s, 1970s, and even 1980s are sources of valuable historical information about the profession in those decades. Students can do preliminary research, develop interview questions, and conduct interviews with some of these retired technical communicators, not only increasing their interviewing skills and their understanding of the development of the profession, but also preserving first-hand accounts of workplace cultures, important projects, technologi-cal challenges, and activities of professional organizations. Unfortunately, many of the founders of the profession in the 1940s and 1950s have already passed away, without ever being interviewed about their experi-

ences. Our professional organizations, such as STC and ATTW, have not undertaken large-scale oral history projects; individual instructors and their classes may be able to do so on a smaller scale. Students would have the satisfaction of producing recordings and transcripts that might be used by future researchers. Alternatively, they might use the interviews in their own publications or conference presentations.

Under the Freedom of Information Act (FOIA), students and instructors do not have to pay search fees and photocopy charges (up to 100 pages) when they request documents from federal agencies. By law, an agency must acknowledge receipt of a request within 20 days, but the waiting period for delivery of documents can be quite long—anywhere from 3 months to a year.[4] Nevertheless, government agencies are rich sources of technical communication artifacts—from proposals to accident reports to once-top-secret manuals for weapons. Students and instructors can acquire these documents for the cost of a letter and a stamp and use them for imitation, analysis, and/or historical study. Such artifacts might illuminate the types of writing that individual agencies produced between World War II and the present, offering insight into, for example, the evolution of application forms or specific types of memos. The FOIA request must be specific enough to enable the recipient to locate the desired record(s). It is wise for the instructor or student to specify the amount of money (if any) that he/she is willing to pay for photocopies beyond the first 100 pages.

A colleague once said that literature teachers have a plethora of feature films and documentaries that they can use in the classroom to reinforce learning objectives and generate interest in students, but technical communication teachers have very few films of the same caliber. This is not entirely true. Feature films, of course, can be used in upper-level international technical communication courses to help shed light on the challenges of intercultural communication (Briam, 2010). There are also documentaries relevant to the history of technical communication that could be used in the classroom or assigned as homework. For example, *Signs of the Time* tells the story of the creation of hand signals in baseball to communicate decisions and instructions (Casper, 2008) and might help students better understand non-verbal forms of technical communication.

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4 For example, citing 36 C.F.R. 1250.52, NARA (n.d.) writes, "All executive branch agencies are required to respond to a FOIA request within twenty working days of receipt, excluding legal holidays and Federal government closures" (p. 12) and "Educational or noncommercial scientific institutions, news media representatives are charged only for photocopying after the first 100 pages" (p. 14).

The BBC aired a series titled *The Beauty of Diagrams*, with episodes devoted to Da Vinci's Vitruvian Man, Nightingale's Rose Diagram, and NASA's Pioneer Plaque. The Nightingale episode, in particular, offers insights into the importance of visual technical communication in effecting change (Clarke & Waterhouse, 2010–2011). The documentary *Helvetica* provides historical information about the origin and development of a commonly used typeface as well as glimpses of the artists who create the fonts we use every day (Hustwit, 2007). These are just a few examples of the filmic resources available to teachers of technical communication who wish to introduce historical topics in their courses.

A Course in Technical Communication History

In addition to covering historical topics across the technical communication curriculum, a program might consider the feasibility of offering a stand-alone history course on an occasional or even regular basis. The following description of a course at our university may provide ideas for those who would like to offer a seminar or special topics course in the history of technical communication (see Appendix F for a detailed syllabus).

At Missouri S&T, students can take a technical communication history course as an elective for the Bachelor of Science or Master of Science in Technical Communication. The course is offered every two years and usually attracts between 10–20 students, mostly technical communication majors, but also some business and information science and technology majors and occasionally an engineering student. The catalog description of the course, which predates both authors' arrivals at the campus, states that the course is an "introduction to the roles of the technical communicator and the technologies of communication from ancient cultures to the present" (Missouri S&T, 2011, p. 252). Thus, the course covers not only the history of technical communication but also the history of communication technologies. The benefit of the latter focus was suggested in the literature in the late 1990s by Karen Schnakenberg (1998), who argued that "a sense of how communication technologies and strategies have evolved" may help technical communication students to develop "the strong analytic and problem-solving skills that today's students will need in tomorrow's workplace" (p. 65).

One of the authors taught the course in 2005, 2007, 2009, and 2011. He organized the content chronologically from ancient times to the present. The first half of the semester emphasized the practice of technical communication from ancient times to the 19th century, while the second half of the semester focused on the 20th century, particularly the emergence of the academic discipline and profession of technical communication. Key texts during the second

half of the semester were Malden Grange Bishop's *Billions for Confusion* (1964), and journal articles about the emergence of professional organizations (e.g., Tebeaux & Kynell-Hunt, 2009; Pearsall & Warren, 1996) and the careers and work of practitioners (e.g., Brockmann, 1998).

A secondary focus throughout the semester was the history of communication technologies. Before the midterm, considerable time was devoted to the history of writing surfaces (clay, papyrus, parchment, paper), book formats (tablet, scroll, codex), methods of chirographic error correction (erasures, cancellation dots, letter reshaping), printing technologies (xylography, moveable type, copper engraving), and the first use of bulleted lists in English (Tebeaux, 1997, p. 49). The readings included extracts from David Diringer's *The Book before Printing* (1982) and Elizabeth Eisenstein's *The Printing Revolution in Early Modern Europe* (2005). After the midterm, attention shifted to more recent communication technologies, such as the typewriter, the electronic computer, and the Internet, with readings from *Control through Communication* (Yates, 1989) and *Multimedia: From Wagner to Virtual Reality* (Packer & Jordan, 2002).

In addition to the readings, the students completed three reports. The first was a study of a technical communication artifact. The students usually selected texts, such as a report of the US Sanitary Commission (1864) or the first edition of Emily Post's *Etiquette* (1922), but they sometimes selected visuals, auditory signals, or objects, such as Dmitrii Mendeleev's (1869) periodic table of chemical elements, bugle calls in the US army, or the card catalogues that were once universal in libraries. If they selected a written text for analysis, they had to "read" it as a nonverbal as well as a verbal artifact (cf. Fleming, 1974, p. 160). This assignment required students to define technical communication and apply that definition to the artifact, whether the artifact was an early technical writing textbook (e.g., Earle, 1911), a survey of technical writing programs (e.g., Fountain, 1938), or the ubiquitous "No Smoking" sign.

The second report was an oral history interview with a teacher or practitioner of technical communication who was active at some point between 1950 and 1975. The university's archives cosponsored the project, accepting the fruits of the students' labor and interviewees' gifts. The students each selected an individual, filed an IRB application, requested permission and negotiated a time for a 30-minute interview, did research and wrote interview questions, secured the interviewee's signatures on a consent form and deed of gift, conducted and recorded the interview (using the 1-800 number and archiving tool in a Wimba Classroom), and finally transcribed the interview, which was then deposited in the uni-

versity's archives. This assignment helped students to develop research and interviewing skills while they learned something about the profession's (or academic discipline's) past.[5]

The third report was a study of a technical communicator's career based on personnel files obtained under the Freedom of Information Act from the National Archives. The personnel files gave students access to diachronic information about job descriptions, salaries, annual evaluations, and some project assignments.[6]

Figure 3. Student inspecting 1561 edition of Agricola's De re metallica in library.

A particularly successful minor assignment in the course—in preparation for the first major report—was a short exercise involving a technical communication artifact. The students visited the campus library and inspected the 1561 edition of Agricola's *De re metallica*, an early printed book written in Latin about mining (see Figure 3).

As is well known, Agricola's book is copiously illustrated with woodcuts, including elaborate cutaway landscape drawings of mining operations (see Figure 4). The instructor asked students to pay particularly close attention to the illustrations as they page through this 550-year-old book—wearing special gloves, of course—and to answer questions on a worksheet. This exercise was designed to prepare students for the report about a technical communication artifact by prompting them to view a book as a nonverbal as well as a verbal document. They can learn a great

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[5] Students in the 2011 class interviewed such figures as Frederick M. O'Hara, Jr., formerly a technical editor at Oak Ridge National Laboratory, currently a private consultant in technical communication; Kenneth J. Cook, owner of a product documentation company in Milwaukee and former STC President; Janis Ramey, co-owner of Ramey Technical Writing in Pittsburgh; Ernest D. Mazzatenta, a long-time technical writer and former STC President; and Thomas Warren, retired Oklahoma State University professor and former president of the International Council for Technical Communication (*Intecom*), a "society of associations of technical communicators" (2012).

[6] In the Fall 2009 class, each student wrote about one of the following individuals: A. E. Tyler (1909–1987), founder of the LA-based Technical Publishing Society in 1954; Catherine C. Campbell (1905–1996), a technical editor at the Naval Ordnance Test Station in the 1940s and 1950s; H. L. Shimberg (1917–2005), a long-time technical editor at the Naval Ordnance Laboratory in Maryland; John L. Kent (1914–1989), founder of the Technical Writing Improvement Society in 1955; and Madeline Warnock (1911–1977), a long-time technical editor at Fort Detrick.

Figure 4: Woodcut illustration from Agricola's *De re metallica* **(1561)**

deal about the technologies of bookmaking in the early age of print and something about the culture that produced and consumed the book by focusing on the book's nonverbal elements. The fact that the book was written in Latin made it easier for them to focus on the nonverbal elements of the artifact.

Not only did this minor assignment reinforce the lectures and class discussions about the technologies of early modern book making and printing by providing a tangible product of those technologies, but it also encouraged the students to situate the technical communication artifact in its historical and cultural context. The students may have begun to see, as Sauer (1993) demonstrated so well, that a technical document does not exist in isolation from the economic, political, and cultural context that produced it.

Conclusion

Offering a stand-alone course in technical communication presents pedagogical challenges, just as any course does. But, as we have shown, it does afford students the opportunity to investigate the evolution of technical communication as practice, profession, and academic discipline while doing historical research. In addition, the content of the course we present here moves well beyond the most prevalent sources with a more robust and chronologically varied list of readings, asks students to relate the past to the present, and allows them to conduct historical research into the long-standing tradition of technical communication. We hope that these pedagogical decisions will produce graduates with more knowledge of their past and, in turn, a better frame of reference for the future. We also believe that this type of study helps to promote a broader collective consciousness and an improved sense of professional identity.

The results of the 2007 CPTSC-sponsored survey show that other academics also favor historical study for students in technical communication programs. On the whole, respondents believed that technical communication history is valuable knowledge for academics, students, and practitioners. We agree with their sentiments because we have seen that students benefit from that knowledge, both during their time in our program and after they have left the program.

Nevertheless, incorporating technical communication history into academia on a broad scale may be easier said than done. Disagreement remains as to how much history should be included in the curricula and how that history should be taught at different levels of study. Answering those questions seems a next logical step in this type of research.

Whatever the answers to those questions may be, we hope that we have shown here that a multitude of historical sources do exist in various formats and that their value within education is widely supported by faculty members at many institutions. We hope that others will take advantage of those sources and the suggestions contained herein to broaden their understanding and strategies.

Appendix A

Sample Responses

Question 21

In your response to Question 11, you indicated that the students in your program receive at least some exposure to the history of technical communication. What is the rationale for providing this exposure?

"... historical study helps to complicate the ideas that students sometimes hold that a) things have always been this way, b) the development of the profession has been a positive progress narrative and the way we do things now is necessarily better than past practices, or c) there's only one right solution to any given situation."

"... it is often in models long past that we can best analyze and see what makes things tick when texts too close to home in time and space make that impossible."

"Our whole program takes a strongly situational approach with emphasis on the adaptation of documents to their specific time and situation. Historical study is a good way to provide students with a sense of perspective on this."

"By providing at least some historical grounding, [future practitioners] are likely to be better prepared to understand where obstructive values, beliefs, and practices come from and to work more effectively to change them."

"An understanding of the depth and richness of the field, as well as a sense that it has strong theoretical underpinnings. . . adds to [students'] sense of TC as a PROFESSION, and places them in a position (in the workplace) to advocate for the importance and legitimacy of the field."

"There's a more applied aspect of this emphasis on the history of tech comm, as well: it enables students to make decisions about documentation based on precedents."

"Technical communication is a young discipline and a slightly older profession, but an ancient practice. We know embarrassingly little about our antecedents. Other professions have a much stronger sense of their own history: doctors have their Galen, engineers their Agricola, teachers their Aristotle. This lack of a historical sense in tech comm is one reason the discipline/profession is often so short-sighted, focused on the newest technique or trend. It's also why we can't seem to convince anyone (even sometimes ourselves) that tech comm is a profession that requires specialized training to do well. Otherwise we wouldn't have a profession so filled with people with little or no training."

Appendix B

Sample Responses

Question 22

You indicated that students in your program do not receive exposure to the history of technical communication in the context of your program's curriculum. What is the reason for not providing this exposure?

"The certificate program is only five courses, which must address the skills and knowledge for creating technical documents."

"The program was originally developed to provide Literature majors with a viable career option. As a result, the program had to share 50% of its courses with the literature program. This left only 35 credits for technical communication (including internships). So few courses meant that we could only cover core genre areas. We are presently changing this relationships and will expand the coverage for technical communication. But the state and the university are interested primarily in how we meet regional economic needs, so we will still focus on skills needed for the profession."

"Students probably do get some exposure to the history of technical com, but it's predicated up on instructor expertise and interest, rather than a conscious part of the curriculum overall. Also, our program is very applied; most people are already working in area pharmaceutical and biotech industries and want the M.S. degree as they anticipate consulting, freelancing, a raise, or just something to do."

Appendix C

Sample Responses

Question 32

In your opinion, what benefits (if any) does a technical communication student derive from studying the history of technical communication?

"Security in the history and longevity of their interests as well as a sense of future possibilities tracing parallel developments in other professions as well as the development of this one."

"I'll repeat myself: To cope with the present and to plan for the future, students need to understand the past."

"Just as all students benefit from the study of history—of their nation, of the world, so do our students benefit from the study of the history of our field/discipline. We are a young field—in terms of occupying our own niche within the field of English studies. However, many of us believe our field has a rich past, extending back to classical rhetoric. For our students, understanding the roles that language and language teachers have played and the impact they have had is critical to understanding the roles they may play and the many ways they may impact the future."

"1) historical perspective 2) knowledge of the complex factors—social, economic, political, etc.—and interactions that influence action at any time 3) examples to draw from, both positively and negatively 4) knowledge of the interaction of communication and technology 5) more perspective on current practice 6) ways to think about what factors might influence future practice 7) deliverance from the all-too-common 'presentism.'"

"A knowledge of successes in technical communication can serve as models, and a knowledge of failures can provide deterrents."

"I think it is always good to have an historical perspective of one's field. I fear that we try too much to reinvent the wheel."

"Other than historical perspective, I'm not sure."

Appendix D

Sample Responses

Question 24

Which statement best reflects your personal opinion about the value of historical studies to practicing technical communicators?

    A.   Historical studies are very useful to practitioners

    B.   Historical studies are somewhat useful to practitioners

    C.   Historical studies are not useful to practitioners.

Question 25

Feel free to elaborate on your answer.

[very useful]: "1. Those who cannot remember the past are condemned to repeat it. 2. We need a toolbag full of techniques and strategies and who best to learn them from than those who came before us. After all, we do stand on the shoulders of giants. 3. Having a history gives us an identity and a sense of self-worth. 4. What other fields are blind to their past? 5. It's fun."

[very useful]: "I like the idea of teaching an entire course on the historical aspects of technical communication. In my graduate-level communica-

tion ethics course, I spend a couple of weeks on the relationship among the Nuremberg Code, the Declaration of Helsinki, and the Belmont Report in a discussion about informed consent and clinical trials protocols in medical ethics. I can envision developing this historical approach in a series of case studies pertaining to all sorts of tech comm topics—risk and benefits communication, environmental impact communication, etc."

[very useful]: "No practitioner with knowledge of the development of the field of engineering or science will ever feel subject to the power of these recently constructed fields, and students prepared with history of the development of technical communication (esp. HCI and usability) see their futures are bright."

[not useful]: "I'll admit I dislike how applied our program is. But when we add more academically, theoretically oriented courses, they are sometimes difficult to run—students who want the M.S. for a raise or to prepare to consult complain about a theoretical class taking up space for applied courses. I'm unsure how to deal with this besides taking students with a higher G.P. which seems to work (the high GPA students seem more likely to be interested for the sake of interest)."

Appendix E

Sample Responses

Question 26

In your opinion, how important is the study of technical communication history in the training of future technical communication teachers?

    A.   Very Important

    B.   Somewhat Important

    C.   Somewhat Unimportant

    D.   Very Important

Question 27

Feel free to elaborate on your answer.

[very important] "I'm sorry to say that I still see too many teachers who see practice as isolated from both history and theory, as something that can be easily learned and practiced by studying guidelines, etc. I'm very strongly in favor of the perspective of Donald Schön [author of *The Reflective Practitioner: How Professionals Think in Action*] and Atul Gawande [*Complications: A Surgeon's Notes on an Imperfect Science*] that professional practice is much more complex than some would give it credit for. And I think having some historical perspective is an important element of truly understanding a profession and becoming proficient as a practitioner."

[very important] "If teachers don't have adequate awareness of the history of tech comm, we can't very well expect practitioners to develop a sense of tech comm as a historically-situated profession and practice. Too

often our doctoral dissertations (both at my school and more broadly) are narrow, trendy 'research,' which when we look closely actually means a tiny survey or usability test or pico-ethnography wrapped up in a bunch of pointless citations—enough to justify a medium-sized article if published, but hardly a book or a research agenda strong enough to survive the march to tenure. I think this superficiality is in part a result of the lack of historical and cultural depth in most doctoral programs."

[somewhat important] " To make this topic really forceful in American curricula, I would wonder if it needs to be offered in generalist terms to a broad swath of students in many degree programs. Something like 'History of Science and Communication' or a portion of a course called 'Sociology of Media and Technology.' Seems to me we are undergoing a shift in social sci and humanities that can make these topics sexy in a new way."

Appendix F

Sample Responses

Question 33

In your opinion, should a technical communication program offer, on a regular basis, a course devoted entirely to the history of technical communication?

    A. Yes

    B. No

Question 34

Feel free to elaborate on your answer.

[no]: "Ideally, this would be great, but constraints of curriculum and faculty time make this nearly impossible—especially at the undergraduate level."

[no]: "There are simply too many other areas to cover in any undergrad or grad program to justify having an entire course devoted to history of the field. Perhaps a large program with many faculty could justify this decision; our program is small and we're stretched thin."

[no] "There are many workable models of programmatic design. History does not have to be a distinct course-level area of study to be present in a well-conceived and executed program. It may in fact be better addressed as a component of most (or even all) courses in a curriculum, or in other words, contextualized to the work of many courses."

[no] "I think it's more useful to infuse the history throughout the curriculum so that its usefulness, relevance, relationship to practice are more obvious

[yes]: "If it's an independent program, not part of a larger program in English, it should do this. If it isn't, for reasons mentioned above, it probably just can't do it."

[yes]: "This would make a valuable and probably a popular elective for programs entirely focused on technical communication. My program is only a track; we don't have enough students or enough electives to offer a course focused entirely on the history of technical communication."

[yes] "In PhD-granting programs, yes, I feel that a regular course in the history of technical communication would be appropriate."

Appendix G

Syllabus for Technical Communication History Course

Week 1   Introduction (historical study in technical communication)

- "History, Rhetoric, and Humanism: Toward a More Comprehensive Definition of Technical Communication" (Rutter, 1991)
- "Historical Studies of Technical Communication in the United States and England" (Malone, 2007)
- Historical definitions of technical writing/communication
- *Helvetica* [documentary] (Hustwit, 2007)

Week 2   Ancient times (technical texts, clay tablets, papyrus scrolls)

- "Technical Report Writing in AD 97 [about Frontinus]" (Miller, 1956)
- "Ancient Egyptian Medical Texts" (Lipson, 1990)
- "The World's Earliest-Known Technical Texts" (Swales, 1997)
- Extracts from *The Book before Printing* (Diringer, 1982

Week 3   14th century (quoditian texts, manuscripts, parchment)

- A Treatise on the Astrolabe (Chaucer, c. 1395)
- "The First Technical Writer in English: A Challenge to the Hegemony of Chaucer" (Hagge, 1990)
- *Making Manuscripts* [documentary] (Getty Museum, 2003
- Medieval helpdesk [video] (Naerum, 2001)

Week 4   15th century (shift from chirography to typography, Gutenberg)

- *The Printing Revolution in Early Modern Europe*, Chapter 3 (Eisenstein, 2005)
- "Learned Correctors as Technical Editors" (Malone, 2006)
- Extract from *From Gutenberg to the Internet: A Sourcebook on the History of Information Technology* (Norman, 2005).
- *The Machine that Made Us* [documentary] (McGrady, 2008)

Week 5   16th century (Agricola's *De re metallica*)

- Preface to the Hoovers' translation (1912) of Agricola's *De re metallica* and a brief extract from the translation (Hoover & Hoover, 1950)
- An episode titled "Hoover and Agricola" from the radio program Engines of Our Ingenuity (Lienhard, 1988)
- "Of Mining, Smelting, and Printing: Agricola's *De re metallica*" (Long, 2003)
- "Revisioning Sixteenth Century Solutions to Twentieth Century Problems in Herbert Hoover's Translation of Agricola's *De re metallica*" (Sauer, 1993)

Week 6   17th century (Harvey's De motu cordis)

- Translation of Chapter 8 of De motu Coris (Harvey, 1952)
- "Thematic Repetition as a Rhetorical Technique" (Allen, 1991)
- "Commentary on *Rhetorical Analysis of William Harvey's De Motu Cordis (1628)*" (Connor & Connor, 1992)
- "A Response to J. T. H. Connor and Jennifer J. Connor's Analysis" (Allen, 1992)
- "Medical text and historical context: Research issues and methods in history and technical communication" (Connor, 1993)

Week 7   18th century (Franklin's fireplace pamphlet as white paper)

- An Account of the *New-Invented Pennsylvanian Fire-Places* (Franklin, 1744)
- "Teaching the history of technical communication: A lesson with Franklin and Hoover" (Todd, 2003)
- Definitions of "white paper" by Stelzner (2005), Willerton (2002), etc.

Week 8   19th century (sewing machine manuals, visual communication)

- "Authority and Audience-Centered Writing Strategies: Sexism in 19th Century Sewing Machine Manuals" (Durack, 1998)
- "'Something in motion and something to eat attract the crowd': Cooking with science at the 1893 World's Fair" (Lippincott, 2003)
- *The Beauty of Diagrams: The Rose Diagram* [documentary] (Clarke & Waterhouse, 2010–2011)

Week 9   Development of the academic discipline, part 1

- "The Rise of Technical Writing Instruction in America" (Connors, 1982)[7]
- "Technical Communication from 1950-1998" (Staples, 1999)
- "Developing an Undergraduate Curriculum for Training Technical Writers and Editors" (Steinberg, 1960)
- Extracts from land-grant university catalogs, 1920s
- Extract from *A Study of Courses in Technical Writing* (Fountain, 1938)

Week 10   Development of the academic discipline, part 2

- "The Association of Teachers of Technical Writing: The Emergence of professional identity" (Kynell-Hunt & Tebeaux, 2009)
- "The Council of Programs in Technical and Scientific Communication: A retrospective" (Pearsall & Warren, 1996)
- "The First Week-long Technical Writers' Institute and Its Impact" (Whitburn, 2009)

Week 11   Early electronic computers (Joseph D. Chapline)

- "The Story of Joseph D. Chapline, First Computer Documentation Writer and Manager, 1948–1955" (Brockmann, 1998)

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[7] One semester, the instructor of the course used the first half of Kynell (2000) in Week 9 and the second half of Kynell (2000) in Week 10 in place of other readings. Connors' (1982) article is now an historical artifact itself. In some ways, though, it is more serviceable than Kynell's excellent book.

- Information about Chapline's involvement in the founding of the IRE Professional Group on Engineering Writing and Speech in 1957 (e.g., Malone, 2008)
- *John Mauchly: The Computer and the Skateboard* [documentary] (David & Reed, 2000)

Week 12   Women technical communicators, 1940-1960

- "'Chrysler's Most Beautiful Engineer': Lucille J. Pieti in the Pillory of Fame" (Malone, 2010)
- "Technical editing . . . A career for women" (Cortelyou, 1955)
- Short newspaper articles: "WACs" (1944), "Many Fields" (1948), Callan (1951), "Program" (1956), N.H.G. (1958), Mundell (1960), etc.
- *Top Secret Rosies: The Female Computers of World War I*I [documentary] (Erickson, 2010)

Week 13   Development of the profession, part 1

- *Billions for Confusion: The Technical Writing Industry* (Bishop, 1964)
- Extracts from *Control through Communication* (Yates, 1989)
- Documents from selected personnel files

Week 14   Development of the profession, part 2

- "Technical Writing and Professional Status" (Light, 1961; Hallier & Malone, 2012)
- "The First Wave (1953–1961) of the Professionalization Movement in Technical Communication" (Malone, 2011)
- Selections from *Multimedia* (Packer & Jordan, 2002)

Week 15   Future of technical communication

- "A History of the Future: Prognostication in Technical Communication" (Wright et al., 2011)
- "What If Readers Can't Read" (Self, 2009)
- "Are We There Yet?" (Rauch, Morrison, & Goetz, 2010)
- "Six Emerging Technologies to Watch" (Evans, 2011)
- *The Beauty of Diagrams: Pioneer Plaque* [documentary] (Clarke & Waterhouse, 2010–2011)

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