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ABSTRACT

This proceedings presents 43 papers delivered at the 2001 annual meeting of the Council for Programs in Technical and Scientific Communication (CPTSC). Papers in the proceedings include the following: "Act IV: On Being Less Invisible" (Bill Karis); "Building a Community of Professional Communicators by Mapping Needs and Assets" (Stuart Blythe); "Designing Institutional Space to Bridge Institutional Devices" (Jim Porter); "Managing the Growth of Service Learning" (Summer Smith); "Collaborative Invention Among Experts in an Interdisciplinary Context" (John Gooch); "Dealing with Increasing Tool Diversity and Student Need to Know Tools in the Writing Service Course" (Heather Sehmel); "How the Web Is Changing the Role of the Service Course" (Dan Riordan); "Managing the Conundrum: Doing an Effective Job Teaching Those Packaged Web Design Courses to Students Who Just Want to Do the 'Fun Stuff'" (Elizabeth R. Pass); "Traditional Writing Instruction and the Technical Communication Curriculum" (Tim Hadley); "Reconsidering the Doctor of Arts Degree" (Tim Fountaine); "Issues in Creating a New Ph.D." (Paul M. Dubrowski); "United We Stand, Divided We Fall?" (Ann M. Blakeslee); "Is There an Alternative Master's Program" (Nancy Allen); "Rumors of Change" (Jennie Dautermann, et al); "A Framework for Developing Research-Based Curricula in Professional Writing Programs" (Graham Smart, Nicole Brown); "Planning, Delivering, and Assessing Communication Modules in an Engineering Enterprise Program" (Dale L. Sullivan); "It Was the Best of Times, It Was the Worst of Times" (Carole Yee); "First Generation Ph.D.s in Professional, Technical, and Scientific Communication" (Kelli Cargile Cook, Charlotte Thralls); "Scaling the Walls of the Tower" (Robin Breault, Michelle F. Eble); "Do We Know Who We Are and Where We Belong?" (Alexander Friedlander); "Independence from English" (Alice Philbin); "Portrait of a Maturing Department" (Barbara L'Eplattenier, et al); "Undergraduate Technical Communications Programs" (Nancy M. O'Rourke); "Visual Thinking in the Technical Communication Curriculum" (Eva R.

Brumberger); "Graphics, Design and Technical Communication" (Kevin LaGrandeur); "Disciplinary Boundaries" (Carol M. Barnum); "Program/Professional Management/Identity" (W.J. Williamson); "Beyond the Glitz and Grandstanding" (Brendan Faber) Faber); "Supporting Success" (Margaret Hundleby, Helen Correll); "Integrating Technical Communications in an Arts and Humanities Setting" (Catherine Latterell); "A Networked Approach to Program Growth" (Deborah C. Andrews, Rebecca B. Worley); "The Place of Communication in Technical Writing Programs" (Tracy Bridgeford, James M. Dubinsky); "Professional and Technical Communication" (Pete Praetorius); "Datacloud" (Johndan Johnson-Eilola); "Sustainable Practices in Distance Education" (Stuart Selber); "Providing a Backbone for an Online Master's Program in Technical Communications" (Nancy W. Coppola); "From Technical Writing to Content Development" (Saul Carliner); "Some Ideas About Producing Online Modules" (David Morgan); "International Technical Communication Programs and Global Ethics" (Gerald Savage); "Legal Communication in Technical Communication Programs" (James F. Stratman); "International Technical Communications and Today's Technologies" (Teresa Mulvihill); "Should Academic Programs in Technical Communication Try to Strengthen the Bond Between Academia and Industry?" (Susan Feinberg); "Don't Manage Change: Make It!" (Christine Abbot, Phillip Eubanks). (NKA)

CPTSC 2001 Pittsburgh

Managing Change and Growth in Technical and Scientific Communication

Proceedings 2001

28th Annual Conference

Pittsburgh, Pennsylvania

Council for Programs in Technical and Scientific Communication

About CPTSC

Purpose: The Council for Programs in Technical and Scientific Communication was founded in 1973 to (1) promote programs in technical and scientific communication, (2) promote research in technical and scientific communication, (3) develop opportunities for the exchange of ideas and information concerning programs, research, and career opportunities, (4) assist in the development and evaluation of new programs in technical and scientific communication, if requested, and (5) promote exchange of information between this organization and interested parties.

Annual conference: CPTSC holds an annual conference featuring roundtable discussions of position papers submitted by members. The proceedings include the position papers. Authors have the option of developing their papers after the meeting into more detailed versions.

Program reviews: CPTSC offers program reviews. The reviews involve intensive self-study as well as site visits by external reviewers. Information is available at the CPTSC Web site.

Web site: CPTSC maintains a Web site at http://www.cptsc.org This site includes the constitution, information on conferences and membership, a forum for discussion of distance education, and other organizational and program information.

Listserv: CPTSC's listserv is CPTSC-L. To subscribe, send an email message to listserv@clvm.clarkson.edu Keep the subject line of the message bland and delete your signature block if you use one. In the first line of the message type subscribe CPTSC-L Your Name

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About the 28th Annual Conference

This conference was held at the University Club of Pittsburgh, across from the campus of the University of Pittsburgh. Carnegie Mellon University served as host. Conference-goers were treated to a rooftop view of the University of Pittsburgh's homecoming fireworks, fired off from the multiple levels of Pitt's Cathedral of Learning. The conference theme, Managing Change and Growth in Technical Communication and Scientific Communication, was made all the more poignant as the conference started a month to the day after the attacks of September 11, 2001.

Upcoming Conferences

2002: October 3-5	Logan, UT	Utah State University
2003: October	Potsdam, NY	Clarkson University
2004: October	West Lafayette, IN	Purdue University

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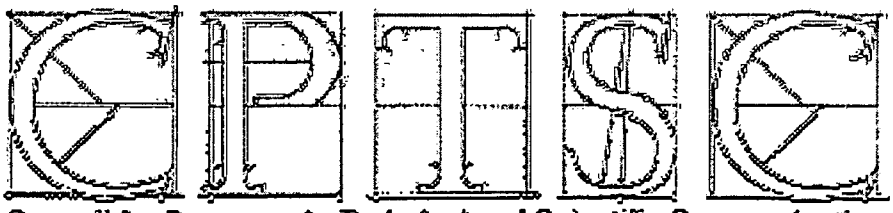

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Act IV: On Being Less Invisible – *with apologies to Ralph Ellison and Claude Rains*

Bill Karis Clarkson University

I adopt a theatrical frame in this keynote address (i.e., Acts I, II, III, and IV) to provide some "generational perspective" on the first 30 years of CPTSC. In a quick review of those years, I recognize many of our colleagues who have been instrumental in

- establishing programs
- strengthening and expanding those programs
- creating new graduate programs
- increasing the visibility of our work within and outside the academy

I encourage the audience to be more aware of the generational changes that are always with us, even though our day-to-day routines may make it difficult to see their critical importance.

Finally, I encourage and challenge our newer and younger colleagues to continue the process of making our field "less invisible" to those outside the discipline – and I challenge those of us currently in charge of programs to help our junior colleagues make that contribution.

Building a Community of Professional Communicators by Mapping Needs and Assets

Stuart Blythe Indiana University-Purdue University Fort Wayne

For an institution with a regional focus, part of program building involves identifying resources in the region the program serves. This effort can be complicated in regions that generally lack the kind of high-tech industry that draws technical communicators. One cannot easily find a ready-made community of professional communicators in such places, leaving some to wonder whether a professional writing program would be able to thrive. Nevertheless, as Jim Henry has recently noted in his book, *Writing Workplace Cultures: An Archaeology of Professional Writing*, communicators are ubiquitous, even if most of them don't identify themselves as such.

In northeast Indiana, for instance, one can find people who spend most of their days writing grants or other types of proposals, managing projects, writing documentation for industry, and training employees. Many of these people may be interested in the kinds of writing-related courses and resources that a professional writing program could offer. Because these people do not identify themselves as professional communicators, however, there is no sense of community, no sense of shared values and needs, and no identifiable list of people to contact. Educators hoping to build a program in such a region need to identify hidden resources while building a sense of community.

Strategies used to map community needs and assets for other purposes can be used to map needs and assets as one attempts to build a community of professional communicators and a professional communication program. Strategies such as those offered by the Community Toolbox (http://ctb.lsi.ukans.edu/) or Kretzmann & McKnight's book, *Building Communities from the Inside Out: A Path toward Finding and Mobilizing a Community's Assets* could be adapted to efforts to identify professional communicators (i.e., potential students and assets) and to assess their needs. In my portion of a discussion at CPTSC, I will talk about how such strategies are being adapted to efforts to re-vitalize a professional writing program in the northeast Indiana region.

Designing Institutional Space to Bridge Institutional Divides

Jim Porter Michigan State University

Professional/technical writing has long been an effective curricular site for off-campus outreach. Especially compared to other humanities' disciplines (not that that category provides any stiff competition), professional/technical writing has emphasized practical application and liaison between the university and business/industry. Two of the chief reasons I am attracted to this field are its pragmatic orientation and its focus on writing-in-the-world.

However, I am still not satisfied with our institutional posture. It seems to me that the traditional institutional spaces we've devised are problematic in several respects. The models we typically use to bridge the university-workplace divide may allow us to cross the river from time to time, but they also maintain a problematic binary between "us" and "them." Sometimes we reach out to business/industry (consulting, internships), but we don't seem to have effective models for bringing business/industry inside the university. (One notable exception: corporate advisory boards.) We reach out to business/industry, but we have neglected non-profit organizations and community interests which should certainly be considered under the rubric of "professional writing."

What structures and programs can we build to encourage better (more frequent, more productive, more institutionally integrated) interaction between 1) professional writing faculty and students at the university and 2) corporate representatives and community members? What sorts of institutional spaces would promote our working together, collaborating on research and other projects?

With the CPTSC community I hope to explore some ideas for reconstituting academic institutional space(s) in order to create stronger structures for bridging the unfortunate divide between the university and the "out there." This includes business and industry but also community organizations and interests of various sorts. We do well, but we could do better.

Traditional Models

Professional/technical writing attempts to bridge the gap between the university and the workplace in many different ways. These methods involve both classroom projects and faculty work.

- **client-based projects** in professional writing classes — students do projects for real clients and bring back knowledge to the classroom (a fairly effective model that might work better if clients actually participated in classroom activities)
- **formal internships** — students go "out" to learn and develop, but there is seldom much institutional integration of work activities (and if the internship is individual and private, how much is learning shared?)
- **faculty consulting** — faculty go "out" and presumably bring information and knowledge "back" to the university, but there is no institutional integration of

work activities (in fact, it often has to be discouraged to avoid work-for-hire problems)

• **corporate advisory boards** — a good attempt to involve business/industry representatives in the curriculum, but how effectively do they bridge work and action?

Don't get me wrong: I think these strategies are good ones. I have used them; I like their intentions. Unfortunately, they happen "out there," away from the university. Sometimes learning is brought "back" to the university and seeds our curriculum that way, but the institutional structures preserve the in/out, back/forth divide.

An Alternative Model: The Research Center

I have been thinking about how we might implement a "research center" model, an entrepreneurial approach that seeks to involve business/industry directly in research activities at the university. (One example of this model is the MIT Media Lab. This structure bears some resemblance to writing centers, except that the research center focuses on research activities more so than on tutoring, teaching, and training.) In my presentation, I will describe this model briefly and talk about how it could be designed to integrate community outreach activities.

Managing the Growth of Client-Based Projects or Service Learning: Towards a Model for a Sustainable Program

Summer Smith Clemson University

Service learning and client-based projects more generally are widely recognized as effective methods of engaging technical communication students in the complexities of workplace writing. But administrators of large technical communication programs often face an uphill battle when attempting to integrate these projects into the curriculum.

One major hurdle is that many writing teachers are reluctant to try client-based projects—even though they think it would benefit their students—because they believe the workload would be overwhelming. The uniqueness of each project seems to require them to continually reinvent their curriculum. This problem is especially acute in technical communication programs that rely on graduate students or non-tenure-track instructors who teach heavy loads for low pay. These teachers see little benefit in altering their tried-and-true syllabi, especially if taking on a client-based project would mean that different sections of their technical communication course would have somewhat different assignments.

If we overcome these objections and convince some teachers to use client-based projects, we may find that our programs lose coherence. Teachers may develop courses that vary significantly from the core curriculum represented in the catalog description of the technical communication course. In turn, this situation can lead students, or even faculty in other departments, to complain that different sections of the technical communication course are not equivalent in workload or educational value.

So the question is, how can we integrate client-based projects and service learning into a curriculum while maintaining acceptable teacher workloads and coherence in a technical communication program? At my previous university, Penn State, I was able to develop a client-based project program that regularly involved about a third of the technical communication classes. Both the department and the teachers considered the program successful. I am now director of technical and business writing at Clemson, and am studying ways to develop a similar program there. Based on these experiences, I recommend a three-part approach to administering a client-based project program.

First, the program director can reduce teacher workloads and promote coherence by developing a curriculum for client-based projects in technical communication classes. This curriculum should be sustainable; it should be able to be applied across different writing projects. The curriculum I developed is based on a series of assignments that involve students in analyzing the audience and client for a project, writing a proposal to the client, and presenting the final product to the client. It also includes a pool of shorter assignments that can be added to fit a particular project or teacher's needs—everything from rhetorical analyses of similar documents, to reflections on collaboration, to user test reports. With this sustainable curriculum, a teacher can use much the same syllabus semester after semester, even though the projects change each semester. This approach reduces teachers' workloads and addresses concerns about the coherence of the program.

Second, the program director should find projects and match them with interested teachers. The director should choose projects that offer enough writing for an entire class of students so that each teacher need only work with one client per class. Because the director ideally would have an assistant to help with this work, this approach requires some buy-in from the department or university. By taking on the responsibility of finding the projects, the director can reduce teachers' workloads, ensure that clients are willing to participate actively when needed, and exercise some control over the rigor and focus of the projects. Recruiting teachers to accept projects also becomes easier when the director can offer a specific project and a firm commitment from an enthusiastic client.

Third, the program director should offer a training workshop for teachers who accept client-based projects. This workshop can introduce the sustainable curriculum and provide model assignment sheets and strategies for adapting existing lessons to fit a client-based project class. The director can also provide ready-to-use lessons and handouts on collaboration, interviewing, and other skills that teachers may not generally teach. In addition, the workshop can offer strategies for involving the client in the course, encouraging reflection, evaluating collaborative writing, and other issues that teachers face in service-learning classes. The workshop will reduce teachers' workloads and promote coherence in the program.

Collaborative Invention Among Experts in an Interdisciplinary Context: The Creation of Written Discourse for Countermeasures to Biological and Chemical Threats

John Gooch Texas Tech University

Programs in technical and scientific communication educate students from multiple disciplines. As we teach these students from various fields, we often assume they will write to others who are members of the same field. However, professionals commonly communicate across disciplinary boundaries and collaborate with those who do not necessarily belong to their field. We should rethink our approaches in teaching scientific and technical communication to consider how different people from different areas of expertise engage one another in a communication situation. Based on the understanding that different disciplinary cultures and languages alter contexts for communication, a study examining how experts from science, engineering, mathematics, and architecture come together as a single group and collaboratively invent discourse can contribute to new knowledge to inform curriculum development.

The focus of my study is a group of experts from the Admiral Elmo R. Zumwalt, Jr. National Program for Countermeasures to Biological and Chemical Threats, a research initiative at Texas Tech. They write proposals to fund projects for developing means to counteract terrorist incidents. One of my goals in conducting this study has been to learn how interdisciplinary collaborative writing practices among experts ultimately influence audiences and shape decision-making. It is not difficult for me to contend that a group's practice of collaborative rhetorical invention eventually becomes a document, and that document transcends the collaborative situation into other contexts that eventually shape the social, cultural, and political milieus. Expert discourse contributes to directing organizational formation as well as policy action, a point upon which most of us would agree. However, the greater questions become "how?" and "why?" Experts influence decisions in other contexts outside of those in which they collaborate. The process these experts engage is worth exploring in and of itself as we build new programs in technical and scientific communication.

When I refer to "experts," I am identifying those individuals from academic disciplines who possess specialized knowledge of their particular area. These people have earned either an advanced degree or terminal degree in their respective field, distinguishing them as an "expert." They bring with them disciplinary practices, perspectives, attitudes, and even biases from that particular field of expertise when engaging others from academic areas different from their own. A process of collaborative invention among these people many times brings radically different perspectives on academic practice, epistemology, and theoretical grounding into conflict. As a process, collaborative invention among and between different people from different academic disciplines causes numerous elements to surface. It forces some sort of conflict resolution and consensus on issues for the sake of producing communication for a particular audience. Conflict, consensus, and resolution are inextricably intertwined in

collaborative invention. How these elements emerge can tell us much about the formation of a particular group.

We have conducted relatively few studies to learn how experts begin their writing process, and in particular, how groups of experts from various disciplines work together to form discourse for audiences inside as well outside the group. The ideas that emerge from this group's interactions will inform policy decision-making contexts and other report and proposal writing situations as well as academic scholarship. An interdisciplinary approach to a writing situation creates new dilemmas for collaboration because several different, sometimes competing, perspectives must be taken into account before the group can create the discourse. A study on experts as they collaboratively invent discourse can shed new light upon the reasons for certain communication practices. We can apply the new knowledge about this practice so that it may inform the development of programs in technical and scientific communication.

Dealing with Increasing Tool Diversity and Student Need to Know Tools in the Technical Writing Service Course: A Call for Programmatic Assessment and Treatment

Heather Sehmel Texas Tech University

One pedagogical issue addressed in current conversations, journal articles, conference presentations, and edited collections in technical communication regards what to do about the growing number of tools that technical writers need to know how to use. Often, these discussions become tools vs. theory arguments—to what extent should responsible technical writing programs teach tools? To what degree should they teach theory and hold students personally responsible for learning tools? For example, a continuous theme in *Computers and Technical Communication: Pedagogical and Programmatic Perspectives*, edited by Stuart Selber, is keeping the focus of technical communication programs on rhetorical and other traditionally academic issues, rather than on tool learning. Finding the right balance between theory and tools is an ongoing debate, both at the level of the individual instructor and programmatically. However, another closely related, but perhaps more often ignored issue, is what should be done about tool learning in technical writing service courses. Understandably, most technical communicators and technical communication programs are primarily concerned with what they and their graduates know. However, the questions of how many tools to teach, which ones, and in what depth also occur for those teaching technical writing service courses. Too often, the issue probably is dealt with individually, when perhaps the best solutions to the problem would be programmatic. Finding a solution is more critical as change and growth in the number and importance of tools available occurs and as the tools used in different disciplines continue to diverge.

Currently, a typical sophomore level service course, such as those that I have been teaching for the last three years, includes students whose tool knowledge ranges from students who do not know what a floppy disk is to students who program in C++ and Java. A survey recently conducted with the student population at Texas Tech indicates that instructors can assume only that most students will know how to use Word and an email program. Moreover, the typical class includes a few technical communication majors and minors along with a mixture of other students, many in engineering, computer science, business, and other majors. The tool needs for these students may be radically different; all probably need to know how to use email, and most may need to be able to make a chart or graph in different kinds and levels of programs. Many may need to know how to use MS Power Point, while all need to be familiar with a word processing program. The problems increase when teachers consider the tradeoffs between spending class time teaching students how to use Power Point, Word, Excel, and Netscape Composer or Front Page in addition to how to write in various genres, how to cater to their audiences and purposes, and how to write

ethically, clearly, concisely, and correctly. There simply isn't class time to do all of this, although, increasingly, knowledge of some tools is useful for completion of class assignments, as well as for the professional development of most students.

Right now, most programs have teachers making individually determined trade-offs. For example, I may spend one class period introducing students to Power Point, and so not have time for extra practice making visuals. However, I think that the best solutions to this problem may be at a programmatic level. Instead of individual teachers struggling with how to adapt to their students' incredible tool knowledge diversity of their students and not knowing how to meet the needs of a variety of students in a variety of disciplines, programs, through cooperation with the technical and scientific and business schools in which these students primarily are majoring could determine which tools are most important. Then, several options might exist:

- Students could learn one or two carefully selected tools in the technical writing course
- Students could attend interdisciplinary tool workshops in conjunction with a technical writing course—maybe as a lab requirement
- Students could take or test out of an information technologies course that introduced them to the majority of the tools that they would use in the technical writing course as a prerequisite to the course, so that teachers of this course could focus primarily upon technical writing, help students review the tools, and help students apply tools to writing applications

Because these options seem more valuable than those that teachers now make individually, it seems that this problem may need to be addressed by technical writing programs. Furthermore, the problem, like curricula, would need to be revisited upon occasion as the tools that students already know or need to know continue to change.

How the Web Is Changing the Role of the Service Course

Dan Riordan University of Wisconsin-Stout

The service course is undergoing another change in its role in the Technical Communication program. Over the years, the service course has evolved from a way of providing students with mastery of genre and style to a way of introducing students to their role as communicators in the rhetorical situation. The Web drives the new role evolving out of this solid past. The service course now provides students with a basis for independent creation. Programs must fill four key needs for students entering the job market. Students must

- learn to learn,
- master the processes involved in creating information,
- learn applications quickly and graduate having mastered several,
- understand information design.

The new Web service course allows all these needs to be filled. The basics of the new service course are Web design, audience analysis, and teamwork, all working to allow independent creation. In this type of course, students learn to create a Web site, and Web pages, which they post to the Web. Students work with the realization that audiences on the Web are real–people, often classmates, who read the site in order to find specific information. Student creation takes place in teams that interact both to create the sites and to evaluate them. The key difference in the new course is actually posting to the Web, where there are real audiences who read because they want something from the site. This factor changes the dynamic in the service course in a very pleasant way. Students take ownership of their sites, developing a sense of responsibility for content and audience that pre-Web projects could never really achieve in this type of course.

This new course fills the needs that currently appear in the field. As students work through the maze of creating a Web site, they quickly discover that the answers to questions are not readily available, thus causing them to learn how to use resources and to discover strategies that help them solve their problems. Often they have to derive the answer themselves because no else knows it nor has the time to figure it out. Students learn processes that include planning, creating, and evaluating; they switch from hurriedly writing the document just before it is due to carefully estimating how to create an effective document. For instance, after a bout with navigation that does not work, the value of planning, in the form of a site map, is clear. Students learn applications, usually a Web authoring program and an ftp program, but most students, learn more even about word processing than they ever knew. They often begin to integrate application usage, for instance by placing a PowerPoint presentation onto the Web. Finally, students learn to design their information by adapting to the scannable style and finding the power of the link.

The new service course strengthens programs because it gives students the basics that they need to cope with the demands of our information economy.

Managing the Conundrum: Doing an Effective Job Teaching Those Packed Web Design Courses To Students Who Just Want to Do the "Fun Stuff"

Elizabeth R. Pass James Madison University

As more Technical Communication programs are offering Web design courses, enrollment in these courses is increasing. Web development has repeatedly been proven to be a vital part of most technical communicator's repertoire; therefore, demand for these classes is booming.

However, we are not at the beginning of Web design. There is a body of knowledge, theories, and usability studies (e.g., Lynch and Horton, Nielsen, Siegel) to give us a wealth of information to apply to our courses. The classes we now teach are not in the infancy stages they once were several years ago at the beginning of the Web boom. Nevertheless, we face an interesting problem: how do we address issues of excellence and critical thinking? Some students in the Web theory and design courses do not want to do the difficult reading to get the foundational knowledge or to get to a sophisticated level of Web design.

We're settling into the second era of Web theory and design and facing the same problems as those who taught literary criticism and rhetorical theory—how to get students engaged with challenging and difficult texts and to develop a more complex level of Web site design. Because Web design courses are so popular, many classes are filling up with students who want to rush in and start putting up Web sites immediately Many students are quickly disenchanted or even angered when told they need to read theory, usability testing information, and work on storyboards for their Web sites before approaching the computer. To them, reading texts about theory, usability, and storyboarding has nothing to do with the promise of Web design.

At James Madison University, the Institute of Technical and Scientific Communication (ITSC) has developed an Online Publications Specialization (OPS). We are now facing the conundrum of managing the described problem. The problem affects us at the course level but has also affected us at the program level. We have taken steps to address this issue at the program level. In order to present consistency, we have implemented an attendance policy in the OPS courses, thus sending the message that the specialization is a serious endeavor with rigorous and consistent requirements. Also, because of my area of research, I am asked to serve on many thesis committees pertaining to online issues. I have developed a contract of agreement that stipulates what I expect from an online document, their interaction with me, etc.

The demand for Web design will only increase, and the ITSC, specifically the OPS, has seen an interesting consequence of this increase in demand at the programmatic level. I am interested to see if other programs are feeling this same tension and what solutions they are implementing to resolve this issue.

Traditional Writing Instruction and the Technical Communication Curriculum

Tim Hadley Texas Tech University

An examination of the curricular offerings of programs in technical and scientific communication reveals continuing uncertainty about the place and importance of linguistic basics such as grammar and style in the technical communication curriculum. Most programs include at least one course offering in grammar and/or style, but the balance between traditional writing instruction and more contemporary issues and tools remains elusive.

This imbalance may at least in part be attributed to historical causes. For instance, it may be that the change in outlook de-emphasizing traditional writing instruction that swept through English departments two decades ago has been paralleled in technical communication instruction as well. It is also probable that the rapid growth in technology emphasis in technical communication has caused writing basics to be left behind in favor of collaborative learning, social construction of knowledge, and the seemingly limitless opportunities presented by the Web.

Program directors seeking to control the blurring of disciplinary boundaries and ground undergraduate and graduate education in technical communication on a solid rhetorical foundation must confront the possibility that one of the best "changes" may be to remain traditional, or at least partly return to a more textual instructional emphasis. However, in broadening the definition of technical communication, we may have gotten too far away from basic writing issues. It seems likely that directors attempting to manage the continued change and growth that we see in technical communication programs will need to carefully consider how they can balance traditional writing instruction with the ever-increasing demand for tools and technology.

The goal of technical communication programs is to produce exceptionally skilled writers who know how to apply technology to the rhetorical situations encountered in the practice of technical communication. With that in mind, perhaps we can ask some questions which will focus this issue more sharply. How can we incorporate traditional writing instruction into an expanded technical communication curriculum? How can we frame grammar and style so that they can compete in our curriculum with the glitz of the Web?

Since these and other similar challenges will continue to face technical and scientific communication programs, our attempts to answer these questions will hopefully provide some fruitful approaches to the successful integration of traditional writing issues into the 21st century technical communication instructional environment.

Reconsidering the Doctor of Arts Degree

Tim Fountaine St. Cloud State University

In 1988, Billie Wahlstrom argued presciently that building curricula balancing research, theory, and technological expertise would enable program administrators to resist pressures to supply businesses with merely, though highly skilled, practitioners. Determining the standards for technical communication programs, she says, needs to be a collaborative effort between the academy and industry that aims to teach students the skills and habits of mind required to "understand and critique the uses to which information is put." Such sentiments to cultivate critical multiliteracies among technical communicators resonate in numerous subsequent publications (e.g., Johnson-Eilola, Cope and Kalantzis, Snyder, Taylor and Ward, Selfe, Cooper, Southard and Reaves, and Selber), all of which underscore the changing roles of communication and communication technologies in contemporary culture.

Critically responding to technological change has guided many developments within technical communication programs. Even so, a quick survey of recent discussion threads of the ATTW listserve intimates that a service identification—or the perception of one—which devalues the work technical communicators do and disempowers them persists in educational institutions and in industry.

There are many merits to reviving the Doctor of Arts (D.A.) degree as a programmatic alternative to certificate programs and the Masters and Ph.D. degrees. Perhaps, especially for smaller institutions and universities who must differentiate their graduate programs from those of other regional competitors to obtain funding and legislative approval, the *applied* doctoral degree may offer students and academics a flexible structure—that could be operated much like an institute–to forge alliances across disciplinary (and departmental) boundaries. As a specialized professional degree, one that is meant to position technical communicators as teaching managers within business environments, the D.A. degree may also provide valuable opportunities to invigorate academe-industry ties to programmatic discussions and reposition the roles of technical communicators more favorably within an information economy.

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Issues in Creating a New Ph.D. Program

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Our English department faced three major issues when developing our new Ph.D. in Texts and Technology (T&T): defining the discipline, defending the proposal, and articulating relations with other departments. We hope this discussion will be informative for those planning to evolve their master's programs in technical or scientific communication to the doctoral level. It will also be informative for others, because we believe our program traces the outline of the English department of the future, linking textual and language studies to digital technologies.

Our proposal came before the Florida Board of Regents in late May 2001; we had to scramble to admit our first doctoral students immediately for fall 2001. Some may recall our solicitation for applications well beyond the date most students had already made their commitments for the coming year. We have been hiring in preparation for this program for the past two years, and expect to hire two senior faculty this year specifically for T&T and one junior faculty for both T&T and our M.A. in Technical Writing.

Texts and Technology is an innovative doctoral program for researching the textual possibilities afforded by existing, emerging, and yet-to-be-devised digital information technologies. We consider "texts" broadly to include words, of course, but also images, video and audio passages, multimedia, hypermedia, and interactivity. We will research how texts can be understood, created, utilized, and accommodated to various audiences and purposes ranging from communication, education, entertainment, publishing, defense, and creative arts. We will bring the traditional strengths of English programs—namely studies of texts and of textuality, narrative, persuasion, reading response, audience analysis and accommodation, critical theory, and creative discourse—to bear on information technologies and how they can be used and devised. No department is better suited than English to research areas such as

- complex meaning in words and images
- the powerful interplay between audience and communicator
- the relation between texts and culture
- the ability of humans to make sense of and respond to information presentations
- the social construction and rhetorical negotiation of meaning in interactive relationships

We are fortunate to benefit from close interdisciplinary collaboration with UCF's considerable computer science facilities, National Simulation Center, and new film and video production department (think "Blair Witch Project"). In creating and advancing this interdisciplinary proposal, we struggled to mark off and legitimate new territory in a gray area belonging to no one discipline. We also performed a balancing act between the textuality and technologies poised between these two poles while allowing ourselves to emphasize one over the other as the situation warrants (i.e., dissertation topics).

One major concern was disciplinary boundaries. The program will be housed in the English department and springs from the traditional strength of English programs, namely textual studies. It will research texts relating to digital and other technologies, "texts" conceptualized broadly to include print, images, video and audio messages, hypermedia, and interactivity. The Texts and Technology Committee explained to our department how English studies already conceive "texts" in diverse media:

- print as written words but also visually as typology and illuminated texts,
- traditional rhetoric orally or in writing or both (i.e., Martin Luther King's speeches) but also visually as facial expression or as the elaborate gesture handbooks of the 19th century,
- drama as written literature and scripts but also as visual texts in the acting especially in live performance, and visually in stage setting and lighting, and orally in the acting, even the person as a text (think of Olivier's *Hamlet*),
- poetry as written text but most authentically as oral discourse.

In these ways, traditional English studies have always had important multimedia dimensions. The T&T program also extrapolates our well-established M.A. program in technical writing. Our existing M.A. in technical writing, more precisely an M.A. in English with a technical writing track, is intensive in writing but already has substantial components in visual, audio, oral and electronic dimensions.

Though the connection to English studies is a fundamental strength, it has also been somewhat of a liability. The Florida Board of Regents, for example, has declared that there shall not be another Ph.D. program in English in Florida because of the glut of English doctoral graduates nationwide already. Though our proposed degree is not in English and is not called English, there seems to have been a suspicion that our proposal was just a "back-door" English Ph.D., and so we have had to work hard to disabuse the board of this misconception.

But this in turn caused a real dilemma. The more we dissociated the program from traditional English literature studies, the more we needed to justify its being housed in our department in the first place. In defending the proposal to our university Graduate Council, for example, the first question I faced was, "Why is this in English? Why not, instead, Computer Science or Digital Media? Or why not any other humanities field?" We also had to counter narrow, obsolete notions of what English studies are. It seemed at both the university and state levels, we faced an audience who thought of English as the impractical study of literature from bygone eras; we had to educate them to understand English as the study of how we shape our world through texts and are in turn shaped by them.

We faced a similar issue even within our department. We currently have three M.A. tracks: Literature, Creative Writing, and Technical Writing. Would the proposed Ph.D. destabilize the parity and collegial relations we have worked so hard to cultivate over the years? The Ph.D. was perceived, albeit incorrectly, as roughly a technical writing program, leading to the impression that technical writing would dominate all dimensions of the department's activities, while the other two tracks would be relegated to second-class status. To remedy this misperception, the Ph.D. committee worked hard to integrate literature interests into the proposal, especially through literary critical theory, gender issues, and culture criticism. Though creative writing has yet to establish

a clear identity within the program, many of the CRW faculty have since been trained in and are presenting Web courses in their areas. Distributed education will be an important part of their future proposal for an MFA in Creative Writing, so we expect that the CRW identity in T&T will become clearer over time.

We also explained and emphasized the pragmatic reality that our department faces: in a major state university growing explosively with new doctoral programs everywhere, our department needs a doctoral program. Without it, we will not be able to hold our own among the herd of doctoral elephants in our neighborhood. It lets us avoid being trampled or rendered invisible. The BOR had communicated clearly that the only sort of doctoral program they would be interested in was a digital–intensive one. This reflects the needs of both academic and non-academic markets for our graduates and the needs expressed by potential students. Therefore, our proposed Ph.D. had to be intensive in digital technologies.

Being digital–intensive was, at times, also a problem. Though several of our technical writing and literature faculty are already heavily involved in various other digital programs at UCF (e.g., Digital Media, Consortium for Research and Education in Arts and Technology, Institute for Simulation and Training, Film and video production), some critics at the university level wondered whether Computer Science, Digital Media, or Engineering and Human Computer Interaction would better house this program. To these critics, we had to emphasize the textual studies dimension of T&T. We continue to face this problem. Our usability course in T&T was initially opposed by one of our engineering departments because it was said to duplicate their usability course. As before, part of the problem was a misperception of what English studies is, should, or might be. (They even questioned our use of "technical" in our technical writing courses!)

A last major hurdle faced was the research nature of the program. Though the program also has strong components in theory and history, as a doctoral-level program, it needed to involve research. By the nature of the program, that research needed to be empirical, whether quantitative, qualitative, or mixed. We faced some objections to empirical research English studies in our department. This seems to be associated with a sort of numerophobia; with critical attitudes towards reductionism, objectivization, and the depersonalization supposed to follow from these factors; and with opposition to the negative cultural, economic, material interests which science and technology are supposed by some be involved with. Our strategy was to focus clear, strong attention on critical theory and cultural history throughout the program, as they are two of the three core courses in the curriculum. This helped send a clear message of sensitivity and appreciation of these cultural concerns. In addition, I tried to present research design and statistics as extensions of common sense rather than as an esoteric, mysterious art.

Developing and advancing this proposal was a difficult task but one that would have to be undertaken by almost any other doctoral program relating to technical or scientific communication within the context of an English department in our existing climate of technological development and market needs.

United We Stand, Divided We Fall? Thoughts on Cohesiveness in the MA in Writing

Ann M. Blakeslee Eastern Michigan University

In my department, we have an MA program in Written Communications with three strands: technical communication, teaching of writing, and discourse studies. As Director of Writing Programs, I coordinate all of these strands and advise all of our graduate students.

A couple of recent events have led me to think a lot more about how united we are, or should be, as a writing program, and about the implications of this for our students. Though we share many common interests, our different strands have seemed to be moving in separate directions. There are as many, if not more, things that separate us than there are things that unite us. For example, we recently received approval for a revised graduate curriculum. In our current curriculum, students in all of the strands take at least two, and often three or more, courses in common: up to two rhetorical theory classes, a research methods class, and up to two linguistics classes to fulfill the current language requirement. In the revised curriculum, they will have just one required course in common, the research methods class, and even this class may end up being split according to strands.

When we made these revisions in our curricula, we did so to respond to changes in our fields and to their increasingly specialized natures, another omen of distinction. Our students now will also take up to two special topics courses unique to their specializations. They will have the option of taking separate practicum courses: a teacher research course for the teaching of writing students and an internship course for the technical writing students.

Our graduate program in written communications and other graduate programs in the department are currently revising the language requirement. One option being considered is a separate requirement for each program.

Finally, another recent event causing me concern is a move by two of our strands, teaching of writing and technical communication, to develop graduate certificate programs. While these new initiatives certainly are responsive to the needs of our students, they also further separate our programs, as they do not contain common courses.

While part of me views these recent developments with satisfaction, another part feels a tinge of regret. What's happening to all of the things our students in the different strands once shared in common? When I taught the research methods class last fall, I was struck when my students in both strands commented on how they had not realized until then how much they shared and how happy they were to be able to help each other and to inform each other's work. These comments, and the tangible evidence I had of their truthfulness in my students' productive exchanges, are at the heart of my concerns. I am curious if other writing programs with multiple strands are also encountering these issues. Is becoming more separate a natural response to developments and progress in our respective fields? Is it the best response to those developments and progress?

On one hand, when I think of all that still unites us, I'm heartened. For example, in my department, the writing faculty from all of the different emphases serve on a

common Writing Committee, which is one of the most influential and productive committees in the department, especially in regard to curricular issues. We meet monthly during the school year, and hold an annual retreat. All of our writing programs do a great deal of outreach. Currently, we are coordinating these outreach endeavors under a single initiative. Several times each school year, we join together at public celebrations to acknowledge the accomplishments of students from all of our writing programs. However, if we continue to move in separate directions, these shared endeavors may also be lost. Even worse, research students' sense of connection with one another may remain unrealized by future students.

On the other hand, when I think of how few courses my technical communication students take in an MA program, I think that separate endeavors may be in their best interests. Technical communication is becoming an increasingly specialized field, and we have to do as much as we can, in an amount of time that is usually inadequate, to prepare our students for the field. This certainly has been a topic of many papers at this conference. If we get too wrapped up in giving our students shared experiences with students in other writing programs, we may end up losing out. Employers, for example, may end up finding our students' training lacking. But what do we lose if we fail to give our students these common experiences? For example, what sense of the field of writing studies do they develop? Do they care? Do we care? I think that we do. In fact, at this year's retreat, several of my writing colleagues expressed an interest in giving our students at least some sense of our larger field through a core course addressing its history.

Perhaps there is a middle ground that we might reach. In my case, it probably will end up being a course on the history of the field that students in all of the strands of our program will take. How much we share in common is a concern that all of us must address since it surely will impact the future of our programs as well as the future of our field.

An Alternative to a Master's Program

Nancy Allen Eastern Michigan University

Discussions concerning the structure of technical communication programs raise a multitude of questions: How do we include both theory and practice? How much theory is appropriate for a program in an applied area? What do our students need and want? How can we meet our students' needs and our own academic goals? These questions can become even more intense when they relate to master's degree programs and the demanding students they attract. We are faced with decisions about what the nature of a master's program in technical communication should be.

Eastern Michigan University, like many other institutions, has chosen the alternative of instituting a Graduate Certificate program. We have potential students who are interested in graduate courses in technical communication whose Bachelor's degrees may be in writing but may just as well be in another field. Often these are people who have some experience working in industry and want to advance or shift the emphasis of what they are doing in their careers. They have a sincere interest in taking graduate level courses in technical communication, but they don't particularly want courses that will center on discussions of theory. While they acknowledge the value of learning transportable theoretical principles and concepts, they are always interested in the practical applications of those principles. They hesitate to commit themselves to 30 additional hours of coursework culminating in a major research project.

To meet the needs and interests of these potential students, we are developing a Certificate program at the graduate level. This program will require only half the course load of a complete master's program but will still engage students in substantial projects. These projects will involve the students in learning new technology as well as in applying basic principles of technical communication theory. The core courses will include Advanced Technical Writing and Research, an option of Advanced Public Relations Writing or Microcomputer Applications in Administration and Research, and one senior level course, such as Technical Editing or Writing Computer Documentation. The curriculum will be completed with a choice of Special Topics courses in Technical or Professional Communications. These courses are ones that are already offered in our Master's Program and consequently require no additional development or staff.

The Graduate Certificate program represents one way of meeting the demands on today's technical communication programs. It will run along side our master's program, complementing our current offerings. Judging from the success others have had with similar programs, we expect this approach to offer benefits to our program and our students without incurring extended costs.

Rumors of Change: Managing Change in Established Technical and Scientific Communication Programs

Jennie Dautermann Miami University
Jean Lutz Miami University
Michele Simmons Miami University

Effective programs in technical and scientific communication are never static. They change, sometimes reactively, in response to factors such as faculty turnover, fluctuations in student enrollment, altered demands from employers and other constituencies, and administrative pressures. But to actively manage change, to evaluate the effects of altering the goals and outcomes of programs, program participants need to seek ways to systematically examine and reflect on what it is they do, do well, and can do better in order to stay competitive and current.

To suggest how programs might take a more proactive approach to change, we will outline two strategies that we are using in Miami University's Master of Technical and Scientific Communication (MTSC) program. The strategies examine and challenge the basic assumptions that underlie our program and incorporate an understanding of how changes would relate to and affect what the program is already doing.

One strategy provides information from outside our program. By examining master's programs with admirable features, we have been able to develop a list of outcomes and strategies for achieving these outcomes at home. Knowing that we will eventually make concrete changes in our program, we have begun by identifying outcomes we wish to achieve and then have linked these to successful practices used by other programs. Thus, we have developed a concrete way to stimulate our thinking about managing change. Our strategy is based on university-wide benchmarking activities designed by Miami's provost, Ronald A. Crutcher, and derived from qualitative research in industry. This strategy calls for choosing outcomes that will allow us to use the resources we already have, to implement the outcomes within a specified time period, and to monitor their progress and evaluate their success.

The other technique, which we think of as an internal one, allows us to re-examine the strengths we already have. By conducting weekly faculty strategy sessions, we have once again provided ourselves with a forum for critical reflection on the work that we already do.

After systematically evaluating current program goals, we deconstructed our eight core course syllabi. By examining the intertextuality of the courses, we were able to better identify recurrent themes and orchestrate a well–planned progression of theoretical principles and practice throughout the program. For example, a two-semester theory and writing course in the program, taught by different faculty, now introduces a topic for a white paper in the first semester and requires students to use that information for a documentation project in the second. Thus, we have used this collective knowledge to revise, update, and coordinate our efforts. This strategy may be particularly useful for sharing and learning about best practices with new colleagues and in responding to program reviews.

The slides that form the remainder of this presentation outline the basic steps in benchmarking and conducting faculty strategy sessions. Ultimately, we argue that effectively managing programmatic change requires that the mission, goals, and curricula be revisited often in light of systematic examination of practices both outside and inside the program.

A Framework for Developing Research-Based Curricula in Professional Writing Programs

Graham Smart Purdue University
Nicole Brown Purdue University

For our field, these are times of significant change. Undergraduate and graduate professional writing programs are proliferating across the country. At the same time, our students are moving into an increasingly broad range of workplace settings. To respond to this reality, we need to establish reliable frameworks for developing curricula that are aligned with the discursive, technical, social, and ethical demands our students will face in these settings. We are proposing such a framework—i.e., a set of guiding principles—for designing research-based curricula for professional writing programs. More specifically, we will describe how this framework can be used to orient the empirical research that will allow us to 1) identify the knowledge, abilities, critical awareness, and aspects of identity that our graduates will need as practicing professionals and 2) develop curricula that respond to these needs.

The framework comprises three guiding principles: *significance, learning*, and *transfer*. To illustrate these principles, we will apply them to the practice of usability testing as an example.

When we apply the principle of *significance*, we ask 1) is usability testing something our students will need to do in the workplaces they will be moving into after graduation? 2) what does usability testing look like in these workplaces, as practiced by professionals? and 3) in the case of existing programs, is the particular model of usability testing we are teaching in our classes similar to the types of usability testing performed in such work environments?

When we apply the principle of *learnablity*, we ask 1) is usability testing, as preformed in the workplace, a practice that can be taught in school (as opposed to a practice that can only be learned through workplace experience)? 2) if so, are our students learning this ability effectively in our classes? 3) and if, on the other hand, usability testing is a practice that can only be learned through experience on the job, can we provide our students with heuristics to help them with this learning once they are working in professional settings?

Finally, when we apply the principle of *transfer*, we ask if usability testing as it is performed in professional settings can be taught in school, and if our students are indeed learning it in our classes, will the students be able to transfer this ability from our classes into the workplaces they enter?

In answering the questions associated with this framework, we need to be rigorous in our standards of evidence. All too often, those of us involved in curriculum design have found ourselves relying exclusively on program lore, textbook models, anecdotal impressions, or "common sense."

While these forms of evidence certainly have value, we cannot rely on them alone; rather, as a discipline, we need to conduct empirical studies that examine writing practices in a range of work environments typical of those in which our students will

eventually find employment. The findings of such research can then be used to develop curricula for professional writing programs that are grounded in the principles of *significance*, *learnability*, and *transfer*. Ideally, these curricula will help us prepare our students for a successful entry into their professional careers—with "career-preparedness" broadly conceived to encompass the knowledge, abilities, critical awareness, and aspects of identity that our graduates will need in order to navigate the currents of workplace practice.

Planning, Delivering, and Assessing Communication Modules in an Engineering Enterprise Program

Dale L. Sullivan Michigan Technological University

The engineering college at Michigan Technological University has begun an "Engineering Enterprise" program consisting of several enterprise groups that work on various research and design projects continuing from year to year. Corporate clients fund many of these enterprises. The idea is to give students an experience as close as possible to real design situations in industry during their sophomore, junior, and senior years.

The humanities department was asked to develop three, one-hour communication modules to support the enterprise program. Marilyn Cooper gave an early report of the conceptual stage of development two years ago at CPTSC. The first two of the three modules were delivered in the spring semester, 2001. Now we can describe the relationship of the three modules to each other, present the syllabus developed for the first module, describe the delivery of the module by GTAs, and give a brief account of how we assessed the course.

Our original vision of the modules and their relationship is summarized in the wording that appeared on our development Website:

> The communication modules (ENG2962 Communication Contexts, ENG3962 Communication Strategies, ENG4952 Complex Communication Practices) cover communication processes, skills, and products appropriate to the tasks and responsibilities of sophomore, junior, and senior members of an enterprise. ENG2962, Communication Contexts, provides strategies for "finding one's way in" to the communication practices and contexts of local situations. ENG3962, Communication Strategies, focuses on audience analysis, purpose analysis, situation analysis, and technical genres. ENG4952, Complex Communication Practices, teaches advanced students how to mentor less advanced students, how to interface with a client, how to manage documentation processes, and how to create their own professional image.

My primary responsibility was to develop ENG2962, Communication Contexts, to prepare GTAs to deliver the module, and to develop an assessment plan for the module. GTAs were invited to participate in developing the syllabus and assessment materials and were given permission to adapt the syllabus to their own teaching style. After the GTAs delivered the course, the assessment materials came to my office.

What are the advantages and disadvantages of offering one-hour communication module like ENG2962 in a design environment like Engineering Enterprises? Among the advantages is the opportunity to craft a course completely devoted to studying a discourse community in which the students participate, as we had hoped to be able to do in ENG2962. Normally, there would not be time in a three-hour technical communication class for such extended observation and reporting, nor would students normally be involved in a design or research team suitable for such ethnographic studies. On the down side, a one-hour course suffers from a lack of cohesion when spread out over a whole

semester, meeting only once a week. It suffers from students' perception of its relative unimportance in the scheme of the larger enterprise.

Plans for the future of the communication modules are uncertain. Patricia Sotirin has developed the final module and is delivering it now, but teachers of other enterprise modules share our unhappiness with the one-hour format. Many are suggesting a return to three-hour courses, while others want to explore the possibility of shifting from teaching classes to acting as specialized consultants in support of an enterprise's needs. Although the future is unclear, this experiment of working with the College of Engineering's Enterprise project has taught us a great deal about the opportunities and unexpected pitfalls of such an undertaking.

It Was the Best of Times, It Was the Worst of Times

Carole Yee New Mexico Institute of Mining and Technology

Undergraduate technical communication programs face a number of challenges in the field during this growth period. Two broadly related problems frequently discussed, though not necessarily linked, are the difficulties of recruiting undergraduate students, despite rich career opportunities, and the difficulties of hiring faculty, despite increasingly competitive salaries in tenure track positions. In a survey I propose to conduct of undergraduate programs, I plan to couple these two challenges.

I will report on the results of a survey to be conducted over the ATTW listserve asking undergraduate programs to comment on the following set of questions:

1. Faculty
   - In what fields do your faculty members have advanced degrees?
   - What sorts of technical communication backgrounds do your faculty members have? Do they have industry experience? Training experience? Other kinds of technical communication background?
   - What sorts of faculty development does your program support?

2. Students
   - How many undergraduate students are in your program?
   - What undergraduate degrees and certificates do you offer?
   - How many of your students entered your program as freshmen?
   - What other programs or other schools did your undergraduate technical communication students transfer from? How many came from other degree programs? How many from two-year schools? How many from industry?

First Generation Ph.D.s in Professional, Technical, and Scientific Communication: Questions of Hiring, Retention, and Training

Kelli Cargile Cook Utah State University
Charlotte Thralls Utah State University

Each year in October and November when the MLA Job List appears, questions and concerns surface about hiring soon-to-be minted Ph.D.s in professional, technical, and scientific communication and about retaining newly minted ones. In November 2001, the listserve of the Association of Teachers of Technical Writing was flooded with such questions and concerns. Program directors of colleges and universities of all sizes described their often futile searches for qualified applicants. One university administrator characterized the hiring situation for programs as "dire" and called for research to alleviate market pressures created by too many job openings and too few qualified candidates.

In many of these posts, list writers stated assumptions about first-generation Ph.D.s in professional, technical, and scientific communication. Yet in fact, we know very little about these young professionals as a group. More will be learned about this group in a research project conducted collaboratively by Charlotte Thralls, Mark Zachry, and me. In an ongoing research project, we plan to investigate who these young professionals are and what their experiences are from graduation through the first years of their academic careers.

In this presentation, I will report preliminary findings for our research project's initial questions:

- How many Ph.D.s with a concentration in professional, technical, or scientific communication graduated from U.S. universities from 1995-2000?
- In what institutions (academic and otherwise) have these Ph.D. graduates been employed?
- How many programs in professional, technical, or scientific communication have searched for candidates to fill junior-faculty vacancies from 1995-2000 and failed to hire, and what were the reasons for these failures?

Given these findings, we will continue our research efforts by further investigating the career trajectories of first generation Ph.D.s. Specifically, we are interested in questions about their job search and hiring experiences as well as their experiences as junior faculty in programs across the country. We expect this research will assist program directors in the field as they seek to hire and retain such individuals.

During the discussion portion of our presentation at CPTSC 2001, we will ask for input from conference attendees to help us determine what additional questions, assumptions, and concerns the field has.

Scaling the Walls of the Tower: Professional Development for Techies in a Traditional English Department

Robin Breault Georgia State University
Michelle F. Eble Georgia State University

With over 45 tenure-track faculty in the Department of English at our institution, we are fortunate enough to claim four as techies. However, we still don't have an approved degree program in technical/professional writing at the graduate level. For three years our department has unsuccessfully attempted to hire a tenure-track faculty member specializing in technical writing. As far as programmatically organized professional development for graduate students specializing in professional/technical writing goes, we have none.

In our presentation, we discussed opportunities we have taken advantage of that have enhanced our professional development. We both teach courses in professional/technical writing and generate research from these classes. Students in these classes work on projects for small businesses, non-profit organizations, and other community-service organizations. We play the role of facilitator in these services to the community, building strong community ties. We also participate in the development, design, and implementation of our own Web sites, as well as ones for various programs within the university and in our communities. We have developed, coordinated, and executed an annual graduate conference in English studies, which draws national participation. In addition to our research, teaching, and service, we have developed close relationships with professors in our fields and assisted them as research assistants as well as taken directed studies courses to enhance our knowledge in a field where courses have only recently been offered. Finally, we both hold Writing Program Administration apprenticeships that inform our teaching, research, and service to the department, university and community.

As Ph.D. candidates specializing in professional/technical writing within a growing program, we have had the opportunity to help shape professional/technical writing's professional development for ourselves and for those who come after us in our traditional English department. We have scaled the walls of the ivory tower and established stairs for those graduate students who study at our institution in the future.

Our goal for this presentation was to present a working model for future techies in traditional English departments and initiate discussion concerning graduate student professionalization. We have heard how other graduate students and professors approach the issue of graduate education and professional development.

Do We Know Who We Are and Where We Belong? Challenge in the Midst of Change?

Alexander Friedlander Drexel University

Over the past few years, we have been re-thinking the focus and direction of the graduate program in technical and science communication at Drexel University. At the same time, we are also dealing with a disciplinary change, as we have split from our long-time home in the Department of Humanities and Communication and formed a new Department of Culture and Communication with our colleagues from sociology and anthropology.

This year's CPTSC call for papers provided the most immediate question for the Technical and Science Communication Program: How will this new connection "complement, complicate [and] challenge programmatic perspectives"? In other words, what will this change mean for our students, for our faculty, for the recently implemented changes in the program, and for our growth? CPTSC's meeting served as a means for us to explore these questions, to receive feedback from professional colleagues, and to reflect on the meaning of these changes.

Let me overview the key components. Starting about four years ago, we re-visited the undergraduate and graduate offerings in communication and revised where we have been going. At the graduate level (MS in TSCOM), we recognized that our students have been looking for a more focused program than the one we had been offering. A majority of students work full-time and take the program part-time at night. They have very specific needs. In addition, we were starting to compete with two other newer graduate programs in the region, Biomedical Writing and Organizational Communication, each with its own niche; we had to consider why students would want to choose Drexel. In examining who was applying and why they were coming to us, we came to the conclusion that we needed to subdivide the program; we could identify three core strands of courses that attracted students with different career objectives. The result was that we created three specific concentrations; one in technical communication, one in science/medical communication, and one in public communication. Each is more narrowly focused, identifying a specific core of courses that provide the foundational perspectives and the professional direction for its students.

Now, to complicate the mix, we are dealing with a new department. Not only is this a change from what many at CPTSC would recognize as the traditional home for a TSCOM Program, but it also is a change into a new mode of thinking and disciplinary perspective. What will this change mean for faculty and for students? How will research programs be affected? What will this mean for programmatic offerings and directions? How will the departments integrate? While we have only started to consider answers to these questions and will continue to examine them during the months ahead, they offer new directions that are both exciting and challenging for faculty.

Let me briefly explore some of the issues and their ramifications we are dealing with, and place them in the record both as an overview of our challenges and as areas for consideration by other programs.

- We are now the communication program within the Department of Culture and Communication. We have thus "lost" Technical and Science from our

name. Even though we have specific concentrations in these areas, as indicated earlier, are our recruitment efforts, particularly at the graduate level, going to be harmed? A little example can elucidate this issue: if prospective students come to Drexel's web site and searches for "technical writing", they will uncover much about our tech writing course as part of the program requirements for different majors but not our program site. If we are now Culture and Communication, how will TSCOM applicants search for us? I note, in passing, that there are other administrative issues related to site searching at Drexel that account for some of the problems applicants have in searching for our program.

- Along the way, we have shed allied programs that gave our major part of its identity. For instance, the Film and Video Program, which used to be part of our department, is now in another college. Our students have to take a certain number of courses in this program, but it is now restricting most of these courses to its own majors. The result is that our students are in jeopardy of not graduating on time. We are going to have to revisit our curricula to see how they can be re-designed.
- As the Department of Culture and Communication, we have new synergies to explore. What can our colleagues in sociology and anthropology contribute, and what can we give to them? Already, the faculty is looking at overlapping research interests. On a personal note, I have been in discussions with an anthropology colleague who is also interested in issues of new texts in the workplace.
- Along with the new faculty comes the opportunity for new courses. Our new colleagues have already proposed such new offerings as "The Ethnography of Communication", "Futuristics and Communication", "Sociology of the Internet", and "Culture and Technology in the Public Sphere," to name a few. While these new proposals are exciting, will they dilute our core offerings? The university has become quite dogmatic in recent years about minimum enrollment in all levels of courses. Can we thus sustain an increased number of course offerings?
- This new "world" requires re-thinking who and what we are. We need to re-consider the whole curriculum in light of our new direction as well as what this direction should be. At a recent Curriculum Committee meeting, the agenda included such topics as how to integrate courses, which programs should be a BA or a BS degree, how we should review our checklists for majors, whether we should develop a new major in Anthropology, whether we should develop a Ph.D. program, and how could we involve socio-cultural faculty in graduate communication program. All of these have the potential to take up much time and energy. How can we prioritize (and remain sane)?

These are some of the challenges we face. It will take time and the effort of all involved to figure out how our new department can negotiate its way through these issues and to ensure that our programs do not lose their identities.

Independence from English? Pros and Cons of an Entrepreneurial Effort

Alice Philbin James Madison University

What does it mean to become an independent department of technical and scientific communication? How has independence been viewed in recent scholarly and professional discussions? In 1999, TSC faculty members alluded to our "roots" in the various English disciplines (Leonard,10). Some have called for separation (Saul Carliner in numerous publications and speeches), and others have attempted a more scholarly approach through a taxonomy of the discipline (Keene).

Within the idea of independence as the literature shows it, a brief case study of James Madison University (JMU) could prove useful. The Institute of Technical and Scientific Communication (ITSC) at James Madison University is in its fifth year; I joined it during its second. Independence has had an impact on how we at JMU define our curriculum, our teaching, and our administration. Independence has been a positive experience, but it raises some challenges too.

On the positive side, we've developed an interdisciplinary plan of study that has TSC, not simply literature or rhetorical theory, at its core. Another positive aspect of the curriculum is that with 27 courses listed in the catalog, we have the opportunity to teach new courses that we might not be able to offer in an English department. Along with the challenging curriculum, we face the entrepreneurial tasks of educating parents, advisors, and potential majors about the inherent value of our new "discipline." We have to meet the tests of the marketplace as well. The drawback is that as we prepare all the new courses, we increase our workloads, and we must stay current in our specialty areas as we remain generalists enough to staff our introductory courses.

A second positive feature has to do with our definitions of ourselves as faculty members. For example, we've implemented a unique plan of faculty evaluation for merit, tenure, and promotion. Our plan allows for great diversity in the area traditionally called "research." Our tenure and promotion policy is better suited to TSC faculty than the traditional statements of typical English departments are. However, our status as "new" also challenges us as members of the professorate, for we face the task of proving that our faculty evaluation model is a true professional model. As we develop other administrative and programmatic tools, we must position them for continued acceptance within the university's existing academic culture. The ITSC must also retain the endorsement of the profession at large.

Finally, there is the matter of service. In a large department, service responsibilities can be distributed and shifted among the members of the faculty. In a "start-up" department, we form a committee of the whole, one on which each person gets to participate frequently! So we face a challenge in addressing our service responsibilities without sinking under the weight of "administrivia."

We need to ask more questions about independence, specifically about why it is a good idea, and about how independence can foster the status of the profession. The body of knowledge that has developed in the technical communication profession offers the most convincing evidence that the time has come for independent TSC departments.

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Portrait of a Maturing Department

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The University of Arkansas at Little Rock's Department of Rhetoric and Writing has been an independent department since 1993. When we left the English Department, the writing programs—composition, the shared B.A. program in Professional and Technical Writing, and the M.A. program in Technical and Expository Writing—naturally came with us. What we didn't have was a developmental vision of a program.

By 1995, the department was recruiting faculty using discipline-specific criteria. Defining itself internally, on the campus, and within the Little Rock community has been an ongoing challenge, partially fueled by the hiring of seven new tenure-track faculty specializing in rhetoric/composition and technical/professional writing. This defining is part of a new identity struggle, one in which we define ourselves in terms of ourselves rather than in terms of our differences from the English Department.

Our program continues to develop its identity through the following areas:

Internally:

- curricular changes (e.g., B.A. in technical writing, certificate development, course renaming for both technical and expository writing classes)
- job placement
- alumni

On the campus:

- publicity (e.g., open house, flyers, internal promotion of courses)
- education of other departments/other academic units about us (e.g., having a supporter in the Graduate Dean, creating collaborative courses with appropriate departments)
- connection of professional writing classes with programs across the curriculum

In the community:

- university publicity (e.g., showing the new computer classroom to potential donors)

- connections to local school districts (Little Rock Writing Project, the CyberSpace Project)
- connections to city agencies and businesses through classes, internships, and consulting work

We hope that these ideas spur discussion about independent department identification and definition.

Undergraduate Technical Communication Programs: Setting the Boundaries

Nancy M. O'Rourke Utah State University

Should undergraduate technical communication programs be bound to a specific program of study in a specific institutional home, such as a department of English, communication, or engineering, if the boundaries of the field have no real or crystalline form? Several of last year's discussions at CPTSC identified this very problem. Carolyn Rude expressed concern about technology-driven programs. Steve Bernhardt advocated "rhetorical education, coupled with a skill set that all students share in writing and document design."

The nature of technical communication seems to expand and contract (on a continuous basis) with the job market (driven by the state of the economy), with employers' stated (or unstated) needs, and with our visions of what technical communication programs should be like. For example, when Novell lays off 20 percent of its workforce, technical communicators are among them. As evidenced in advertisements for technical writers, some employers simply do not know what they need because they have only a vague notion of what a technical communicator does.

Disciplinary boundaries, as we manage change and growth in this organic field of study, become crucial to consider as we define needs, identify the student population, formulate goals, design and identify courses, and assess program outcomes. The breadth of careers that technical communicators are highly qualified for often complicates our programmatic perspective and plan, thereby continually reshaping the boundaries we set. For example, students who graduate from our undergraduate programs go on to pursue careers from publishing or public relations to multimedia.

I believe it worthwhile to re-visit these problematic issues of setting boundaries in terms of rigidity (or not) in at least four areas:

- program design
- political positions in academia
- access to other programs of study
- internships

I have purposely indicated these areas in general terms in order to spark a lively discussion that could go in many different directions.

Visual Thinking in the Technical Communication Curriculum: Establishing Connections and Building Understanding

Eva R. Brumberger Virginia Polytechnic Institute and State University

The role of the technical writer is expanding, partly in response to technological and societal changes; it is encompassing a broader variety of communication tasks and media. One individual, the technical communicator, often plays the roles of designer, writer, editor, and producer. As these roles converge, visual thinking and visual communication are becoming critical skills for many technical writers.

However, technical communication courses and programs are still dominated by the written word, in part because, as Robert Horn points out, "For the English department, the visual is an add-on" (204). If our goal is to prepare versatile technical communicators who can successfully meet the demands of an increasingly complex field, we must re-think the ways we conceive of and teach "technical writing," as well as the ways we design technical communication programs.

We can begin by re-designing existing assignments and adding new assignments to include a greater emphasis on visual rhetoric. We can also re-vamp our syllabi so that they integrate design issues throughout technical communication courses rather than relegating them to a discrete unit. Perhaps even more importantly, though, we must work toward a better understanding of how students acquire visual fluency and visual literacy within their disciplines and beyond those disciplines, and a better understanding of how they may become visual thinkers.

Reaching such a goal will require us to stretch beyond disciplinary boundaries. It will require establishing stronger connections between technical communication and other fields such as cognitive psychology, human factors, and graphic design that complement it and have given substantial attention to visual rhetoric and visual perception. In order to strengthen such interdisciplinary connections, we must become conversant in the language of very different discourse communities, and, in some cases, alter those communities' perceptions of our field. If we can meet these challenges, we will take a significant step toward successfully managing one of the most critical changes in our profession, a step toward encouraging the visual thinking and visual awareness that Brasseur, Rainey, and others have argued is essential to our profession.

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Graphics, Design and Technical Communication: Exploring Disciplinary Boundaries.

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How much about graphics and visual design should the courses in our technical communication programs cover? This has become a programmatic issue because technical writing has become more graphically dependent. This is true in many arenas: when designing electronic or print documents such as brochures, issues such as color theory, perspective, and proportionality come into play along with the rhetoric of the written word. The crossover between the visual and the linguistic is most evident in new media, especially in Web design.

The main source of contention concerning such issues as who should teach Web design is that fine arts departments and, in some cases, marketing and communications departments, may consider the conceptualization of new media as part of their territory—and they may be justified in doing so. After all, the design considerations of new media could be said to depend on the principles inherent in any one of these disciplines. Perhaps for this reason, all three of these departments at my institution have some kind of course in Web design that incorporates elements of design theory.

Some important questions arise for those engaged in technical writing curriculum design: How do we negotiate these intersections of content? How do we promote our students' understanding of graphical issues without infringing on the teaching territory of these other departments? Should boundaries be set to control which kinds of computer applications we teach in various classes? Or should they be set by the relative predominance of the written word in the documents produced by students?

One way to approach these questions is to consider how we define the visual elements in new media. These elements originate in the visual arts, so they might be defined under that aegis. One may also argue that we must consider graphical components of new media—even the overall design of new media itself—in terms of rhetoric. One of the reasons for this is that communicators—especially technical communicators—are, because of "a rapid rise in the international distribution of information," increasingly using pictures in place of text, or to reinforce written messages (Dragga and Voss, 265). This employment of graphics-as-text clearly places graphical images in the realm of rhetoric and textual communication—which is the realm of English and writing departments. In fact, the academic community of technical writers has recently been focusing, in this context, on a question that Aristotle pondered long ago concerning the use of words—how graphical representations can "lie" (see, for example, Tufte, Allen, Herrington, and Allen and Voss). This rhetorical issue is one that, it may be argued, has become more pronounced with the advent of new media and the Web, arenas in which the image is heavily relied upon as a textual replacement or addendum.

Such a reliance arises mainly because, unlike a photo or a painting hung on a wall, images in new media are often not inert and static, but are interactive and dynamic. The potential for interactivity means that a digital image can communicate in much the same way as speaker might: calling the viewer to take a particular action relative to the image. Just as a speaker might call on a listener to walk away with him to a government

building to make a protest, a digital image on a Web page might prompt you to click on it, to go somewhere else in the Website or to fill out an interactive form to send to your government representative. As with listening to a public speaker, deriving meaning on a Web page is often interdependent on linguistic and visual cues, or "texts," that change over time. In this way, the images in a Web page communicate in a way that a regular photograph cannot. Images on the Web are dynamic: they can change as a result of what the viewer does or does not do, and thus their relationship to any written text associated with them can change. The message they convey is mutable, highly inflected, not just as a result of an audience's perceptions of digital images, but also because their own appearance is mutable.

Viewing design in new media as inherently rhetorical is not a new idea. As far back as 1977, scholars were thinking of the need to reconfigure our notions of literacy with regard to electronic media. As Johnson noted then, literacy had already

> been stretched beyond the definition of reading and writing letters, not necessarily out of irreverence towards print but as a reaction to technological advancements in communication (rpt. in Stern, 188).

More recently, Jackson has argued:

> As a synthetic manifestation of all or most modern media, new media is often confused with multimedia, when in fact new media is *one* media: a contextual and content dependent form of communication (349).

To claim that new media is primarily a form of context and content dependent communication is to liken it more to the written word than to visual representation. It is also to position new media within the sphere of rhetoric.

Nevertheless, one cannot maintain that the visual rhetoric of the digital world is the exclusive domain of English or technical writing departments. As Stern notes,

> Because of digital communication, we have quickly moved from a society that recognizes literacy as alphabetic reading of text, or even a social act, to one that understands that people employ multiple literacies to communicate and understand communications (189).

These multiple literacies involve the ability to understand, among other things, the potential meanings inherent in words, page layout, hyperlink choices, colors and shapes, and the way that digital tools can cause any of these things to be changeable. Obviously, some of these aspects of digital communication are better suited to disciplines other than technical writing: understanding color, shape or layout, for instance, is typically taught in art classes. But it need not be confined to such classes. Some crossover is inevitable when dealing with a medium, such as the Web, where color or layout can intersect dynamically with textual communication. Thus, we come full circle to the main question of this essay: how can the various methods that might teach disciplines relating to new media design stay out of each other's way?

One solution is to encourage team teaching across the disciplines and interdisciplinary alliances. This solution has been tried at Carnegie-Mellon University, where the department of English and the School of Design have instituted a joint graduate degree program called Communication Planning and Information Design. The informational brochure for this program states that classes are meant to answer the problems of disciplinary crossover by teaching students how to "combine words and images, sound and motion for effective expression," so that they will be able to "take

increasing responsibility for both the verbal and the visual aspects of their work" in a communication environment where "new technologies are...blurring the traditional boundaries between creations and production" (1).

In the absence of such interdisciplinary programs, it may be possible to create workable, implicit compromises by making rhetorical distinctions in course descriptions that give room for other disciplines to teach similar concepts but in different ways. I have taken this route in trying to create a course description that involves Web design for my school's technical writing program. The tentative description for the course, which is called "Writing for the Web," reads as follows:

> This is a computer-intensive course. Focus is on learning and practicing advanced aspects of creating multimedia, hypertext, and online help documents. Topics include: linear and nonlinear planning structures ("information architecture"), writing stylistics, the rhetoric and use of graphics, linking, reading and editing online, and project management. Oral presentations of a final project, with computer-based presentation programs, are required.

The key thing that distinguish this course from one in design or fine arts is its focus on graphical elements in terms of their textuality and rhetoric, as opposed to methods of creating them. Also, this course's general focus is on the Web-as-document rather than as artifact or image. The hope is that such a focus on "documental" aspects will also keep it from infringing on the territory of the Communications Department.

Such course design as this, however, is inevitably a stopgap measure. Ultimately, a medium as dynamic and complex as the World Wide Web will demand a careful rethinking of discipline itself and, I hope, a strengthened spirit of cooperation between academic departments.

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Disciplinary Boundaries: Where (and How) Should Usability Testing Be Taught?

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With the rapid rise of interest in usability testing, especially with the demise of a daily increasing number of dotcom companies (and the headlines resulting from the "butterfly ballot"), the question arises as to where (and how) a course in usability testing should be taught. When I first started teaching a graduate course in technical and professional communication, I created it to focus on documentation issues and to educate future technical communicators about the role they could play in testing and in advocating usability testing for their products. The argument went something like this: who better than the technical communicators–the user advocates–to initiate usability testing within organizations. What better place to start than with the documentation?

That was 1993, the old millennium and old thinking. In the new millennium, technical communicators are more likely to be information architects; they have responsibility for the content and design of products in any medium. No longer do they think of themselves as documentation specialists alone, although there are still plenty of jobs where technical writers continue to focus on this work. With the increasing emphasis on tools for design in all media and teamwork to produce products that are usable, the question becomes where best to get the experience of usability testing. Should a course be housed in the computer science department, the psychology department, or the human factors or cognitive science arena? In each of these other departments, our students would be exposed to the mindset and learning strategies of the very people they would be most likely to work with on user-centered design teams. Yet, is this the best teaching and learning strategy for them? If we feel we can do a better job in teaching our own students, what should our focus be? What is the role of the technical communicator, or information architect, on a development team? What is the role of the technical communicator, or information architect, in spearheading usability testing within an organization? What are the issues they should be conversant in if they are to become usability advocates?

These are the issues I have contemplated in the years I have been teaching the course in usability testing. I have changed the approach I have taken and the projects I have assigned to my students. Where once I focused on documentation and tutorials, now I give students the projects they seem to want: web testing. In web testing, they are no longer relegated to issues of help and documentation, but can examine and evaluate the entire "product" or user experience. So, is it still a course in usability testing for technical communication students, or has it become something else? And, if it's something else, should I still be teaching it? And if I should still be teaching it, should other students in different disciplines be taking it to more closely approximate the real-world experience of a cross-functional team?

In search of models to guide me, I distributed a short electronic survey to CPTSC listserve members. Table 1 is a summary of the findings from the survey. Table 2 is a detailed breakdown of the findings by institutions, including the sender of the information, where permission was granted to use the sender's name. Based on the

information received from the survey and shared with the participants at the CPTSC annual conference, I can safely conclude that usability is commonly taught to technical communication students in a variety of formats and under a variety of circumstances. The subject seems to generate a lot of interest, not only in those programs where a course or component is currently taught, but also where no such course yet exists.

Figure 1: Summary of Survey Findings About Usability Courses/Components

23 respondents

Course or component?
20 programs DO teach usability testing course or component
3 programs DO NOT teach usability testing course or component

7 teach course(s) in usability (or usability testing)
- –6 in graduate programs
- –1 in professional weekend program

13 teach component(s)

Components in undergraduate courses:
Engineering design
Technical writing (3 responses)
Advanced technical writing
Writing in the professions
Document planning and evaluation
Business and technical report writing
Information design
Electronic writing
Writing technical manuals
Reading and usability
Electronic document design
Document management
Design of manuals
Writing for the computer industry

Components in graduate/professional courses:
Document design
Project management
Evaluation methods
Technical writing
Online genres and usability
Online communication

Departments or Programs where usability is taught:
Technical communication (4 responses)
English (13 responses)
Rhetoric and Composition/Professional Writing (1 response)
Engineering (1 response)
Humanities (1 response)

Projects:
Many for real clients
Many web projects
Also: manual, online documentation, tutorial, brochure

Team or individual?
Most programs use both

5 programs use team project only:
Mercer, Southern Polytechnic, Utah Valley State, Cedarville, Clemson

Lab or no lab?
8 responses indicate lab use (but not all are dedicated labs)
12 responses indicate no lab (but some work in computer classroom)

Table 1:	**Usability Survey Results**						
University	**Course or component**	**Name and level**	**Dept/ program**	**Required or elective**	**Topics/ Projects**	**Team or individual**	**Lab or no lab**
Colorado State (Don Zimmer-man)	Course and component	2 grad courses: Information Design JT661; Research & Evaluation Methods JT500 (component)	MS in Tech Comm	661 elective 500 required?	661: usability research project, summative eval for client; now focus on Web issues	Heuristic-Ind. Class project-team	Lab-fixed and portable. Fixed: 2 video cameras, mixing unit, mikes, time sync generator, vcrs, internet hookup. Field work with VCR, camera/tripod, mike, etc
Purdue U (Diane Atkinson, School of Mech. Eng.)	Component	Engineering design course (EPICS) students can take more than once; first year to senior year. Each time, students become part of ongoing design team.	Engineering school-10 degree programs; course originated in software development (School of Electrical and Computer Engineering)	Elective, but can satisfy design require-ments	Team uses decision matrices to evaluate software designs for client and agency needs; feedback used iteratively to develop software	Some of each; teams of 8-15 exist over several semesters; some leadership carries over for continuity with clients	Lab available
Perdue U (Comp/ Rhetoric)	Component in several courses	UG. tech writing, advanced tech writing (UG and Grad), writing for computer industry	Rhetoric and Composition (professional writing major)	Tech writing-create web pages, conduct utesting on competitor pages; adv. TW-docs for clients; Writing for Computer Industry-manuals	It varies	Both	Classes taught in computer classroom
U of Central FL (Karla Kitalong)	Course	Introduction to the Theory and Practice of Usability Testing (MA and PhD)	English Dept. MA in TC; Ph.D. in Texts & Technology	Elective	How to design and conduct tests; how to implement usability; how to manage process; research methods; assessment test, validation test, contextual inquiry, research	Both	Yes; 2 rooms w/smoked glass between, video recording and editing equipment, timestamp software
St. Cloud State U (Tim Fountaine)	Component	Writing in the Professions (junior/senior)	English Dept.	Varies; required of CS; for others, elective among set of required options	Usability testing one topic, among others Doc. Makeover, information brochure	Both	No

U. of Wisconsin-Milwaukee (Rachel Spilka)	Component	Document Planning and Evaluation (Juniors/Seniors. Grad students)	English Dept. 4 year, MA, Ph.D.	Varies	Project mgt., collaborative skills, doc design, doc evaluation, editing, usability testing, revision; class produces newsletter or magazine; individual students use planning, doc design, and utesting for document for a client	Both	No
U. of HoustonDT	Components	Intro to Business and Tech Report Writing ((Junior+), Advanced Business and Tech Report Writing (Junior+)	English Dept. Professional Writing undergrad and certificate	Intro required; Advanced varies	Rhet. Analysis, doc design, research, collaboration, utesting, style, genres (intro only) project mgt. (advanced only)	Both	No
Mercer U (Marjorie Davis)	Course and component	TCO 605 Usability Eval. Process (grad) TCO 361 Info. Design (Junior/Senior)	Technical Comm. UG, MS, Grad Certificate	Required	UG course-info design, intro to training, usability; projects and hands on with real clients; ex. usability study of redesigned library website; heuristic eval and utest	Team	Yes—not dedicated ulab, but 2 labs where students can observe and videotape users, interview them, etc.
Georgia State U (Jeff Grabill)	Components	Engl. 3110 Tech Writing, 3120 Electronic Writing and Publishing (UG); grad level Tech Writing	English Dept. 4yr., MA, Ph.D.	Required	Usability research approaches, project based usability research, minimalism; functional websites, paper doc, revisions of existing products	Both	No, use classroom for informal work and do site-based tests

U of Wisconsin-Stout (2 responses)	Components	Writing Tech Manuals (senior); Tech Writing (senior)	English Dept. 4-yr.	Elective (manuals) Required (TW)	Planning, page design, style, usability, visuals; two manuals: 2nd project requires meeting with client, plan/create manual, conduct usability, provide final manual to client; two course includes usability testing and reporting	Individual in Manuals; both in TW	No (a lab is available, but not for these courses; has PC and Mac with Ethernet and modem connections, video/ recording equipment)
N. Illinois U. (in conj. With Chicago STC) (Christine Abbott)	Course and component	Two programs: one component in 7-Saturday program (Fund. Of TC); separate 2-Sat. course; can be used for UG, Grad or Certificate	N. Illinois U. and Chicago STC Institute for Professional Development English and other depts. and corporations	Elective	Combination of theory and practice; project is test of online instructions for client or prototype test	Both	Yes; instructor owned consulting firm in Chicago
Oklahoma State U (Brenda Camp Orbell)	Component	English 5533 Online Genre and Usability	MA and Ph.D. in English	Elective; however, usability is major subcategor y of one of exam areas	Info design, defining utesting, goals, limitations, web heuristics, testing methods; design, build website; conduct series of utests in development	Individual or can choose to work in teams (most choose 2-person team)	
Michigan Tech (Dale Sullivan)	Component	Reading and Usability (senior)	Humanities 4 yr.	Elective	Reading theory, emergence of utesting emphasis in TC, how to conduct test, write report; students write several papers, conduct one test, write report	Both	No; use computer lab and user's workspace
Utah Valley State College (Joe Strange)	Components	Electronic Doc. Design (juniors and certificate); Doc. Management (seniors and certificate)	English, 2 yr, 4 yr., certificate	Required; must take one	Testing design and actual testing; major software doc. Project	Team	No (but CS has a lab)
Cedarville U (Sandi Harner)	Component	Design of Manuals (junior)	English 4 yr.	Required	Storyboarding, instructions, process of creating manual, usability; write manual, including a utest	Team	No

Auburn U (Margaret Hundleby)	Components	Doc Design (1), Project Mgt (2). 6000 level (grad, 4th yr. "piggyback" course	English Dept. MA, Tech & Prof. Comm	Required	(1) Doc design, usability included; (2) designing and managing projects with emphasis on usability	(1) group produced and (2) ind. Produced print manual; ind. electronic project	No
Eastern Michigan U (Nancy Allen)	Component	Writing Computer Doc (Senior, grad)	English Dept. 4 yr.	Required	Type of utests, preparing for testing, and reports; design website and write tutorial	Both	No
Clemson U. (Sean Williams)	Courses	Usability Testing (MAPC); Human Factors (Psych), HCI Design (Ind. Engineering) All 800 level (grad)	English, Psych, IE; can be used for MS, MA, PhD	Electives	In English MAPC: task analysis, UCD process, protocol analysis, data coding, focus groups, report writing; project based course with industry clients—task analysis and protocol analysis of corporate intranet; report to client	Team	Yes; funded by IBM for industry work; has SVHS video recording equipment, lapel mikes, analog editing equipment, 3 testing stations (no one way glass) but only one test conducted at a time
U of Washington (Geoffrey Sauer)	Course	Usability Testing (TC 517)	Technical Comm. MS	Elective	Usability issues in HCI design; design phase methods, evaluative methods of utesting; students collaborate on large projects with local corporations	Both	Yes
Southern Polytechnic State U (Carol Barnum)	Course in utesting; Component in Online comm.	Usability Testing (grad); online comm. (grad)	Technical Comm. MS	Elective	Usability and usability testing; planning, preparing, conducting, and reporting on test; software and web sites (generally for clients)	Team	Yes; IBM funded lab with 3 video cameras, one-way mirror, 3-room setup (including exec. Viewing room), scan converters, logging software, analog and digital editing capabilities

Rice U	No						
Washington State	No						
Michigan Tech (2 replies)	No						

Program/Professional Management/Identity

W. J. Williamson University of Northern Iowa

Technical communication faces the same identity crisis in 2001 that it did in 1991, 1981, 1971, and 1901. It seems that no matter how much energy technical communicators invest in the development and promotion of their expertise in their social and economic marketplaces, there are always more people who do not know what they do or why than there are people who understand what technical communication is. Certainly, this forces program administrators to recycle old arguments while reliving old battles and working to maintain their own institutional and professional integrity. Here, years after the emergence of technical communication as a viable academic pursuit and career choice, people still wonder if technical communication is a profession or not.

There are two sources of identity crisis here: 1) mismatched standards for judging technical communication as a profession, and 2) ill-suited language for framing the qualities of technical communication professionals.

Standards for Judging Professions as Professions

The technical communication professional community has looked primarily to traditional models in sociology to locate standards for judging the professional maturity of technical communication (Pinelli and Barclay, Skelton and Anderson, Savage). Our professional community insists on following a set of rules for defining "profession" that does not recognize the differences between technical communication and other professions. Such projects are valuable to the greater community of technical communicators but can only judge an incomplete sampling of our professional community favorably by the traditional standards for defining professions.

Language for Defining the Quality of Technical Communicators

Technical communication by any definition, focused or specific, is an ill-suited umbrella term for the amorphous reality that is communication work in contemporary markets. If we look to emerging market niches, we see nothing like the old standby nomenclature for any profession. Leading edge professionals are more likely to carry titles such as "change agent," "organizational catalyst," "Chief Linguistics Officer," or "E-cubator" than technical communicator, engineer, or computer scientist. Old names die hard. Old thinking confines all professions by defining people more by what they can do or what they are supposed to know than by their potential to act within an organizational framework. True, many professional settings are fairly rigid in their entry-level distribution of responsibility and salary. Beyond the entry level, there is often more opportunity for blurring those boundaries and bending the organizational structure to fit the needs of the organization.

And?

This presentation explores what technical communicators stand to gain (programmatically, pedagogically, professionally) by comparing themselves to

professions that do not now and perhaps never have fit the mold of the traditional professional order.

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Beyond the Glitz and Grandstanding: Management Theories and Technical Communication Programs

Brenton Faber Clarkson University

Curiosity has led me to explore the popular management theories. Over the past several years, I've noted how management theory has influenced workplace practices and how advocates of various theories are now attempting to apply management principles to higher education organizations. Slogans such as re-engineering, total quality management (TQM), value-add, downsizing, and just-in-time have nearly become household words. Management gurus such as Peter Drucker, Michael Hammer, and Peter Senge have achieved international notoriety as management experts. Yet, beyond the glitz and grandstanding of management fads, how seriously should academic administrators regard these ideas? What value might academic programs find in management theory?

This is not really a paper but rather my own coordination of various notes and opinions about management theories. I apologize in advance for those anticipating a full paper. Instead, for the CPSTC conference, I put together a series of eight one-page overviews on different management theories. These overviews are summaries taken from Birnbaum's *Management Fads in Higher Education,* which I highly recommend to anyone wondering about management fads. In addition, I also relied on Micklethwait and Wooldridge's *The Witch Doctors* and my own field notes taken from my on-going research into corporate training. My goal was to provide a quick reference to ideas like TQM, Re-engineering, Strategic Management – concepts I had heard about but never thoroughly investigated. I hope readers will understand that the above information is a summary. For a more detailed discussion they should read Birnbaum and Micklethwait and Wooldridge.

Works Cited

Birnbaum, R. *Management Fads in Higher Education: Where They Come From, What They Do, Why They Fail.* San Francisco: Jossey-Bass, 2000.

Micklethwait, J. and A. Wooldridge. *The Witch Doctors: Making Sense of the Management Gurus.* New York: Times Books, 1996.

Planning Programming Budgeting System (PPBS)
1960-1974 *(Birnbaum, 33-43)*

Genealogy	Military budgeting (which weapon provides best solution for economic cost).
Definition	Planning - identify long range objectives & cost/benefit alternative ways to achieve these objectives Programming - take the best cost/benefit alternative and decide implementation Budgeting - create financial plans for one-year implementation System -emphasize process occurs as a recurring system
Action	Compare all relevant alternatives according to what each can accomplish and select best alternative based on economic cost/benefit. Categorize all organizational activities into discrete units and provide detailed narratives and quantitative evaluation of these activities. Managers will compare costs of inputs versus benefits of outputs and will identify alternative ways to achieve similar outputs. Allocate resources according to those programs that will best fulfill organizational objectives.
Major Supporters	Robert McNamara, Lyndon B. Johnson, American Council on Education, Ford Foundation, U.S. Office of Education, National Center for Higher Education Management Systems.
Academic Application	Indeterminate. Universities, departments, and programs, detail specific objectives, measure inputs and outputs, and creates prospective budgets. Central authorities analyze data and allocate resources.
Major Problems	Could lead to economically advantageous but educationally unsound practices. Eliminated faculty and upper administrative governance (esp. in State-wide implementation) Increased administrative oversight, workload, and costs (esp. in data analysis) Increased politicization of educational issues and programs Ignorant of context, politics, and non-quantitative realities of program management Inability to quantitatively measure academic inputs, outputs, and objectives. Administrative structure was more cost-intensive than anticipated savings.
Final Blow:	Charles Hitch, original developer of PPBS, killed PPBS as President of University of California System.

Management by Objectives (MBO)
1965–1980 *(Birnbaum, 43-52)*

Genealogy	Peter Drucker and "rational school" of management. See, Drucker, *The practice of management* (1954). Post-war boom in industrial America.
Definition	Management by achieving stated, highly publicized short-term objectives en route to fulfilling long-term goals.
Action	An attempt to integrate best of humanist and rationalist approaches, MBO emphasizes establishing clear objectives at organization and individual worker levels. An elite group of managers determine strategy and set objectives for lower managers. Employees then create their own objectives to meet those pre-established at higher levels. Each short-term objective has a deadline for implementation. If deadline is not met, organization must re-assess long-term progress and implementation. Ideally, subordinates should have wide range to develop objectives in concert with management.
Major Supporters	Peter Drucker, General Motors, RCA, General Foods.

Academic Implementation	Creation of job descriptions, subordinates create performance objectives, negotiation and agreement with superiors, continual progress reports, and the creation of new objectives. Each year, administration announces new objectives and how these objectives will be measured. For example, "This year we will recruit 15% more technical communication students." If an outcome cannot be measured, it cannot be part of MBO. Seemed useful in academic settings because it included participative management.
Major Problems	Objectives were too weak/uncontroversial to be effective Created large amounts of administrative work and paperwork Quantitative goals often did not address qualitative problems Implementation of goals was problematic Top-down directives contrasted with university academic cultures No empirical, research data on effectiveness of MBO Little reporting on MBO in general Few institutions actually implemented process
Final Blow	MBO assumed an unproblematic relationship between academic levels, departments, and administrative and academic interests. Advocates of MBO did not understand political issues involved in academic contexts (tenure, academic freedom). MBO was reported dead by 1985.

Zero Based Budgeting (ZBB)
1970-1985 (Birnbaum, 52-60)

Genealogy:	Peter Pyhrr described new process at Texas Instruments that was incorporated into Jimmy Carter's Administration in Georgia. ZBB followed Carter's administration to the White House.
Definition:	Base budgets are wiped clean every year as programs vie for year-to-year support.
Action:	Organization is divided into specific units and each unit ranked activities according to cost/benefit analysis. Resources were distributed according to rankings. However, ZBB wiped each unit's starting budget each year to zero. Each program needed to validate its existence every year.
Major Supporters	Texas Instruments, Jimmy Carter (Governor, then as President).
Academic Implementation	Institutions determine yearly goals and objectives. Budgets are divided into units; each unit prepares alternative ways to provide activity. Activities could include program objectives, specific courses, administrative objectives, or even athletic goals. Program directors select the best way to deliver each activity. Then, costs and benefits are analyzed at three levels: minimal, maintenance, and desired and accompanied by a written report. Unit managers then rank and forward each proposal to supervisors. Supervisors consolidate rankings, provide their own rankings, and then forward to higher levels. Each program theoretically must be re-justified anew every year.
Major Problems	No empirical evidence ZBB worked Studies of ZBB implementation in Georgia but no change in resources could be identified Use of ZBB was unsubstantiated In Georgia 80 percent of budget was carried over each year In organizations where it was used, it did not work No data of college or universities that actually used ZBB Administration spends huge amounts of time, energy, and money ZBB does not work in a political context – ZBB is unaware of organizational contexts
Final Blow	Unless there is a real possibility that organization-wide budgets can actually be reduced to zero, ZBB cannot work.

Strategic Planning
1972-1994 (Birnbaum, 63-75)

Genealogy	Emerged from failure of rationalist approaches to management and lack of political awareness of previous systems. Strategic planning was an attempt to merge rationalist and political inputs.
Definition	Assessment of Strengths, Weaknesses, Opportunities, and Threats in present and future business environments. Purpose is to create a competitive niche for organization.
Action	Strategic planning was to enable an organization to compete in a dynamic and changing external environment. Survey external environment for trends, market forces, threats, and opportunities. Organizations created objectives to correspond with external trends.
Major Supporters	Kotler and Murphy, 1981. "Strategic planning for higher education" *Journal of higher education 52(5)*, 470-489. Society for College and University Planning George Keller, VP of strategic consulting firm
Academic Implementation	Assess external environment for organization's strengths, weaknesses, opportunities, threats. Analysis data generated from assessment. Determine future directions for programs and organization as a whole. Create action steps to determine organization's mission.
Major Problems	Too much information – often required predicting the future Information became too general and unhelpful Economic forecasts were often misleading or wrong No consistent use of methodology and poor methodology for developing research Research became "wishful thinking" Few strategic plans actually worked Research showed no difference between institutions that did/did not use it. Little empirical support beyond case studies
Final Blow	George Keller: "The literature on academic strategy making is skimpy, and empirical findings about successful strategies are nearly nonexistent" (Birnbaum, 72). Strategic planning assumed a connection could be made between external assessment and planned activities; however no organization was capable, over a sustainable period of time, to make this connection.

Benchmarking
1979– (Birnbaum, 75-89)

Genealogy	Developed as one component of TQM along with 360-degree evaluation, learning organizations, and other practices. Developed initially at Xerox.
Definition	Finding, examining, and implementing the "best practices" of competing and complementing organizations according to a specific and highly structured process.
Action	External examinations focus on practices rather than metrics (numbers). While there are several different models, Birnbaum details a 10-step process divided into 4 stages: 1. Identify what needs to be benchmarked and determine comparison organizations. When identifying processes, rank by importance to organization. 2. Analysis – determine performance gap and project future performance desires 3. Integration – benchmark findings are communicated and goals are established 4. Action – plans developed and progress measured. Benchmarking can include internal benchmarking, when an existing processes are intentionally duplicated, competitive benchmarking (reviewing competitors), functional (different sector), and generic (any model).

Major Supporters	Xerox corporation, wide use among Fortune 500 companies, integrated as part of the Malcolm Baldrige National Quality Award.
Academic Implementation	*Benchmarking:* Staff from one office visit another office considered to be more effective, study their processes, revise current processes, set goals. However, Academic contexts integrated "performance indicators" and "performance funding" *Performance Indicators*: Specific goal is established for a unit based on experience of an external competitor –increase enrollment by 10 percent because XYZ did it last year –without examining XYZ's practices. *Performance Funding*: A portion of a unit's budget depends on meeting stated goals (potentially versus competing units). Provision of benchmarking data became an industry and professional service sold by consultants and associations.
Major Problems	Not responsive to organizational context. Assumes a process exists apart from context. Benchmarked data has no empirical support – based on folklore Became synonymous with finding the one best solution Resulting aggregated quantitative data could not represent actual practice Performance indicators deal with outcomes in isolation from processes or contexts Confused statistics with actual measurements Meets political demands for accountability without concern for actual practices Based on copying – stifles innovation
Final Blow	"Triumph of hope over experience" (Birnbaum, 80).

Total Quality Management (TQM)
1985-1996 (aka Continuous Quality Improvement CQI)
(Birnbaum, 92-108)

Genealogy	American loss of industrial market share to Japanese companies in the late 1970s to mid 1980's, especially in the automotive sector. W. Edward Deming, referred to as "father of TQM," developed statistical control and sampling processes, which were widely implemented by Japanese manufacturers. Deming's ideas are cited as a primary factor in Japanese quality industrial emergence of the 1980s.
Definition	TQM stresses getting products right the first time with no defects and little waste. This is accomplished through sophisticated control mechanisms, reduction in variation, and conformance with requirements. Often, "quality" is defined as "what the customer wants."
Action	Rather than testing a product after manufacturing to assess quality, TQM dictated that products be assessed at every step along the manufacturing process. This way, quality is built into a product from idea stage to customer use. TQM emphasizes assessing systems rather than individuals; it includes process controls, management based on consistent, continuous measurements, and cross-functional employees versed in multiple specialties. TQM requires well-defined mission statements and complete congruity with organizational mission across the firm. TQM was enabled by the incorporation of technology throughout the manufacturing process and extending technological measurement through to areas such as supply chain, marketing, and financial analysis.
Major Supporters	W. Edward Deming, Newt Gingrich, Department of Defense, Motorola, Federal Government, American Association for Higher Education.

Academic Implementation	Emphasized slogans and principles but short on data and specifics. The rationale for implementing TQM was often a variant of "staying competitive in changing environment." Advocates of TQM in academe claimed that universities were just like any other business enterprise and that educating people was a process similar to any industrial process. Businesses argued universities should adopt TQM so that graduates would better fit into business positions, and advocated that studies of quality become part of the curriculum. Actual implementation was not wide spread but in these cases, advocates attempted to create a quality-based culture in every aspect of campus.
Major Problems	Difficult/impossible to define quality, In higher education, it's difficult to define customers or synthesize customer needs Easy to be in favor of quality – hard to implement Reforms could not deal with multiple actors in academic contexts By 1993, major supporters of TQM were jettisoning quality programs - at least one award winner filed for bankruptcy Industry surveys reported most TQM programs failed to make substantial quality improvements TQM failure rated reported to be approximately 80 percent Created mini-bureaucracies, exorbitant cost, immense paperwork
Final Blow	New consulting companies specialized in turning around failed quality programs.

Business Process Reengineering
1990-1996 (aka Reengineering) ***(Birnbaum, 108-121)***

Genealogy	Consulting world's answer to TQM – whereas TQM tried to improve the status quo, reengineering attempted to challenge and overthrow the status quo (Birnbaum, 108).
Definition	Use information technology to create new process-based advantages throughout the organization. Assumption became that information systems *are* organizations, and that implementing new information systems meant radically re-organizing the firm.
Action	Reengineering advocated "starting all over" in the organization of work. James Champy argues that reengineering "reverses the industrial revolution." Reengineering requires breaking an organization down into its component parts and then putting it back together in a way that emphasizes what the organization was meant to achieve in the first place. Rather than focus on traditional job descriptions, departments, or duties, reengineering creates processes in which (usually fewer) people integrate to deliver a streamlined product. For example, rather than have many separate departments review, accept, process, and file a credit application, one person with a database can complete all four tasks in about 45 minutes. Reengineering sought to replace organizational silos (functional department hierarchically organized) with cross-functional teams. This approach often removes the middle manager and through automation can remove significant number of employees.
Major Supporters	Hammer, Champy (1993) *Reengineering the corporation,* most major business consulting organizations, William Bratton (NYC police 1998-1996). For example, in 1994, American corporate profits rose 11 percent, 516,069 jobs were eliminated, and $10 billion spent on restructuring (Micklethwait & Wooldridge, 32); In 1994, GTE cut customer service centers from 171 to 11and revenue collection centers from 5 to 1, eliminating 17,000 jobs.
Academic Implementation	"Transform the culture, get faculty support for a unified vision, simplify the curriculum, and outsource (including instruction)" (Birnbaum, 114). Estimates that re-engineering could eliminate 25 percent of university's staff. Reengineering would include moving most administrative functions to IT platforms, eliminating programs that do not fulfill the university's mission, redistributing resources to those that do, redefining long-held institutional assumptions, changing the way leaders are selected, and redefining internal reward structures to focus on organizational mission and customer centeredness.

Major Problems	Became synonymous with downsizing and cost cutting, few implemented it for quality Created the 'anorexic corporation' with short term gains but long-term difficulties No empirical data reporting that reengineering made significant long-term difference Even consultants admitted few successes—claimed 50-70 percent failure rate. Costs in employee morale outweighed gains from staffing reductions Created increased workload for fewer people and constant upheaval Backlash against lay-offs among customers/staff/governments/public Downsizing left hollow companies less able to function Cost cutting did not lead to productivity gains Solution may have nothing to do with the problem No examples of academic organizations successfully implemented reengineering
Final Blow	Michael Hammer, re-engineering's greatest advocate: "I wasn't smart enough about that [human element]. I was reflecting my engineering background and was insufficiently appreciative of the human dimensions, I've learned that's critical" (Birnbaum, 112-113).

Corporate Universities
1985–
(Faber, 2001, from field notes)

Genealogy	Fortune 500 companies attempting to consolidate training programs under one roof. Corporate universities are outgrowths of human resources programs and human resource theory. They have been most effective at organizing new hires' training, giving corporate training more respect within an organization, and socializing and re-socializing employees within an organizational culture.
Definition	Loosely defined. Early reports defined "corporate colleges" as non-educational sites that provided courses that earned accredited academic credit. However, with the decline of corporate accredited programs, definition has broadened to include any centralized training program.
Action	Corporate universities employ a variety of distance education methods, just-in-time education, and market-based approaches to education. A new emphasis in the area situates education as a commodity that should be included in the firm's revenue generation strategy. Corporate centers stress measuring learning outcomes, protecting intellectual property, employee socialization, rapid course development and turnaround, and cost-effective curriculum. In addition to actual practices, corporate university proponents have advocated this form of education as an alternative to academic educational organizations. This alternative includes de-professionalized instruction, synergistic curriculum (teaching company material purchased from company-owned affiliates or branches), and revenue generating curriculum.
Major Supporters	Corporate university consulting firms: HR Events, Corporate University Exchange, for profit education companies.
Academic Implementation	Curricular shift to job-relevant topics and knowledge versus culturally relevant topics. Stresses occupational objectives and ability to fit within a large corporate workplace upon graduation. Desires greater connections between workplaces and educational sites including partnerships with companies in which academic universities teach courses (on/off site) for corporations.
Major Problems	Emphasizes education as reproduction rather than innovation No connection with research and development Avoidance of resource intensive courses (science, engineering) Lack of consistency or foundation in curriculum Emphasis on revenue displaces concern with pedagogy and student learning Customer-centeredness ignores "difficult" or "necessary" curriculum Little empirical study in area, no empirical study to determine teaching effectiveness No empirical study to demonstrate advantage to organizational productivity or profit Expensive to maintain, service, and send employees "away" for training Confuse culture of workplace with culture of university

Final Blow *The training department is forever on the lookout for ideas that will help inflate the training budget, while the "human resource specialists" are suckers for any theorist who argues for "putting people first"...* (Micklethwait & Wooldridge, 62).

Supporting Success: Project Management Preparation for Internships and Other Industry Contexts

Margaret Hundleby Auburn University
Helen Correll Metropolitan State University

Preparing students for internships and other industry-context work, including research, is ideally a process of supporting their success in applying the knowledge gained in a study/practice/mastery cycle of technical communication courses. The routine formulation of this cycle assumes that project management (PM) techniques are implicitly conveyed and equally implicitly internalized. To some extent, PM skills do develop effectively within the context of the apprentice relationships fostered by technical communication conventions. Instruction in courses, from undergraduate service teaching through advanced Ph.D. supervision, is conceived of and delivered as "projects." The role of the technical communication student inevitably invokes exercise of some kind of management procedures. Formal knowledge tends to be obscured, however, by the assumptions made about the efficacy of experiential learning, and PM tenets often barely qualify even for the status of "lore".

Throughout our years of experience in practice and pedagogy of technical communication, we have seen that this situation creates a significant gap between the supervised and limited management skills practices in fulfilling a course objective. There are expectations placed on even novice professionals to understand that a project is a process, of greater or lesser size, within a process—also of great or lesser size but specifically established within a business cycle or other industry on text. "Out there", students will be expected to know not only what and how required work is produced but also why—in terms of business objectives, management goals and institutional cycles—it is produced at all. If this awareness is either fuzzy or non-existent, students attempting internships and work in the wide variety of industry contexts into which they may venture will have only partial knowledge of how to activate their knowledge and take part as professionals. This paper takes a simple position: to support the success of our students' internships and other industry contexts, PM techniques must be made explicit and receive due focus as part of a technical communication knowledge arsenal.

PM can still be found in undergraduate "advanced" technical communication, in "introduction-to" graduate level programs in professional communication, and has been suggested as an "add-on" for at least one major technical communication textbook. There are seldom any freestanding courses to it, however. Overall, we have seen the attention devoted to exploring PM techniques, as part of the central concern of technical communication education, eroded by the pressure to stay abreast of the "latest" in text/document production. An original symbiotic relationship with computer technology has, in the need for a demonstrable basis for certifying technical communication performance, morphed into an almost parasitic one. As a result, students enter individual contexts with clear knowledge of design and execution strategies but only a hazy awareness of what a relationship to organizational operations might be or of how it can ultimately influence both technical and social aspects of their work. Without PM knowledge, students have little opportunity to realize that their work will be judged in

industry as part of an overall context–or that this context is characterized by a search for satisfaction not from elegance but from robustness.

Most of us accrue robustness over time. This acquisition can even be said to be a way of defining the move from novice to expert status. Our programs could greatly enhance their ability to support student success in initial encounters with industry if we make PM knowledge both explicit and productive. The two of us are working separately in our home programs and together in a projected text to reinstate PM as personal and pedagogical support that will benefit three important recipients—students, programs, and finally, the field as a whole.

Integrating Technical Communication in an Arts and Humanities Setting

Catherine Latterell Pennsylvania State University, Altoona

A quick survey of recent years' *MLA Job Listings* indicates a growing recognition among schools of all sizes that technical and professional communication appointments bring a better balance to their programs. Research institutions are not the only ones vying each year for graduates with professional and technical communication profiles. Schools ranging from mid-sized state institutions to smaller private colleges with no previous connection to the field are seeking people to promote renewal of their English programs. As more of us operate within a small college or university setting, Technical Communication academics may be stretching the nature of the field by collaborating with disciplines other than science and engineering. The following overviews a shift taking place in my work since I joined the faculty of a four-year college with a strong humanities focus.

As a branch campus of the Pennsylvania State University, Altoona's campus is a four-year college with approximately 4,000 students. Although a majority of our students use Altoona as a feeder campus (spending 2 years here) before moving to the full-service University Park campus, the Altoona campus is carving out its own niche, granting 10 BA and BS degrees including electro-mechanical engineering technology, criminal justice, business administration, integrative arts, and English. Instead of departments, the campus are divided into four divisions. Reflective of that structure, the campus cultivates a collaborative, interdisciplinary academic community.

The fluidity of both administrative structures and degree programs (many of which allow students to design their degree) creates unique potential for technical communication. Like most schools our size, the campus is not likely to be able to support a major in technical communication any time soon; technical communication specialists working in this kind of campus environment may instead develop productive cross-disciplinary collaborations. While many in technical communication (myself included) support interdisciplinary coursework and programs with science and/or engineering faculty, it is also important to recognize opportunities to integrate technical communication studies with the Arts and Humanities. To this end, Penn State Altoona faculty have been developing degree options that take advantage of the contributions of a broad spectrum of arts and communications disciplines working in an integrative arts program.

Across the country, there are many integrative studies degrees, but only a handful of schools offer an integrative arts bachelor's degree. Integrative studies programs are framed as cross-disciplinary completion degrees, usually designed for adult students. In contrast, an integrative arts program is structured to offer students a major concentration in the arts while allowing greater flexibility and breadth of interest in its specific organization than would normally be found in a traditional discipline-based arts degree. The program at Penn State-Altoona includes studies in art, art history, music, dance, theatre, film, visual arts, performance art, creative writing, and professional

communication. Thus, while most art programs channel students' interest into one distinct area–dance, painting, piano–an integrative arts program allows students to pursue interests across artistic boundaries, combing study in the arts with other disciplinary areas.

This kind of cross-disciplinary curriculum has increasingly allowed me to apply professional and technical communication concepts and course offerings toward the work of arts and humanities students and colleagues. For instance, in recent collaborations with the arts curriculum and professional communication courses we've begun to offer, students have

- combined the study of art with courses in finance and management to prepare for careers in arts administration,
- combined courses in art, graphic design, photography, nonfiction writing, and computer science to pursue careers in information design, medical arts illustration, website development, and publications management,
- combined advanced rhetoric and communication seminars with courses in dance, film, and/or theater to prepare for careers in cultural reporting or arts critic in journalism,
- explored the areas of visual arts, music, film, and creative writing to work in animation or filmmaking,
- combined coursework in the arts with courses in health and human development to prepare for graduate work in art, dance or music therapy.

This brief overview is meant to suggest that humanities-focused institutions can provide intriguing opportunities for professional and technical communication academics. Specifically, in my setting within a division of arts and humanities, the combination of English and integrative arts continues to provide a productive environment for the study and practice of technical communication, perhaps stretching the concept of what technical communication can be along the way.

A Networked Approach to Program Growth

Deborah C. Andrews University of Delaware
Rebecca B. Worley University of Delaware

The University of Delaware offers a concentration in business and technical writing within the English major. Initiated in 1980, the program enrolls about 75 students in any given year. They complete a core of five concentration courses, including an internship, in addition to other department and university subjects. Currently, we take a networking approach to expanding and enhancing the program. We are incorporating projects in fields such as information technology that require the teamwork of our faculty and students in many different disciplines. Our recent hiring of the Kirkpatrick Chair in Writing (Steve Bernhardt) is one big step in this direction.

In addition, we have two specific projects. One is a "new media initiative" Developed by Becky Worley. This discovery-based program focuses on information architecture and Web design. It also accompanies a course in visual media. Debby Andrews is developing the second project, a module for capstone courses that emphasizes audience. With colleagues from Mechanical Engineering, Accounting and Information Systems, and Chemistry and Biochemistry, she is designing and testing strategies to bring student and faculty teams together across these disciplines, including the discipline of technical communication.

The Place of Communication in Technical Writing Programs

Tracy Bridgeford University of Nebraska at Omaha
James M. Dubinsky Virginia Polytechnic Institute and State University

The Modern Language Association recently outlined numerous changes in English Studies, citing the significant growth of jobs in technical and professional communication. Since 1997, the number of academic positions advertised in our field has increased by 76 percent. The reasons are simple: the job market for capable communicators has expanded (primarily due to technology), and more and more students want a major or minor that provides the knowledge and skills necessary to meet the increased demand. Many English departments, including our own (Virginia Tech and University of Nebraska at Omaha [UNO], are responding to students' needs by hiring faculty to build programs in professional/technical communication.

An important first step in program development for recently hired faculty, such as ourselves, is curriculum design. This is particularly because, at least in our cases, the availability of technical communication courses was limited to the standard service courses, taught primarily by adjuncts and instructors. This development process is complicated by the interdisciplinary nature inherently a part of technical communication, which burdens us to garner support from related departments.

In our brief experiences, support has come from college administrators in the arts and sciences and in the technical disciplines (e.g., engineering, computer sciences, and information technology) who recognize the increased importance of communication skills. In both our cases, these administrators support the development of a technical communication program by offering economic advantages—budget lines for hiring faculty trained in technical communication and release time.

Surprisingly, support has been least forthcoming from communication departments. Our respective communication departments have resisted or stalled our program building because they question the disciplinary status of technical communication (at least at UNO). They fret about "turf violations" because they offer courses with some content overlap (e.g., editing, document design, history of rhetoric), and oppose the "vocational" ethos highlighted by our emphasis on technical skills. Equally at stake is the claim to who owns the term "communication." Each of these reasons illustrates issues familiar to technical communication professionals in academe and in industry.

If we accept Killingsworth and Gilbertson's explanation that we work in a space "opened up in the interstices among several academic disciplines and professional communities of knowledge," these interdisciplinary disputes make sense, but knowing why they exist doesn't solve them or make program development easier. There are several possible resolutions: 1) cross listing courses and sharing teaching responsibilities, 2) carefully adjusting the language in our proposals so that our courses appear different from related courses, and 3) eliciting intervention from the Dean—all of which have been

tried successfully. These solutions are appropriate and necessary to facilitate program building, but we're not sure that they will be permanent.

We seek, if not a permanent solution, a productive one that converges what is valuable from both departments. To achieve it, we argue that we must rely on *metis* in the short-term and on strategies for preparing faculty for these kinds of curriculum development issues *before* they become administrators in the long-term.

Our points are relatively straightforward: 1) claiming space is a difficult act, one fraught with problems of ownership and definition. The work that Sullivan and Porter began nearly a decade ago is not finished; in fact, with the increase of curricular overlap among departments due to the technological, hands-on focus of many of our courses, it may even be more difficult to map out a geography now; and 2) The kinds of thorny issues involved in this program building work need to be addressed in the Ph.D. programs, particularly because many of us have been and will continue to be hired to build, develop, and expand programs. Expansion, by its definition, deals with space.

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Professional and Technical Communication: The Humanities Degree for the 21st-Century

Pete Praetorius Montana Tech of the University of Montana

Although the professional and technical communication (PTC) degree is a "practical" degree, the hands-on nature of the degree does not preclude it from providing students with a sound liberal education. Frequently thought of as "merely" training in technical writing, those who graduate with a PTC degree often go on to fill a wide variety of positions. In fact, those who major in professional and technical communication are much better prepared to fill many of the jobs that are currently going to students majoring in traditional humanities programs. Unless these traditional humanities majors wish to pursue a career in academia, they would be better served by the more user-centered PTC degree.

As a way of educating students about the many possibilities open to those trained in professional and technical communication, those who market such programs could learn from those who market traditional English programs. English departments often recruit students by claiming that English majors can "do most anything." A typical recruitment line is as follows: "An employer can train you to do a specific job, but an employer cannot teach you to think critically, to respond intelligently, to analyze and synthesize, and to communicate your thoughts and ideas, especially in writing. Having these skills—which you develop as an English major–gives the opportunity to do almost anything" ["sic"] (Florida Southern College). PTC majors are similarly educated in how to address user-centered, practical, everyday concerns.

Like their counterparts in traditional humanities programs, PTC majors leave college with a sound education in writing and critical thinking–two attributes that employers value highly. Unlike traditional humanities majors, however, the education of PTC majors is use-rather than academic-centered. Sure, PTC majors take philosophy and history classes, but these courses focus on ethical and practical concerns. For example, when PTC majors take philosophy and history classes, they learn such things as how technologies such as computers have influenced our lives and how to write a proposal to raise money for environmental remediation.

Interestingly, the flexibility of the PTC degree can be compared to the liberal education provided to American college students during the 19th century. Probably the strongest similarity between the modern PTC degree and the 19th century liberal education is one of versatility. As Robert Connors points out, the curriculum of American colleges during the 1800's (particularly before the Civil War) "worked against specialization" (57). Just as the practical/liberal education of the 19th century prepared students of that era for life as civic leaders (primarily as lawyers and clergy), the PTC degree prepares students for 21st century civic concerns.

These concerns are becoming increasingly complicated on both the technological and rhetorical fronts. The PTC degree actively addresses the use and understanding of technology. Students learn not only *how* to use new-media software, but *how* to best apply the effects that such software has to offer, or even to use such software at all.

PTC students also learn what rhetorical strategies are best suited for advancing ideas in an increasingly technologically competitive world. Because an increasing number of civic concerns are centered on technological issues, the successful technical communicators of the 21st century will require the capacity to understand how technologies work.

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Datacloud: Toward a New Theory of Online Work

Johndan Johnson-Eilola Clarkson University

We talk in fevered voices about the computer revolution, but the shape and trajectory of that revolution are only now becoming clear, at the fringes. While computers now touch our lives in substantial and nearly ubiquitous ways, that impact has remained relatively benign. The ways in which we work and live now include digital components, but our processes and structures for working and living have not radically changed. Microsoft Word provides us with a faster, more flexible typewriter; AOL Instant Messenger gives us a digital, textualized version of a conference phone call; and Adobe Photoshop offers us a wonderful array of photographic darkroom tools (even if many of us don't recognize them as such). Until now, the computer revolution may only, as Shoshanna Zuboff put it nearly two decades ago, be a "revolution" in the sense of revolving around a point, faster and faster.

When we look at edges of the revolution, we begin to see profound changes in the ways people work and live. Surprisingly, these shifts are not occurring within cutting-edge research and development centers or think-tanks. Although such sites might provide the genesis of new forms and processes of working and living, it is in the real world, on the street, in the workplace, and in the home, that change begins to take hold. By definition, radical change is not simply a speeding up of existing processes or an increase in efficiency of existing structures but a major reworking of them. At first such shifts are not likely to be easily identifiable as important changes, although they will occur in a multitude of disparate locations. Frequently, they will look like only chaos to those comfortable with old ways of working.

There are several instances of such work and the potential impact on technical communication theory, teaching, and practice. Understanding and supporting these shifts represents a crucial task for technical communication in the coming years, because it is precisely in such areas that technical communicators have their greatest potential: communication technologies that transform rather than simply automate or make traditional processes more efficient.

Technical communication is trapped by existing forms of online work. In nearly every popular use of computers, the computer acts as a stand-in for an older device: the typewriter, the telephone, the television, or the book. In these models, technical communication remains tied to an industrial model of efficiency, one that insists communication must be clear, speedy, and painless. I think most of us would agree that the simple sender-message-receiver model of communication is outdated, but we would also have to agree that it's very much in practice for most people in our cultures.

I'm not proposing change simply for the sake of change or even change just to improve the status of technical communicators at the cost of efficiency for everyone else. There are emerging forms of working and living that forefront symbolic communication and the manipulation of symbols in primary rather than secondary ways. The focus shifts from the technology to the communication.

However, these forms of work seem rather alien to us. In fact, they seem to be the antithesis of technical communication.

A little over five years ago I watched my daughter, then seven, play a computer game called Per.Oxyd, which she had downloaded from a shareware site. I've reported on this research in a chapter of a collected edited by Illana Snyder. The brief instructions to the game my daughter had were written in German (which neither of us could read), so she merely started the game and began clicking on objects on the dense, multicolored screen. Within moments, she became absorbed in the game and eventually played for hours, moving from level to level in a bizarre pattern of changing actions and reactions that I was completely incapable of following. I was struck by her ability to cope with a game that appeared to have no pre-set rules or goals.

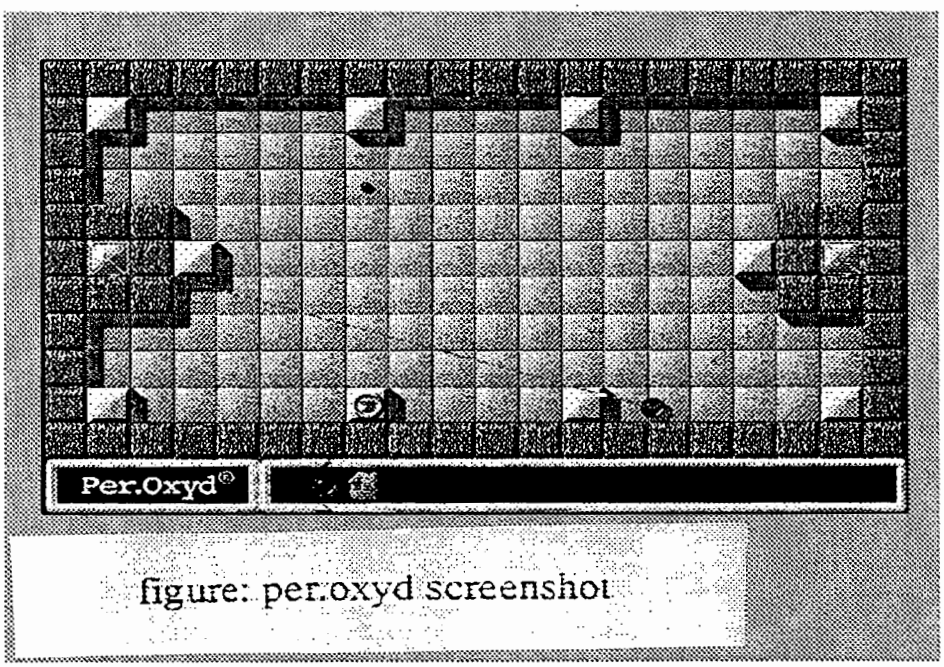


figure: per.oxyd screenshot

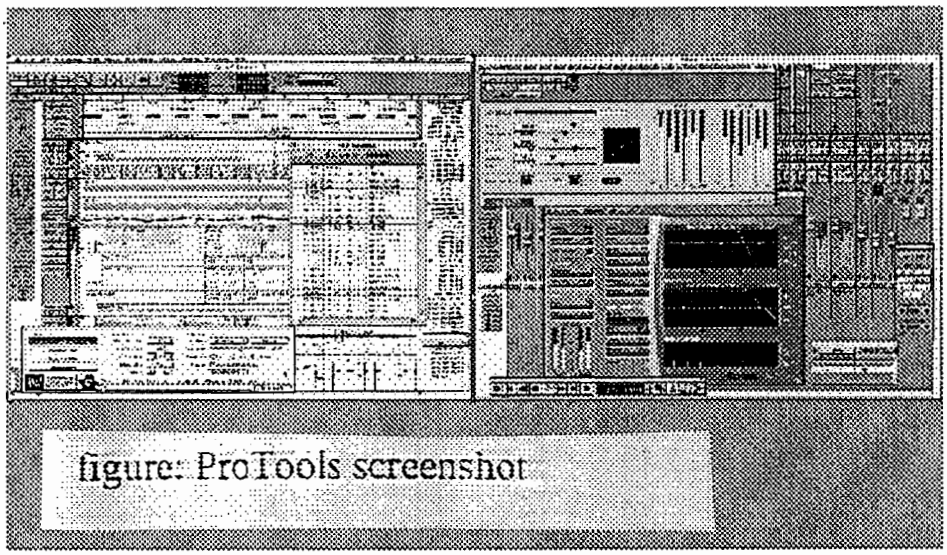
I recorded part of her conversation for a chapter I was writing for an Australian book on computers and literacy:

Johndan: How do you know which blocks to hit?
C: I just ... hit them.
[...]
J: So how do you figure out what the rules are?
C: Just play.
J: Just play? And then what happens?
C: You just ... play.

Over the next five years, I began to see this sort of activity, contingent, experimental, loosely goal-driven work, in an increasing number of situations.

I've recently begun working with a composer on a commission to develop a hybrid electronic and trumpet piece. Working in ProTools, a wildly popular computer

system in the music industry, David Dies creates music in a recursive, nonlinear process of cutting and pasting, experimentation, and transformation.



Here are some selections from the observation log I created during one session.

time	video/audio	comment
3:20	D explains he's created a new file in ProTools with 8 blank tracks It's "a canvas ... and palette in one"	Accumulating a mass of information on which to draw during composition
8:20	D gets paper, explains that he doesn't do a lot of sketch work, but is going to write down notes about interesting tambres that he can come back to later	Begins actively moving among three MIDI keyboards, Mac ProTools workstation, and pad of paper (multiple sources and spaces for information)
25:25	After long sequence of tones, "I have half a mind to capture this" "I'm not wild about the initial [...] I want to capture that second half to see if I still like it when it's isolated. [plays tone]. See? That's cool."	Actively fragmenting existing sounds
30:20	"Once this is captured, I tend to not come back to the keyboard" "It's so manipulable there" (in ProTools). Says in a previous composition he created melodies from a scale (by cutting up)	Explains why he's recording source tones that he's played. Typically likes to work from the virtual palette of sounds during composition rather than moving back to MIDI keyboard Composition for D emphasized rearrangement, selection rather than production

What struck me about the two events was that the patterns of working seemed very different from those with which I had experience. Rather than establishing frameworks and ground rules early on, users in these environments learned and often created rules on the fly. Rather than understanding creativity as the inspired production of solitary genius, these users manipulated pre-existing data, filtering, cutting, pasting, and moving. Rather than seeing information as something they needed to master and contain, they saw information as a rich field in which to work. I was struck by how the computer

has broken open and radically transformed traditional ways of working and living. This was the shape and trajectory of the coming revolution.

These examples suggest an enormous but relatively unexamined potential for technical communication as a field. They call on us to look at communication not in reductive or supportive ways, but central and complicating ones. In addition, they offer real, concretes sites for new work in our field–ways to expand our frameworks for teaching and thinking. They ask us to rethink in broad and fundamental ways what it means to communicate, to learn, and to work.

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Sustainable Practices in Distance Education

Stuart Selber Pennsylvania State University

We are engaged in distance education because our graduate program is committed to responsible instructional practices in the computer age. As humanists, our efforts in this relatively new area are primarily energized by opportunities to revisit basic educational assumptions, test the social claims made about distance education, and prepare future teachers who can operate both effectively and judiciously in online environments. From our perspective, departments that foreground the values of the profession will find distance education to be a productive site for literacy education, one that can even influence the shape of resident instruction in positive ways.

Technical communication programs everywhere have been invited to move their courses online, yet it is important to wait until the conditions are right for you and your students, an essential maneuver for the establishment of truly sustainable activities. In our context, this meant waiting until we could implement a development process that recognizes and rewards the enormous amount of time and energy required to create valuable online courses. What might such a process involve? For us, the decisive elements were significant released time for faculty and graduate students; organized tutorials in WebCT, the environment used at Penn State to deliver distance education; and assistance from the talented instructional and graphic designers who work for the World Campus, an outreach unit at Penn State that provides crucial pedagogical and technical support to academic departments.

Although the literature often characterizes online education as a radical enterprise, we have chosen to capitalize on–and reinforce–the strengths of our department. The result has been a progressive agenda for distance education that unites rather than fragments the department, clarifies instructional aims, and prepares graduate students for the twenty-first century in ways that are responsible and manageable. There are two focal points for our curricular integration efforts. The first is graduate seminars in rhetoric and technical communication that have been expanded to encompass the theoretical complications of literacy technologies. Students in these courses consider computers through the lenses of various social theories. The second is a robust teaching practicum that prepares new writing teachers for instruction at Penn State. This practicum not only covers traditional pedagogical concerns but also the thorny issues that arise when teaching with technology. Because our online classes mirror our on-site classes, all graduate students in technical communication have the opportunity to teach a distance education course before graduation.

Our distance education efforts have been effective because we keep our professional values in mind and exploit the strengths of our department. We feel that these two factors are pivotal to the business of distance education in technical communication.

Providing a Backbone for an Online Master's Program in Technical Communication

Nancy W. Coppola New Jersey Institute of Technology

Classrooms without walls. Textbooks without pages. Thinking outside the box. These are the hip phrases that describe contemporary e-learning. What is it, then, that provides structure, cohesion, and foundation for distance learning degree programs in technical and scientific communication?

Two years ago, our master's program, which was available completely on site, moved to also being available completely on line. The movement online was organic, led by faculty interests in online teaching and new technologies, rather than forced by an administrative pronouncement. Our faculty has found that a sense of community or, as one instructor calls it, our "disposition for intimacy," provides the best support system.

How do other programs provide structure in their distance-learning environments? This presentation asks that question and provides a description of one university's nascent experience with its online degree program. We provide structure for our program through the following:

- The same degree program on site and on line
- The same faculty teaching both onsite and online courses
- A common delivery experience provided by WebCT
- The expectation of required interactive online discussion
- Development of a community of learners and teachers

From Technical Writing to Content Development

Saul Carliner Bentley College

Abstract

Although our field officially calls itself technical communication, support for that name is tepid at best. Practicing professionals increasingly prefer the name information design and development. Even though industry is increasingly moving away from the term—it does not attract students to courses—the term technical communication still dominates in the academy. With this naming controversy playing out and as part of a larger, college wide effort to better integrate the web into our courses and curricula, Bentley College developed a new platform of courses for people who develop workplace communication. A master's and post-baccalaureate certificate program both use the term information design. The undergraduate major offers an information design track. Because the term information design also covers issues of visual communication, it did not seem an appropriate replacement name for technical communication for course titles. We eventually chose content development, which also reflects the reality that most working technical communicators do not create the content they publish. Rather, they develop it for use by a particular audience. The title change also corresponds with course changes. It emphasizes new genres such as reference entries, how-to articles, and guided tours, which emerged with the rise of communication online. The courses also include a service-learning component.

Service Learning Background

Although our field officially calls itself technical communication, support for that name is tepid at best. Concerned that the name technical writing did not adequately communicate the breadth of the work, practicing professionals began moving to the name *technical communication* about three decades ago.

That change did not do the job. Some practicing professionals complained that using technical implies a technician. Others felt the term communication confuses us with telecommunications.

So tinkering with the name continued, and some tried a completely different name. In 1981, IBM introduced the term *information developer*. The name was a strategic move, intended to create a single job classification that included technical writers, editors, and illustrators and would allow them to easily move among the roles without changing job title. The hope, at the time, was that the scope of the work would eventually include responsibility for all aspects of a computer user's experience: not just the documentation, but also the online content and user interface.

Although initial response to the name was negative, by 1997 the term had gained wide acceptance. In the interim, several companies adopted the term for the job titles of its technical communicators. Richard Saul Wurman, best-selling author of *Information Anxiety* and the Access series of guidebooks, popularized a related term, *information architecture*. The term *information design* was emerging from the European Union and from the community of graphic designers. Not surprisingly, in an informal study of its

members, the Society for Technical Communication (STC) found that 51 percent preferred use the term information design and development to describe the work of technical communicators. Only 38 percent preferred the term technical communicator or some variation of it.

While industry was moving towards the term information design and development for the work, those in the academy have remained more loyal to the more traditional terms, technical writing and technical communication. A glance through the *STC Directory of Academic Programs* shows that nearly all of the programs use the term technical communication, and the term technical writing appears in several course titles. In contrast, the term information development does not appear in any program, and the term information design is just beginning to appear in the titles of programs and courses. As the academy has remained loyal to the terms technical writing and technical communication, problems have arisen. Students connote the term technical writing with boring, and that does not help generate enrollments in the course when it is offered solely as an elective. Recruiting majors poses similar problems. Only a few undergraduates have heard of the profession of technical communication and, for many, it connotes working in jobs that are either technically beyond their reach or, like the course, boring. Given a choice, many prefer a more generic form of communication, public relations, or advertising.

These were the problems faced at Bentley College; we decided to change terminology, change student perceptions, and, ultimately, to transform our courses.

The Situation We Faced

Although the market for technical communicators is outstanding in Boston, recruiting undergraduates for our two-course sequence in technical communication, much less the concentration in our corporation communication major, was a challenge. Most preferred public relations and marketing.

Student interest significantly differs elsewhere in our curriculum. As Bentley College refocused its entire curriculum on business education for the information age (we are accredited as a business school), the administration found the technical communication program to be strategic in achieving this mission and has encouraged innovation in the curriculum. In response, the senior members of the information design and corporate communication faculty launched a platform of programs. The showpiece is our MS degree in human factors in information design, which prepares information architects, user interface designers, and usability engineers. The program is rooted in our belief that information design skills extend far beyond the traditional realm of technical communication. We emphasize the principles of computer-human interaction, user-centered design, and sound management practice. Although we believe that our students must have outstanding communication skills, we believe that those skills are prerequisites for master's study, so we do not offer more traditional technical writing and editing courses in this curriculum. Instead, we teach only advanced design courses. The M.S. program is supported by a self-funded usability lab, which, during the day, is made available to corporations for testing software interfaces and communication products. The lab also employs graduate assistants. The college recently built a smaller lab, which supplements the first one and provides additional resources for basic research. We also offer two post-baccalaureate certificate programs in

- information design, which prepares experienced technical communicators, information designers, and others interested in user-centered design, to take a more active role in interface design and information architecture efforts,
- technical communication, which prepares people who have bachelor's degrees in other disciplines for entry-level jobs as technical communicators.

The undergraduate major is our oldest program. It almost exclusively serves traditional undergraduate students and has had a broad focus on corporate communication, which complements faculty strengths in communication theory, information design, managerial communication, public relations, and technical communication. As our graduate and certificate programs increasingly focused on issues more commonly associated with technical communication, we wanted to share the enthusiasm with our undergraduates.

The Title Change We Made

Like most of us teaching technical communication, we find that few undergraduates are familiar with technical communication as a career option, and when they are, they often connote it with boring work. We wanted to make changes that would invite students to try out the courses and consider careers in the field.

This name change was part of a broader effort to update our undergraduate curriculum to better reflect the impact of the World Wide Web on corporate communication. These changes include

- requiring that all undergraduate majors take a course in Web development, because we believe that all of them will be required to use these skills on the job. This course presents the fundamentals of production on the Web, including use of a Web authoring tool, figures, linking, and cascading style sheets,
- re-formulating our two courses in visual communication. As originally conceived in the 1980s, the first course taught graphic design and the second publications and publicity production. But with the massive changes in technology, publications production has changed and so have the skills needed. As a result, the courses are now a two-course sequence named Visual Communication.

The fundamentals course introduces students to the principles of visual communication, including visual rhetoric, semiotics, and layout. Because many students have not visited an art museum, the course also includes a visit to the museum to show how the fine arts and graphic design have influenced one another.

The advanced course continues this education and shows how to adapt these skills to the design of information in print and online. In this course, students produce real design projects for a nonprofit or campus organization.

Because these courses serve all of our majors as well as business communication minors (most of whom major in marketing or management), the visual communication courses take a broader view than just technical communication. The benefit of this approach is that technical communication students become familiar with concepts such as branding and corporate identity, which are essential skills for information designers even

though they are not widely emphasized within the community of technical communicators.

We encourage students to focus on one of three distinct specialties: public relations (our curriculum conforms to recommendations of the Public Relations Society of America, which suggests at least one theory course and one writing course in public relations), web development (which we see as a growing area of opportunity for corporate communicators), and information design (the title is intended to match terminology used in our master's and certificate program).

One of the key components of the update to the undergraduate curriculum was a revision to the two-course sequence in technical communication. Using input we received from our corporate advisors for our certificate and master's programs about corporate needs, a review of other curricula in the field, and our own gut instincts, we struggled with both the content and name of the courses. For example, our corporate contacts told us that they emphasized the ability to produce Help and to use authoring tools. Help's moving to an HTML-based interface, coupled with the growing e-learning and performance support markets, suggested that tools skills are perishable and that a broader communication repertoire is needed (and also challenges the belief that technical writers only produce help, user's guides, and programming references). Similarly, we know that the name technical writing and technical communication, though informative, does not inspire students to enroll in the course. Thus, we wanted to broaden the focus of the course and change its name.

Broadening the focus was easier. The courses were then called Technical and Professional Communication, following a curriculum update in the early 1990s. We considered a variety of names, but none seemed to work well. If a name might appeal to students, we felt it did not adequately describe the course to others reading the transcript. Some names had duplicate meanings. For example, we considered the name Information Design, but many people associated that with issues of visual design rather than those of content design.

The term content development eventually emerged; the faculty enthusiastically endorsed it and the courses were named Fundamentals of Content Development and Advanced Content Development. The term works well with the profession as it stands today. The term content development is widely used in the high technology press to refer to the activities of creating material for the Web. The breadth of the term represents the breadth of opportunity in the field, not just writing help topics (though this is a large part of the work today) but also demonstrations and tutorials, technical articles, references, and other materials that Patricia Wright terms "functional documents."

As we went through the approval process for the new course titles and descriptions, some faculty lamented the absence of the term "writing" or communication in the course titles. Some wondered about what that implies about the original contribution of the "content developer." But the truth is, that's an issue that pervades the profession. Whether practitioners are called technical communicators, information designers, or content developers, the work involves transferring knowledge from those who know to those who need to know, and in an appropriate form. The challenge derives not from first-hand creation of the material (such as the scientific discovery or the hands-on writing of product plans) but rather in the appropriate transfer of that material.

The Course Content Changes We Made

Although the titles and descriptions of the courses are new, another compelling reason for the changes is to better represent changes to the course content that have been made by two faculty members over a period of years. These changes include

- strong integration of online content into the course. Even under its old title, the Advanced Content Development course primarily focused on developing online materials, especially online help. Our course also stresses the importance of following a well-defined design and development process and user-centered design. In addition to writing help topics, students use the most popular help authoring tool to create those topics.
- Presentation of new online genres for communicating technically. In addition to help, online demonstrations and how-to articles are increasingly becoming staples of online communication. These new forms are included in the content development courses. Specifically, courses teach students to prepare how-to articles and online reference entries in the fundamentals course, and help topics and demonstrations in the advanced course.
- Incorporation of a service learning component. One of the hallmarks of Bentley's educational philosophy is learning through service to the community. One of the projects in the Advanced Content Development course is recruited from the community: nonprofit and campus organizations that need to have procedures prepared for them. Working on "real" projects provides students with an incentive to properly perform their assignments (as well as the possibility of producing a portfolio piece). These experiences also more effectively teach students about the challenges of interviewing subject matter experts, the differences between what subject matter experts present and what users really need, following guidelines, and meeting deadlines.

Curriculum challenges remain, and marketing poses a challenge. Although the course no longer carries the title technical writing and all of the connotations of that term in their minds, some admittedly do not know what content development means. Admittedly, the first section of the fundamentals course filled easily (the first time we have offered the course using its new title), but we need to launch a promotional effort to better familiarize the campus community with this term. We also need to work with employers so that they are aware how content development prepares students for work in technical communication.

Because the content development curriculum has a wider scope than traditional technical writing and focuses on other types of functional documents, we must raise employers' awareness of the term and manage students' expectations for employment after college. Several or our students find work in web development, preparing e-commerce sites and educational sites. Of course, we are pleased that others find rewarding positions in more traditional positions for technical communicators. We are also working with our Center for Career Services to show students how to develop electronic portfolios that will highlight their content development skills.

Some Ideas about Producing Online Modules: Learning Dynamics Australia

David Morgan Australian Institute of Management

Online learning results from the interaction of a learner and a Web-based set of content and collaboration with other people. The selection and direction of the content are determined by the learning and business outcomes of any module. The client sets the outcomes and provides the content. The LDA team translates that content into a set of screen components that state the meaning of the content and builds in continuity through a navigation system. In addition, collaboration with a tutor and other learners helps to maintain the personal nature of learning.

Our strategy: Our focus is on providing a total learning experience

- by dividing the material into what we call streams and chunks.
- by contextualizing the material.
- by layering the material.
- by having the learners interact with the learning material.
- by getting them to collaborate with other learners and with a tutor.

Our aim is to engage our learners—to present material in such a way that they are keen to learn and to complete the learning. Our experience shows that we achieve this with a high rate of success.

Screen components: Learners learn from an online screen by generating meaning from what they see there. We provide them with five different components that they can interact with:

- *text: the usual familiar words and simple sentences, the use of bulleted points and so on,*
- *other screen components: photographs, graphics, icons, sound, moving pictures, interactive screen components, and so on that direct the learners' attention to the meaning of the page and reinforce and elaborate the meaning set in the text,*
- *design: the overall frame in which the components are located, the position of text and illustrations, the shape of the white space, and the position of the navigation tools,*
- *navigation: the means of achieving continuity between the pages; this affects the meaning because of the way we privilege certain material and provide hyperlinks to material at different levels,*
- *rhythm: patterns of material that we use to identify certain functions, such as a movement from information to assessment.*

All of this constitutes a new language arising from the concept of the page as a generator of meaning, just as writing became a new language, related to spoken English, but distinct from it.

Structure of the content: The learners see the module one page at a time and are guided from one page to another by the navigation built into the module. That movement is not always next to next. The learners need to be able to move (by means of the navigation tools) from, say, a narrative running through the whole module to a summary of principles relating to some topic to deep underpinning theory. The navigation system seamlessly takes the learners from one layer to another.

A further ingredient: We insist that an online module is and must be a human experience. We keep learners in the learning experience by engaging them in discussions with other learners, and we provide a tutor who can mentor them when they need help, give encouragement, and assess their work. We train these tutors using an online module.

Role of the teacher: Rather than replacing the teacher, the online medium enables the teacher to work more efficiently. There is no need to present material to students; the computer does that. Instead, the teacher can engage with individual learners and with the group. A face-to-face teacher may not be able to engage with every member of the group. Online, he/she can and does, including with those who might not participate much in group discussion because of shyness or a language problem. This feature also allows for differences in learning styles. For example, the learners who think slowly and carefully are not disadvantaged over the learners who think fast and shallow as they might be in a classroom.

The learning management system allows the online tutor to track the progress of each learner, to monitor this, to e-mail learners who have missed work, and to take away any threat that a learner might feel by being exposed to questions in a tutorial.

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International Technical Communication Programs and Global Ethics

Gerald J. Savage Illinois State University

International technical communication program developers may face globalization either with fear or exhilaration. Is globalization primarily an economic process that will bring unprecedented opportunity, prosperity, democracy, and health to everyone in the world? Or is it a process that will usurp the autonomy of national and local governments, colonize the cultural diversity of the world, lay waste to ecosystems, and gobble up the resources of the entire planet?

Views of a middle ground between these extremes offer little security. For example, Anthony Giddens says, "We are at the beginning of a fundamental shakeout of world society, which comes from numerous sources, not from a single source.... and we do not really know as yet where it is going to lead us" (Giddens 1996/97).

From the perspective of those who Giddens calls "hyper-globalizers," primarily international business advocates, globalization is inevitable. To decry it is like denouncing gravity when we fall down. On the other hand, the anti-globalization perspective claims that globalization can be effectively resisted and that we must not close our eyes to its ugly realities simply because they do not directly impact us, or perhaps because we may benefit in the short term.

We must recognize that international technical communication participates in global practices that may have social, economic, and environmental consequences beyond any we have considered in our theory and pedagogy.

Many of our students will find jobs with organizations that operate beyond the borders of a single nation, and certainly beyond the boundaries of single cultures. Thus, whether we explore new approaches or do business as usual, our programs are always international in their consequences.

Approaches emphasizing multicultural communication and understanding (e.g., Grobman 1999) are not enough. Such approaches do little to foster critical awareness of how multicultural communication and understanding may serve corporate interests without regard for broader social consequences.

I propose three issues for program design aimed at preparing critically competent citizen/professional communicators for decisions and actions that will have global consequences:

- The role of information and communication technologies (ICTs) in globalization
- The prospects for global roles for technical communication other than in international business
- The need for research and theory that specifically addresses communication in global contexts (Hamelink 1997)

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Legal Communication in Technical Communication Programs: Worth Thinking About ?

James F. Stratman University of Colorado at Denver

At least since the days of Alcuin, whose name recurrently appears on the labels of champagne bottles in my dreams (I should be happy to talk about this phenomenon, but not within this text), rhetoricians have often nominated themselves for key roles in crucial social and political negotiations. They have done so based upon the premise that, given their interdisciplinary, if also free-floating expertise in language and communication, they were in the best position to transcend cultural and sub-cultural differences at the root of many bitter, intractable conflicts. Depending upon the antagonists' needs, they were allegedly able to demystify mysterious technical verbosity or to lend clarifying linguistic precision to social "realities" otherwise too mercurial to put into words. These "realities" sometimes encompassed socio-technical problems like how to know whether "a meeting of minds" has occurred, or how to know "whether a reasonable person placed in the position of the plaintiff would understand terms in the hair replacement formula warning."

In advertising this kind of expertise, rhetoricians have often bumped egos (and sometimes more tangible parts) with lawyers whose relationship with ars rhetorica has been a continuing exercise in denial, dismissive accommodation, total appropriation, and still more fierce denials (Rieke, 1964; Wetlaufer, 1990). The truth is, despite mutual entreaties, lawyers and rhetoricians still do not seem to know how to talk to one another about essentially common concerns.

What, if anything, should technical communication programs teach their students about the nature of law and the production of legal discourse? When is technical writing also legal writing, and vice versa; when is legal writing (really) technical? Are there distinctions worth maintaining and dissolving here? Do lawyers' relationships to, and problems with, legal writing contexts and processes parallel in important ways technical writers' relationships to, and problems with, technical writing contexts and processes? If they do, is a conversation between the disciplines worth institutionalizing, at least experimentally, in each other's programs?

As these questions should imply, I am interested in issues that go above and beyond the commonly aired questions about technical communicators' economic, employment, and intellectual property rights and responsibilities (important as these certainly are). For instance, what should our programs teach students about their potential role in influencing the myriad kinds of federal and state regulations affecting technical discourse, its production and evaluation? When, if ever, should technical writers accept an assignment to create legal documentation–or, when should technical communicators "leave law (and language) to the lawyers?" (E.g., "My company wants me to write and design our sexual harassment policy.") What do technical communicators need to know about "norms" of legal discourse and its functions in different contexts? How might technical communicators rise above the usual turf battles between themselves and lawyers over language and communication norms and arrive at a more mutually enlightening perspective?

Consider the kinds of legal processes in which technical communicators are increasingly directly involved and implicated in complex ways. For example, nationally known litigation support firms such as TechLaw, Inc. (http://www.techlawinc.com/) in Denver may hire technical communicators to develop graphical displays for courtroom presentation. What does a technical communicator need to know about law and trial procedures to work responsibly in such a situation? As a second example, technical communicators may be requested to develop and give expert testimony about language clarity or meaning in technical risk documents. What should technical communication students be taught about their role in these situations?

In technical communication curricula already crowded with knowledge and skills that graduates "simply must have," what should we view as "essential" knowledge about the ways our two professional cultures can constructively interact?

International Technical Communication

Teresa Mulvihill t2a Communications

Introducing technical information to diverse cultures creates unique challenges in communication. In the global economy, successful publishers cannot afford to ignore cultural influences on information presentation. Yet there are multiple excuses for ignoring international issues. For example, "All business professionals speak English; therefore, translation is not necessary"; "This company only sells to English speaking countries, so there is no internationalization"; and "Internationalization is someone else's job."

These excuses will not hold up in today's market. While budgets are shrinking, audiences are growing, and even more so outside English speaking countries. Documentation in a native language is good business and common sense. Consumers will not buy a product if they have to translate the help themselves.

Color, humor, layout, and media nuances also make a publication friendlier in a given culture. U.S. companies that have launched British versions of their Web sites claim their Internet sales rose by 30 percent in just a few months.

A more idealistic reason for incorporating cultural influences is world peace. It is not about throwing out one culture and language for others to learn and respect, but to learn and respect every culture and language. We are in this together, and every little bit helps.

Most technical communicators are thinking, "Don't we do enough? Besides, I speak only English." However, beginning a project with cultural issues in mind conserves time, saves costs, and reaches a larger audience.

International Content

Incorporating cultural issues into content can be simplified by merging the methodologies of writing for a single-sourced environment with those of writing for multilingual audiences. These methodologies also help save editing time and translation costs and reuse information in multiple publications.

As in writing for a single-sourced environment on an international project, avoid referring to sections and graphics by their position in a printed document. For example, referring to a segment as "the section above" may not identify the correct section in an online help document.

Write identified segments keeping paragraph length at three-to-five short sentences and segments at three-to-four paragraphs on one concept. It is important to identify each segment clearly using "Introduction" and "Overview" alone for a segment header; such headings may cause confusion in large documents such as manuals. Instead, use "Introduction to Technical Communications" or "Overview of FrameMaker Tools."

Writing for multilingual audiences requires writing in simple English. For translators and English-as-a-Second-Language (ESL) readers, it is important to keep their attention on the content, not on their dictionaries. Using consistent terminologies and phrases aids both human and machine translators. Humans will not have to look up difficult words, and machine translators can "remember" reused phrases.

Do not use repetitive sentences after descriptive headers. For example, after the title "Overview of FrameMaker Tools," remove the sentence "This chapter gives an overview of FrameMaker tools." If this sentence is merely a way to have text between headings, list the subsections under a sentence similar to "This chapter includes the following sections."

Reducing the number of words will not only keep content simple; it will keep the cost of translation down, as translation is priced per word. Do not use unnecessary words or phases such as "manually edit," "automatically," or "in order to." Hans Fenstermacher of ArchiText, Inc., is a great source for guidelines on reducing words and writing in simple English.

Also, consider units of measurements and humor. Most of the world uses metric units, yet the US uses imperial units. Humor can be used as a way to "lighten" text and increase retention. However, it can rarely be translated directly. When humor is used in a document that must be translated, be sure to identify humorous passages to the translator.

International Layouts

Cultural issues must be considered in the layout of international documents. Most documents translated from English grow by 25 to 30 percent. Paper sizes will also affect the layout as most of the world uses A4, yet the US standard is 8.5 x 11 inches.

Color interpretations differ greatly in different cultures. For example, yellow is associated with warning in most western cultures; however, in Japan yellow signifies peace and tranquility.

Although most pictures paint a thousand words, graphics can be misinterpreted depending on cultural interpretations. Traffic and road signs are generally safe, but stay away from using body parts. For example, the palm of the hand signifies the "stop" command in western cultures, yet it can be an invitation in Eastern cultures.

FrameMaker Tools

The tools used can also help alleviate headaches on international projects. FrameMaker has many functions that are excellent for single sourcing international projects. Using the book feature allows adding and removing chapters as needed for different audiences. Some media, such as print, online, or wireless, may be favored over others, depending on location. FrameMaker allows books and documents to be saved for PDF, HMTL, and wireless publications.

Within each file, the conditional text feature can identify words, sentences, and phrases that will be published in a certain book. For example, if a manual is to be published in the U.S., a U.K. conditional text helps identify the words that are spelled differently and the phases that are punctuated differently. For translation, conditional text can identify words and phrases that should not be translated into the other language.

International Communication Conclusion

International communication requires extensive audience and tool analysis. There are obvious factors such as language, spelling, time zones, standard paper sizes, and units of measurement that must be considered before beginning an international project. However, technical publishers must also consider effects, such as cultural interpretations of layout, colors, and symbols. Keeping these issues in mind from the beginning of an

international project and using the available tools to their fullest extent will help shorten production times, lower costs, and reach a broad audience.

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Should Academic Programs in Technical Communication Try to Strengthen the Bond Between Academia and Industry?

Susan Feinberg Illinois Institute of Technology

Whether the answer to the question in this title is a resounding yes or no, it needs to be addressed when we consider models for strategic development.

My own experience suggests that the field of technical communication is drawing closer to issues present in both academia and industry: visualization of data, usability and field testing of products, design of instructional material for the Web, and other research issues. As the two domains need each other to begin to solve problems, the collaboration is fraught with perils such as who states the problem, who manages the project, what resources are available for working on the project, and who owns the results.

As we begin to try to strengthen the bond, do we currently have models for successful collaborations? Are strategies in place that lead to success? Are certain approaches doomed to failure? What do we already know about the bonds between academia and industry? I can offer two case studies, one that may lead to a model for success and another that was less successful. Perhaps others in the audience can offer additional models and strategies to help us avoid pitfalls and succeed in this important collaboration.

My first case study deals with the usability testing of a museum site. During the semester in which I taught a graduate course in usability testing, I asked the class members to participate in a usability study for a museum located in the city. The museum welcomed the opportunity to have the educational materials on it's Web site evaluated by users, and the class members ware eager to observe a "live" usability test. The first problem arose when the museum staff was less than forthcoming about their concerns with the site and their goals. After all, they were still defining their goals (even though the Web site was developed) and their Web designers were from out of state. After some careful probing about the staff's concerns, the class members actively examined the site, created tasks that reflected the museum staff's concerns, and reviewed the user test with the museum staff. Even with a difficult beginning, by the end of the formal usability study, when data was analyzed and findings were reported, the museum staff and the class members reported that the project benefited both constituencies. The museum staff used the findings to focus and improve the site, and the class members felt confident about their usability testing skills. This case study may serve as a model for strengthening the bonds between two domains: when the project is clearly defined and the material to be learned has a practical application.

On the other hand, I attempted to collaborate with industry to produce instructional materials for the Web. This project immediately led to a clash as industry treated the class members as unpaid employees. Scheduling the project as if the class members were daily workers and the goal was simply product-oriented, industry aroused the wrath of students who felt as if their creativity were being stifled and their educational goals ignored. After all, these students were students, not employees, and they were learning to discover and explore, not just do as they were told. After a full discussion of these issues between the two groups, industry agreed to offer resources and advice in exchange for a new student-created product. An interesting question at the end

of this project was, who owned the new product? In all, the students agreed that this project gave them a valuable experience in how industry views employees. From this experience I learned some strategic advice that I can offer to avoid some pitfalls that may weaken the bonds between academia and industry: establish student rights, and determine ownership before the project begins!

Perhaps others in the audience can speak of some strategies and models that may strengthen or weaken the bonds between industry and academia, if these bonds should even be attempted.

Don't Manage Change; Make It! Redefining Our Programmatic Identities

Christine Abbott Northern Illinois University
Philip Eubanks Northern Illinois University

The interrelationships among thought, language, action, and character have intrigued linguists, psychologists, philosophers, and rhetoricians for centuries. Rarely, however, have we considered how these interrelationships subtly shape and reflect our technical communication programs. We would like to question some of the assumptions upon which technical communication programs are built and suggest some ways to think more creatively and collaboratively, while at the same time stretching our resources, our students, and ourselves.

First, we ought to stop managing change and, instead, begin making it. Managing change connotes passivity on our part, as if the present and the future are somehow things that happen to us, things that need to be managed, not things that we help create and take responsibility for. These unquestioned assumptions underlying our programs may be dangerous because they can insidiously influence our students' thinking. If we feel and act helpless and constrained and talk and act as though we are the victims—whether of budgets, administrators, or industry—then we most certainly will be, and we shouldn't be surprised when our students also think, talk, and act like cogs in a machine or slaves of the military-industrial complex. Bureaucracies despise innovation and change. They exist because they thrive on managing things: policies, procedures, forms, and people. The more roadblocks they put up, the more likely our resistance turns to frustration. Perhaps one day, this resistance will turn to apathy as we begin to regard gridlock as normal and inevitable.

In his book *Leading the Revolution*, Gary Hamel argues that a strategy of radical innovation is essential if companies are to survive. Although we are not arguing for the simple, crude, economic survival of our programs and ourselves, we do think it is time to think outside of the box, whether the box is of our departments, programs, universities and colleges, computers, or that box of all boxes: our heads.

We are well aware of the many challenges confronting us: shrinking budgets, downsizing of faculty, increasing competition for student market share, growing territoriality among departments, and rapidly obsolescent hardware and software. Increasingly, we are asked to do more with less. At the same time, the field of technical communication has grown so rapidly that it is impossible to keep abreast of the many developments within and outside academe. Whereas some disciplines get increasingly specialized and narrow the more they mature, technical communication is simultaneously becoming increasingly both specialized and broad, encompassing a wide range of topics, career fields, and research interests. For those in departments with only one or two faculty members in technical communication, developing undergraduate and graduate programs in our field becomes exceptionally challenging and seemingly constraining as we scramble for scare resources.

Let us assume a few things: that no one is going to lighten our workload; that our hardware and software will always be a few versions behind industry standards; that the extra faculty members we need are not going to magically materialize; and that the field of technical communication will continue to evolve at dizzying speeds. This is not an unrealistic scenario for most of us. Given this scenario, how do we improve the quality of our programs and give students meaningful educational experiences that will stretch them intellectually and help prepare them for the future, without substantial additional resources and without putting further pressure on us? How do we conserve our resources and our sanity?

Perhaps it seems to be a conundrum, but out of adversity blooms possibility. Once we admit that we can do more than we are already doing and work no harder than we already are, then we begin to think creatively. We not only begin to think outside of the box but also move outside of it and, in the process, redefine our programs and ourselves. We begin to envision what could be and ask "What if?" and "Why not?"

In the last decade, that vision has increasingly included finding ways of involving others who most have a vested interest in the quality of our students' education: those in government, business, and industry who eventually become our students' employers. We are glad to see the many initiatives at various colleges and universities represented by the CPTSC members. These initiatives emphasize outreach and collaboration and go beyond the typical advisory boards, guest speakers, and real-world projects. While all of these are important, they do not solve budget problems and the need for experienced, knowledgeable faculty.

About five years ago, the CPTSC audience learned about how Northern Illinois University began to address these issues by developing the Institute for Professional Development, a partnership with the Chicago Chapter of the Society for Technical Communication. For several years, the institute has brought together researchers, teachers, and practitioners of technical communication to plan and team-teach courses that integrate theory and practice.

The institute is still thriving and now involves professors from five universities and professionals from numerous corporations. In the future, we hope to take the institute concept even further by exploring the possibilities of a consortium based on shared human and technological resources and on collaborative teaching, research, and practice in technical communication, whether in the classroom, training room, or board room; whether on the page or on the screen; and whether in real time, virtual reality, or some combination.

At the time the institute was developed, we thought that it was a creative solution to budgetary constraints and insufficient faculty, and it was. Today, we think that such partnerships and alliances among universities, colleges, business and industry, and professional organizations are becoming the norm and that we all need to think and move outside of the academic box.

Distinguished Service Award 2001

Selection Criteria[1]

Persons nominated to receive the Distinguished Service Award will in general possess the following characteristics and attributes

1. They must be members of CPTSC at the time of their nomination.
2. They should be members of long standing in CPTSC with at least seven consecutive years of membership sometime during their careers. The DSSC can recommend exceptions to this rule but only for members of extraordinary merit.
3. Nominees must have made significant long-term contributions to programming in technical communication. It is expected the DSSC will consider only members who have established significant careers in technical communication programming, working both on the local and the national levels. The key question will be, 'Have technical communication programs been significantly affected in a positive manner by this person's career?'

Honorary Distinguished Service Award

The DSSC of the Executive Committee with the advice of the DSSC may from time to time choose non-members to receive an Honorary Distinguished Service Award. Such honorary recipients should have made significant contributions to CPTSC or to programming in technical communication. This contribution could be either as a career long emphasis or as a significant special contribution.

2001 Recipient, Carolyn Rude

Speaking on behalf of Rude

Kelli Cargile Cook

"As I was considering what to say about my friend and mentor, Carolyn Rude, I remembered a quote from William Arthur Ward. He wrote: 'The mediocre teacher tells. The good teacher explains. The superior teacher demonstrates. The great teacher inspires.'

The word 'inspires' literally means "to breath life into." It describes Carolyn well . She has breathed life into the technical communication and rhetoric program at Texas Tech University and into her students there. I know because she inspired me when I was her student, and she continues to do so when I teach my own students, especially my editing students. I am proud to have had such a great teacher and couldn't imagine a more deserving person to receive the award."

[1]Approved Austin, Texas, October 1997; Posted to the Web site March 1999.

Betsy Smith

"In 1989, Carolyn Rude spent an afternoon with me describing Texas Tech's Composition and Rhetoric program. She spent an enormous amount of time while I was part of the program including me in her research activities and in conference presentations, modeling excellence in scholarly activities, and immersing me in the technical communication profession. She set the bar high. I continue to try to simply reach the bar. A simple thank you will never be enough. I congratulate her on this CPTSC honor."

David Dayton

"I was delighted when Stuart asked me to add my two-minutes-worth in this tribute to Carolyn Rude.

When I moved my family to Lubbock, Texas, in 1996 to begin doctoral studies in Technical Communication and Rhetoric, I did not realize that the qualities of the program that had drawn me to Texas Tech were largely a reflection of Carolyn Rude's leadership. I soon found out.

Over the course of two years of resident study, I came to appreciate what a remarkable, many-faceted job she does as head of that program. She leads a crew of colleagues with diverse personalities, strengths, and interests, while also nurturing the intellectual growth of many different students. She keeps things running.

What has kept Carolyn from burnout year after year? My theory is that she lives by an ethic of devotion, committed to nurturing a complex web of social networks in our discourse community, the center of which is the program she directs. CPTSC is truly fortunate to be an important node in Carolyn's web.

I feel personally advantaged to have had Carolyn as a mentor during my dissertation years. During conversations we have had, face to face and through email, I have been struck with admiration by her ability to dissect complex situations and offer me advice in a way that reflects an appreciation of my own inclination and point of view, while making the best possible case, in very few words, for important alternative perspectives.

After the events of Sept. 11, I take my life and work, if not more seriously, then certainly more socially than I did before. I am more consciously proud to be a member of a community of professionals for whom service, is, in a sense, all that we do: Service subsumes our research and our teaching.

I learned to see our work that way under the tutelage of Carolyn Rude."

Elizabeth Pass

"In 1994, 4Cs was in Nashville. It was my first professional conference as a graduate student and I got stuck at a hotel in a bad part of town several blocks from the conference hotel, having to walk to and from the conference. It was then I learned to love taxis.

I didn't know anyone there except Carolyn and Betsy Smith. Needless to say, I felt pretty insecure and alone, and wondered what in the world I had gotten myself into. I certainly didn't feel as if I belonged to the conference, let alone the profession.

The last day of the conference we had the afternoon off and Carolyn and Betsy were going to the Botanical Gardens. Carolyn was gracious enough to invite me along with them. We had a wonderful time. [It was there that she told me the names and reproductive cycle of every coniferous tree, plant, and flower there. I thought she was the smartest woman I knew until 3 years later she told me she had made it all up.]

It was the first time I felt a part of the discipline; not a graduate student taking courses in a program, but a someone **in** the profession.

Carolyn has accomplished so much in this field:

her research has added to the body of knowledge
her books have aided in our teaching
her professionalism has set an example for graduate students to model
her advising has guided the future of many in industry and academe

But for me, Carolyn's most important contribution to this field is her sincere ability to welcome newcomers into the field with her spirit of collegiality.

Her small gesture of collegiality left an important and lasting impression with me, and for that I thank you, Carolyn. Congratulations on such a deserved award."

TyAnna Herrington

"You already know about Carolyn Rude's success. She has published books and articles that have contributed to and broadened the field of technical communication, created and effectuated the technical communication program at Texas Tech, and has taught and mentored students who now work in responsible positions in both industry and the academic world.

But what may not immediately come to mind when you see this unassuming and mild-mannered, though accomplished administrator is her courage. I first started to associate that quality with Carolyn when we were at last year's CPTSC conference in Menomonie. I was walking with Carolyn during our Saturday trip and we started across the big, open-treaded bridge that spanned the river that you probably remember. As we walked across, Carolyn's steps got slower and her stride grew shorter. When I asked if everything was okay, she told me that when she was a kid she had to cross an open, swinging bridge every day to get to school, and it always scared her to death. So today she continues to conquer her fear by walking across every open bridge she finds.

Carolyn has shown the same courage in ways that have broadly affected the field of technical communication. She created and launched the technical communication graduate degree at Texas Tech in the English Department, even within a departmental structure whose power lay squarely in the literature camp. Just four years later, she further demonstrated courage by initiating Internet provision of both the technical communication Masters and Ph.D. Students can begin and complete graduate degrees in technical communication over time and distance through the online program at Texas Tech. These aren't isolated results of Carolyn's courage, but examples of where it has lead.

So tonight I'd like to join in congratulating Carolyn on receiving the Distinguished Service Award and know that she'll continue to contribute to the technical communication field, enabled by her quality of courage.

Coucil for Programs in Technical and Scientific Communication 28th Annual Conference

Program

Thursday, October 11

6:00 Opening Reception

8:00 Keynote Presentation

Bill Karis, Act IV: On Being Less Invisible

Friday, October 12

9:00-10:15 Plenary Panel and Discussion

David Kaufer, Designing a Communication Design Program

10:30-11:30 **Concurrent Sessions 1**

A. Mapping Community and Institutional Spaces

Stuart Blythe, Building a Community of Professional Communicators by Mapping Needs and Assets

Jim Porter, Designing Institutional Space to Bridge Institutional Devices

Summer Smith, Managing the Growth of Service Learning: Towards a Model for a Sustainable Program

John Gooch, Collaborative Invention Among Experts in an Interdisciplinary Context: The Creation of Written Discourse for Countermeasures to Biological and Chemical Threats

B. The Service Course, Technology, and Writing Instruction

Heather Sehmel, Dealing with Increasing Tool Diversity and Student need to Know Tools in the Writing Service Course: A Call for a Programmatic Assessment and Treatment

Dan Riordan, How the Web is Changing the Role of the Service Course

Elizabeth R. Pass, Managing the Conundrum: Doing an Effective Job Teaching Those Packaged Web Design Courses to Students Who Just Want to Do the "Fun Stuff"

Tim Hadley, Traditional Writing Instruction and the Technical Communication Curriculum

C. Graduate Programs

Tim Fountaine, Reconsidering the Doctor of Arts Degree

Paul M. Dombrowski, Issues in Creating a New Ph.D.

Ann M. Blakeslee, United We Stand, Divided We Fall? Thoughts on Cohesiveness in the MA in Writing

Nancy Allen, Is There an Alternative Master's Program

11:45-12:45

Concurrent Sessions 2

A. Frameworks for Change in Established Programs

Jennie Dautermann, Rumors of Change: Managing Change in Established Technical and Scientific Communication Programs

Graham Smart and Nicole Brown, A Framework for Developing Research-Based Curricula in Professional Writing Programs

Dale L. Sullivan, Planning, Delivering, and Assessing Communication Modules in an Engineering Enterprise Program

B. Undergraduate and Graduate Student Training

Carole Yee, It was the Best of Times, It was the Worst of Times

Kelli Cargile Cook and Charlotte Thralls, First Generation Ph.D.s in Professional, Technical, and Scientific Communication: Questions of Hiring, Retention, and Training

Robin Breault and Michelle F. Eble, Scaling the Walls of the Tower; Professional Development for Techies in a Traditional English Department

C. Out of English

Alexander Friedlander, Do We Know Who We Are and Where We Belong? Challenge in the Midst of Change

Alice Philbin, Independence from English: Pros and Cons of an Entrepreneurial Effort

Barbara L'Eplattenier, Betty Freeland, Cindy Nahrwold, Karen Kuralt, and Suzanne Barr, Portrait of a Maturing Department

Nancy M. O'Rourke, Undergraduate Technical Communications Programs: Setting the Boundaries

1:00-2:00

Lunch

2:15-
3:15

Concurrent Sessions 3

A. New Media and Curricular Boundaries

Eva R. Brumberger, Visual Thinking in the Technical Communication Curriculum: Establishing Connections and Building Understanding

Kevin LaGrandeur, Graphics, Design and Technical Communication: Exploring Disciplinary Boundaries

Carol M. Barnum, Disciplinary Boundaries: where (and How) Should Usability Testing Be Taught?

B. Program Management

W.J. Williamson, Program/Professional management/Identity

Brendan Faber, Beyond the Glitz and Grandstanding: Management Theories and Technical Communication Programs

Margaret Hundleby and Helen Correl, Supporting Success: Project Management Preparation for Internships and Other Industry Contexts

C. Interdisciplinary Program Development: Necessities, Possibilities, and Boundaries

Kate Latterell, Integrating Technical Communications in an Arts and Humanities Setting

Deborah C. Andrews and Rebecca B. Worley, A Networked Approach to Program Growth

Tracy Bridgeford, The Place of Communication in Technical Writings Programs

Pete Praetorius, Professional and Technical Communication: The Humanities Degree for the 21st Century

3:30-
4:30

Concurrent Sessions 4

A. Online Work and Education

Johndan Johnson-Eilola, Datacloud: Toward a New Theory of Online Work

Stuart Selber, Sustainable Practices in Distance Education

Nancy W. Coppola, Providing a Backbone for an Online Master's Program in Technical Communications.

Saul Carliner, From Technical Writing to Content Development

David Morgan, Some Ideas About Producing Online Modules

B. Global and Legal Issues in Technical Communication

Gerald Savage, International Technical Communication Programs and Global Ethics

James F. Stratman, Legal Communication in Technical Communication Programs: Worth Thinking About?

C. Industry and the Academy
Teresa Mulvihill, International Technical Communications and Today's Technologies
Susan Feinberg, Should Academic Programs in Technical Communication Try to Strength the Bond Between Academia and Industry
Christine Abbot and Phillip Eubanks, Don't Manage Change: Make It! Redefining our Programmatic Identities

6:00 Reception

7:00-10:00 Annual Banquet
Distinguished Service Award
Carolyn Rude, Texas Tech University

9:00-12:00 **Saturday, October 13**
Annual Business Meeting

Trip to Fallingwater and Ohiophyle Sate Park (or alternate plans)

Minutes

Annual Meeting, October 13, 2001
Pittsburgh, Pennysylvania

1. Announcements:

Linda Driskill announced call for participation in WAC conference (flyers distributed).

2. Approval Request:

Minutes of the Menomonie, Wisconsin, 2000 Business Meeting were distributed and approved.

3. Standing Reports

Secretary – Dianne Atkinson, no report

Treasurer – Karen Schnakenberg reported an ending balance for last year (December 31, 2000) of $10, 868.22, reflecting a total income this year of $8420.00 (including $2900.00 from dues), and total expenses this year of $5699.35. Current balance (October 1, 2001) is $12,627.55. An itemized report is attached.

Program Reviews – Bill Karis encouraged programs to consider a program review, which typically begins with a "self study." On the basis of that initial description, Carole Yee then matches the program with appropriate reviewers and a site visit is collaboratively planned. Bill Williamson and Carol Barnum affirmed the value of their respective experiences with that process; Susan Stevenson requested a program review for Simon Fraser, BC Canada.

Strategies for encouraging more widespread use of the review process were discussed. Johndan Johnson-Eilola and Brent Farber both spoke in favor of developing a formal description of the program review process. Stuart Selber suggested that a working draft be available by the next annual meeting. Susan Stevenson expressed interest in widening the participation of the review panel to include industry and/or engineering professionals.

Web Site – Bill Williamson invited members to submit news items. The .rtf file format is appreciated. Bill also requested help in locating the exact words associated with past awards so that a more complete description of those awards can be included on the site. Interest was also expressed in making available samples of program self-study materials, but it was noted that a request form for review is already on line and that Carole Yee as the first contact can provide assistance with locating appropriate materials.

Saul Carliner noted that STC website can provide program descriptions by sending requests for information directly to programs and then posting those updates, placing the responsibility for content directly with the programs. Dale Sullivan suggested adding assessment tools to the website as a resource for programs. Examples would include "exit surveys" for seniors and procedures for evaluating portfolios.

Dan Riordan suggested that programs might benefit from web access to data on hiring, yet any such Internet publishing should not inhibit future publication. Stuart Selber expanded that suggestion to include other important components of placement and promotion such as salaries. Johndan Johnson-Eilola commented on the feasibility of a database for salaries that would protect anonymity. Additionally, information about benefits and course loads would also be of interest. Harriet Wilkins spoke about similar efforts by ASEE (American Society of Engineering Educators). Stuart Selber suggested that the feasibility of such a data base resource be explored. Sandy Harner offered to look into what STC was already doing in this area as STC does collect job information directly from practitioners. Kelli Cook added that she is already in the process of collecting some of this information. Dan Riordan stated that such data is important to use in discussions with upper administration; Carolyn Rude also affirmed that quantifying is needed. Carol Barnum pointed out that only about 6% of STC is academic and that these individuals may be senior people where disparity with current new hires might be highest. Brent Faber noted that *The Chronicle of Higher Education* publishes detailed salary data for every institution. Stuart Blythe suggested that administrators be reminded (by the STC data) of the non-academic options available. Bruce Maylath added that care must be taken to make comparisons reflecting the technical communication profession and not merely the English market. Joe Strange suggested limiting the data base to the CPTSC membership to assure relevance and that we provide that data directly to Kelli Cook. Linda Driscoll moved that CPTSC take appropriate action to support the Cook project.

Publications – Bruce Maylath reported that the hard copy newsletter costs about $200 and currently comes out once per year in promotion of the annual conference. The newsletter is a tangible benefit for our international members. Carolyn Rude suggested that the newsletter go to the website as the proceedings are already electronic.

4. Other Reports:

ATTW – Carolyn Rude announced that ATTW will have a full-day conference this year and that the special interest group (SIG) on teaching as part of 4C's (Thursday evening) this year offers good visibility as well as help for program development. Jerry Savage added encouragement to submit ATTW conference proposals and membership applications on line.

STC – Saul Carliner noted that both international and regional conferences tend to be during fall. He also recommended the STC publication *Intercom* but noted that it is

available only to STC members. STC supports SIGS in 18 different areas and maintains a list of related organizations, including training organizations.

Carliner added that STC is eager to fund research. Interested researchers should visit the STC website and go to the research section for information and guidelines about grants (value up to $10,000. See Sandra Harner's October *JBTC* article for discussion of areas of interest and of what is expected.) Carliner noted that the category of "special opportunity grants" is not pure research but is more project oriented. He added that the Industry Fellowship for faculty (intended as incentive only) has been increased from $2,000 to $4,000. The assumption is that industry picks up actual salary costs. Teaching fellowships for practitioners have been added this past year. Sandy Harner noted that only two academics serve on the STC board, so it is important that a new committee termed "Academic Support" has just been created. She asked members to please let this committee know of their concerns and consider listing their institutions' programs on the STC site. (STC does not endorse programs but provides program information supplied by the programs to STC.)

A possible new addition may be distance education, which has been frequently requested. Meredith Cintko will be contacting CPTSC members. The new emphasis may have special importance for international programs such as those in Canada. STC offers scholarships for students; these are sometimes not used completely. The STC website will also add a "bookshelf" with links to Amazon.com.

Carliner finished by noting the Jay Gould Award for teaching technical communications–three awards each year—and asked CPTSC members to consider nominating candidates. Student awards are also available: Bill Williamson mentioned that national awards to local chapters can fund student travel to national meetings. Pete Praetorius suggested that local chapters find ways to reduce student fees by 50%. Saul Carliner suggested volunteering to judge products, which are sometimes available as online material, so that distance and/or travel constraints do not limit participation.

ACM SigDoc – Johndan Johnson-Eilola noted that the cost of sig.doc membership is just $30 as it is not necessary to also join ACM. The ACM digital library may already be available through institutional libraries and is a great resource. Through the digital library access may be gained to all IEEE and all ACM journals.

CCCC Committee on Technical Communication – Stuart Selber pointed out that perhaps as few as six dissertations are submitted for the outstanding dissertation award. Students have up to two years to submit and should provide three copies.

Consortium for the Study of Engineering Communication – Linda Driskill described the new ABET approach to accreditation as emphasizing goal setting, assessment, and improvement. Margaret Hundleby added that assessment tools relevant to ABET were the focus of the Spring 2001 Wildacres workshop. Linda

continues to seek funding for a planning conference to generate tools for using the feedback generated out of the ABET accreditation process.

Summit Report – Sandi Harner represented STC at the summit; only six organizations provided representatives for the last summit, and no future meeting date has been established. The role of the summit changed two years ago, such that funded projects benefited all participants. It is not clear that the effort will go forward. Stuart Selber commented that as long as the "meta-conversation" can go forward in conjunction with ongoing meetings, good exchange is possible. Saul Carliner added that the field benefits from such exchange. Stuart suggested that we continue but fund at about a $200 level (one person's travel).

5. Old Business:

Seven countries were represented at the CPTSC/ATTW Interntional Committee's London 2000 Roundtable this past year. Bruce Maylath suggested a follow-up of these discussions in conjunction with FORUM. CPTSC might meet with tekom, the German counterpart to STC. Debby Andrews observed that six of the participants were non-North Americans. Stuart Selber asked about the possibility of an earlier opportunity–closer than five years, and whether another site might be identified, perhaps on the Continent (or again in London) that might be made available to us (as was the London meeting site by the University of Delaware). A German connection or a partnership with ABC (business communications) was suggested. Debby Andrews will check with Karen Schriver about a document design meeting that may be scheduled in Cambridge, UK. Bruce Maylath suggested that it is important to secure a venue sooner than 2005 and offered to work with Andrews on that project. Carol Barnum urged CPTSC to incorporate an international tone and content in its materials, especially those made available via the Internet.

Bill Karis said he seeks guidance about the portfolio exchange project that was proposed last year. Is this a project that can go forward? Nancy O'Rourke identified proprietary information as a constraint in the sharing of some student work.

6. New Business:

Revisions, CPTSC Constitution — Three amendments were brought to the membership from the Executive Board:

Amendment #1
Article VIII - Elections.
Current language: "(1) The election of officers shall be by written mail-in ballot."
Proposed language: "(1) The election of officers shall be by written mail-in or electronic ballot, the process to be determined by the Executive Committee."

Article IX – Constitutional Amendments.
Current language: "The constitution shall be amendable by a two-thirds vote of those present and voting and the ballots mailed in to the secretary or proxy ballots from members unable to attend the annual business meeting accepted up to the opening of the annual business meeting."
Proposed language: "The constitution shall be amendable by a two-thirds vote of those present and voting and the ballots mailed or emailed in to the secretary or proxy ballots
from members unable to attend the annual business meeting accepted up to the opening of the annual business meeting."

Amendment #2
Article VIII - Elections.
Current language: "(3) The nominating committee will have a slate of officers and members-at-large mailed to the membership no later than 60 days prior to the annual meeting."
Proposed language: "(3) The nominating committee will have a slate of officers and members-at-large mailed or emailed to the membership no later than 60 days prior to the annual meeting."

Article IX – Constitutional Amendments.
Current language: "Proposed amendments to the constitution must be in the hands of the members at least 60 days in advance of the business meeting at which the vote is to be taken."
Proposed language: ""Proposed amendments to the constitution must be distributed to the members at least 60 days in advance of the business meeting at which the vote is to be taken."

Amendment #3
Article IV - Officers.
Current language: "The officers shall be president, vice-president, secretary, and treasurer, each to be elected for a two-year term."
Proposed language: "The officers shall be president, vice president, secretary, and treasurer, each to be elected for a two-year term, and an information officer, who shall be appointed by the president and serve at the pleasure of the president."

Article IV - Officers.
Proposed duties of the information officer: "1. Maintain organizational Web site."

Article IV - Officers.
Current language: "The president, vice president, secretary and treasurer, plus the immediate past president and three members-at-large, elected by the membership, shall serve as the executive committee."
Proposed language: "The president, vice-president, secretary, and treasurer, plus the immediate past president and three members-at-large, elected by the membership, as

well as the information officer, appointed by the president, shall serve as the executive committee."

In the discussion that followed, consensus arose that the Information Officer should serve as an ex-officio member of the Executive Board. Brent Faber voiced concerns about the open-ended nature of the term of office. The amendment was changed so that the information office is to be appointed by the executive board (rather than the president) to serve at the pleasure of the president. Dan Riordan suggested rewording the amendment to list elected members as "voting" and to list information officer as "non-voting." These motions passed unanimously.

Suggestions, 2004 Meeting Site — Susan Stevenson moved to accept Purdue invitation; Johndan Johnson-Eilola seconded. Purdue will host 2004 meeting.

7. Invitation to Utah State/Logan:

Kelli Cargile Cook and Nancy O'Rourke extend invitation to Logan, Utah, for the next CPTSC annual meeting, October 3 to 5, 2002, at Utah State University.

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