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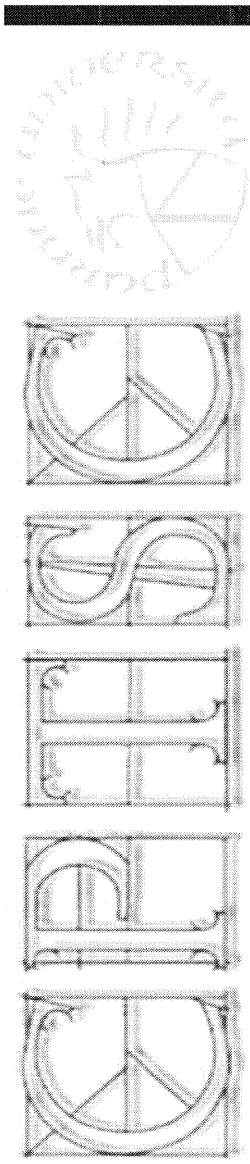

PATHWAYS TO DIVERSITY

31st annual meeting of the Council for Programs in Technical and Scientific Communication
Purdue University
October 7-9, 2004

About CPTSC

The Council for Programs in Technical and Scientific Communication (CPTSC) was founded in 1973 to promote programs in technical and scientific communication, promote research in technical and scientific communication, develop opportunities for the exchange of ideas and information concerning programs, research, and career opportunities, assist in the development and evaluation of new programs in technical and scientific communication, if requested, and 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 website.

Website

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, follow the directions on CPTSC's webpage:

http://dwc.wide.msu.edu/cgi-bin/mailman/listinfo/cptsc-l

About the 31st Annual Conference

The 2004 CPTSC conference was held at the West Lafayette campus of Purdue University by a state-wide Purdue University Team comprised of: Marj Hovde from the Indianapolis campus; Stuart Blythe from Fort Wayne; Pat Sullivan, Mike Salvo, and Linda Bergmann from the West Lafayette Purdue English Department, along with Joanne Lax and Dianne Atkinson from West Lafayette Purdue Schools of Engineering programs.

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Which Came First?: On Minority Recruitment and Retention in the Academy

Samantha Blackmon, Purdue University

When I first began to think about writing a speech for tonight, I really had to think long and hard about a way to approach this subject without ruining your meals. Many of the things I could say need to be said, but may not be exactly dinner conversation, still it is definitely a conversation that needs to be had. Those who know me well may be wondering if Nancy and Michael really knew what they were getting themselves into, but I will try to be on my best behavior.

I was excited when I saw the theme of this conference and honored when I was asked to speak about minority recruitment and retention in the field. Mind you, tonight I am going to talk about experiences that are specific to me as an African American, but they may be considered (and not applied wholesale) when thinking about other minorities. One of the issues that I want to open up for discussion tonight is just as perplexing as "which came first, the chicken or the egg"? How do we recruit and retain minorities in our departments when there are no other minorities around? How do we support and retain minority faculty members and graduate students and how do specialized areas of teaching and research in our departments such as minority rhetorics simultaneously help us to prepare for changing student populations and curricular shifts, as well as put a new spin on old curricula and be beneficial to broader society.

As my Granny always says "Times, they are a changin.'" When I first began to study rhetoric and composition, it was something that I just kind of happened in to. I was working on African American Literature as an area of specialty and I was specifically interested in what the literature had to say about literacy. Then someone suggested that I take a class that would allow me to explore literacy practices among African Americans, so I decided to give it a try.

Today things are a bit different. Our writing programs no longer feel like something that students just happen into or find themselves relegated to when they can't find a job in literature, but something that they actively pursue. There are more scholars doing research and writing on minorities and minority issues in rhetoric and composition. There are more students who are interested in learning these things, not because they themselves are necessarily minorities, but because they see the importance of studying less traditional areas as a necessary part of their education and preparation to teach and live in an increasingly diverse world.

The potential of minority rhetorics is just beginning to be tapped. There are so many possible areas of study that we are just beginning to explore. There are historical concerns (for example educational history, technological history, and rhetorical history); there are pedagogical concerns (how do cultural differences and history affect classroom dynamics and learning styles?); there are critical theory concerns (how and whether or not mainstream pedagogical theory can be applied to students of color); and now there are even cultural studies and new media concerns (how do minority issues affect broader society as a whole and how can these things be used to critique and be beneficial to said society). In the same way that we have come to realize that racial history and attitudes affect acceptance of cultural and linguistic differences, the study of minority rhetorics can help us to discover how these things can affect any number of things, from the more traditional

classroom dynamics and pedagogical practices to the way that minorities interact with technology, and the ways that they find themselves represented online, in video games, in film, and elsewhere.

As the importance of minority rhetorics becomes more and more obvious, it becomes even more important that we not only make sure that the courses are properly staffed, but that there are students to take the courses at the institutions where they are being offered. This is where the chicken and the egg come in to play. Which comes first, the African American faculty or the African American graduate students? One of the first questions that I am asked by prospective African American graduate students is "Do you have any African American faculty?" After asking myself "What am I?" I realize that they are looking for a community of African American scholars. It is this sense of community that is not only important in recruiting graduate students, but is also important in the recruitment, retention, and support of African American faculty members. As a budding area in a field that is still relatively new itself, a sense of community is important for numerous reasons, including social connections and academic collaboration. While minority rhetorics is indeed a very real part of Rhetoric and Composition, it often draws heavily from critical race theory and ethnic histories and literatures that are not usually widely read by those outside of minority rhetorics. It is this sense of community and the feeling of connection that is, in my opinion, imperative not only to the recruitment and retention of minority students and faculty members, but to the supporting the research and collaborative efforts of minority rhetorics scholars.

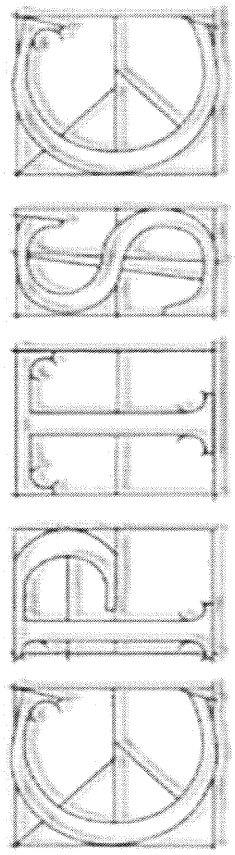
Outside of the obvious needs for scholarly collaboration, there is the need for a sense of social community. Oftentimes, minorities find themselves housed in universities that are situated in areas that are not very diverse. Some folks may find it impossible to imagine living in a world (and sometimes it feels like the whole world) where the only face that they regularly see that remotely resembles their own is that of the woman who comes to empty their trash in the mornings. The amusing thing is that there are invisible ivy covered walls that separate us even from that familiar face. As African Americans, we have chosen the one thing that has historically alienated us from those in our home discourse communities: higher education. We have chosen to "act white" or "sell out." Educated African Americans have for years found themselves on the periphery of their own communities and on the margins of academia. Victor Villanueva hit the nail on the head when he said the academic of color could be seen as "being Tonto in two languages"; in this case we are tonto in two cultures. Alienated from one, but never fully accepted by the other. Tonto without the Lone Ranger, now that is one sorry sight. Or imagining having a middle-aged white woman who works at Wal-Mart asking you if you need for her to read the circular to you or not beating the little old white man at the farmer's market about the head and neck when he asks you week after week if you want to pay for your produce with WIC coupons. Unfortunately, this is not something that is contained solely within Central Indiana. I hear stories such as these from scholars of color in the field year after year. We can share these stories with our immediate colleagues and appreciate the fact that they can empathize, but realize that they can not possibly sympathize.

The issue of diversity is one that needs to be addressed and seems to be getting pushed further and further to the rear as we see articles that call single folks in the academy the last real minority, as university administrators continue to lump all minorities together in their statistics, and as search committees and administrators ignore the need to build a community where there is none by doing cluster hires. Hiring one minority faculty member is not sufficient, especially if by the time you hire another the first has moved on because of conditions that have grown to be unbearable. I believe that this is a problem that gets exacerbated if other issues are also at work. If I had been a single, queer, African American woman moving into this area, I would have high-tailed it out of here a long time ago. This is not to say that I don't have some of the best colleagues here that I have ever run across, because I do, but being able to go

home and vent to someone who truly understands where I am coming from has been invaluable. I guess what they say about misery loving company is true. (And as a side-note it is important to remember that unlike the chicken commercial that claimed that "Parts is Parts," "Minorities ain't Minorities." All too often administrators answer the call for minority recruitment with statistics that show the numbers of unclassified minorities on campus.)

But, my purpose here today is not to tell you how to build or maintain this community because the only thing that I can do is to speak to you from personal experience and not from any kind of global experience. What we are here to do is to come together as a broader community and discuss issues that are of great import to English departments across the country.

Plenary Panel



Advocacy and Accountability Without Anality in Internship Programming, Including Some Tips on Law, Ethics, and Places Not to Go

Gerald Savage, Illinois State University

3 Es in England: Education, Experience, and Entrepreneurship

Jacqui Bleetman, Coventry University

Exporting Students, Importing Content: Global and Political Diversity in Homogenous Universities and Technical Communication Programs

David Sapp, Fairfield University

Advocacy and Accountability Without Anality in Internship Programming, Including Some Tips on Law, Ethics, and Places Not to Go

Gerald Savage, Illinois State University

Keywords: mandatory internships, elective internships, liability, hold harmless agreements

Although I've directed an internship program for ten years, much of what I will be discussing here is recent news to me. First, some horror stories—

A university doctoral program in psychology required an internship. The program provided a list of approved organizations for internships and a female student chose six sites that interested her. The program placed her in one of her selected sites, an organization that she could get to within 15 minutes from the university. She was leaving the site one evening when she was kidnapped, sexually assaulted, and robbed by an armed man. The student sued the internship provider and university because of evidence that both were aware of previous, similar attacks at the internship site. She eventually won both suits. According to the National Association of Colleges and Employers, cases like this "have implications for schools that require internships/cooperative education as part of a degree program and that select the sites for the experience. These schools have an additional responsibility to warn students of any risks or of criminal incidents that have occurred at these sites" (Schools Have a Duty, 2004).

Similar cases have had varying outcomes, some of which remain unresolved as appeals continue; however, as NACE advises, universities should be attentive to potential and known risks in internship settings, not only "because the law is unsettled as to...ultimate liability" but also "because of ethical and...image concerns" (Unpaid Student Interns, 1999).

Although cases such as these are not common, they should awaken us to a reality most of us may never have even considered. I suggest that we have the double duty of advocacy and accountability as internship program directors, and that these duties are complicated by our responsibility to multiple constituencies—to the interns, to the internship providers, and to our own employer.

Advocacy means representing and speaking on behalf of each of these constituencies of the internship program. In fulfilling our duty as advocates, we need to ask what each of these constituencies expect of the others because it is in those relationships that we may have to speak on behalf of the interests of each stakeholder. More specifically, we need to ask what rights, needs, and expectations of each constituency we may need to speak for.

Accountability means having to answer for statements or actions of our constituencies on legal or moral grounds. It is to this aspect of our duties that, if you are like me, you have given little consideration and may have even less awareness. Law, of course, pervades virtually every aspect of our lives, but for this discussion I will only discuss some aspects of liability.

First, a disclaimer: I am not a lawyer. You should work with your university's legal counsel or through appropriate college or university-level offices to determine what needs to be done in your program. The legal information I am presenting today comes from two sources: 1) the Assistant Director of Professional Practice for Illinois State University Career Center who provided information that was reviewed by the university legal counsel and 2) The National Association of Colleges and Employers (NACE) *the* organization. Laws pertaining to internship concerns vary from state to state, and a number of important legal issues have not been conclusively resolved, either because

of conflicting court decisions from one case to another, or because some important cases are still in the appeal process.

Two domains of liability concern us: liability of the intern and liability of employer (internship provider) and/or the university. Liability of interns for unintentional damages they may cause in the course of their internships has recently become a concern at my own university. Universities are beginning to recognize that they or the interns themselves could be liable for unintentional damage an intern may cause to an employer's business, employees, or customers. Universities, students, and employers are asking who is legally responsible for unintentional damages a student may cause in a supervised internship—the university that places the student, the employer, or the student?

In the fall term of 2004, Illinois State began to offer a liability insurance policy for interns. It costs the interns $17 per internship per semester. The rate is based on at least 100 participating students per academic year. Our policy is with United Educators Insurance Company. The policy protects the student only. Five of the six colleges at ISU supported a decision to make student liability insurance a requirement for internships. Only the College of Fine Arts had not responded to information about the insurance as of summer 2004.

The second type of liability is liability for harm to interns while working at an internship site. Two types of internship are defined under this kind of liability: 1) Mandatory internships, that is, internships required as part of a program, to complete a degree, or to earn a certificate; and 2) Elective internships, that is, internships that are not required for the completion of a program, degree, or certificate. In this case, the school's involvement doesn't extend beyond posting information about opportunities.

Some internship programs may include both types of internships, and some, like our English Studies internship at ISU, might be considered hybrids of mandatory and elective because we promote internships and our undergraduate advisor often recommends internships as a way to fulfill elective requirements for graduation. Therefore, I now treat all of our internships as if they are mandatory, even though I try to make it clear to students that it is their decision whether any given internship is right for them, and I often suggest alternatives to internships when I think a student could benefit more from a different option, such as workshop or service-learning based courses, or independent study.

Mandatory internships involve the greatest liability concerns for universities, as the story I began this paper with illustrates, even though such cases are probably not common.

What seems to complicate such concerns is that legal definitions of internships and employment vary from state to state. In New York, an intern who was subjected to persistent sexual harassment by her supervisor while serving a mandatory internship was considered a "volunteer" and therefore was not protected under employment laws. Neither the employer nor the university was held liable by the court or the appeals court. These, however, are examples of situations in which a philosophy of advocacy on the part of the internship directors might easily have prevented the harm done to the interns, as well as avoiding the expense and adverse publicity resulting from lawsuits.

Elective internships do not appear to be on the radar screens of university attorneys, but keep in mind that definitions are slippery. Hybrids are possible and may be judged to involve liability. Again, I recommend a proactive stance of advocacy that can prevent liability concerns from occurring.

The legal solution to liability for harm done by interns themselves is the "Hold Harmless Agreement." The reason for such agreements is that, in most situations, employers have had the greatest liability risk because they have more control of the work setting and the intern's activities than the university does. It is just for this reason

that employers are beginning to see internships as potential liabilities and are looking for ways to either share the liability with universities or to shift liability to the university. Hold harmless agreements, also called indemnity agreements, are the corporate lawyers' remedy. Although some organizations might consider asking the student to sign hold harmless agreements, it appears that such agreements for students probably will not protect the organization. For further details about such agreements, see the NACEWeb white paper, "Hold Harmless Agreements."

How to Avoid Going There

The most vital precautions for avoiding liability concerns in your internship program have already been discussed. Knowledge, advocacy, and working with legal counsel proactively are surely your best protection. First, keep in mind the principles of accountability and advocacy. Seeing to these measures, however, requires judgment, time, and information, which suggests another level of precaution, the need to advocate for yourself.

You need to have time to do your job as an internship director, and you need to use the time you have. This means, first of all, things like release time for the job. You simply can't have too much information about internship prospects. If your department doesn't want to give you release time but it wants an internship program, perhaps the legal implications of internships will convince your chair to give you the time to properly administer the program.

But information includes knowing the students and this takes more time than site visits, meetings with employers, or research on experiential education. I generally require a minimum of a half hour initial interview with each student before I will even give him or her the internship application forms. This makes an immense difference in the kind of internship I recommend to them and whether or not I recommend anything at all.

Finally, after all this rather scary stuff, I can tell you that in ten years of directing our internship program and placing close to 400 students in internships, I've never had a student get sued, never had a student or employer sue me or the university, never had a student get injured. What I have had is a constantly rewarding experience. I believe that more students keep in touch with me after graduation than with most other faculty members, and I learn a great deal about technical communication and related professions from interns and graduates. Know these things, and then enjoy helping students get started in rewarding professional careers.

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3 Es in England: Education, Experience, and Entrepreneurship

Jacqui Bleetman, Coventry University

A Bit of History

Coventry University has run a Technical Communication course under various guises since 1989. The purpose of the course was to introduce students to the concepts of Technical Communication and Information Design and to prepare them for a career in these professions. This was the first course of its kind in the UK and was uniquely placed alongside Graphic Design, as part of the Information Design department in the School of Art and Design. The course incorporated a placement (internship) module in the final trimester of the second year.

Placement Module in Information Design

The placement module was designed to enhance the link between education and practice, enabling students to apply their knowledge in a real-world environment in industry. Placements in Information Design were organised for both Technical Communication and Graphic Design students. The placements remain an integral part of the academic programme and, as such, are assessed and contribute to degree classification.

Those academics who started the Technical Communication course had fostered strong links with industry [1]; they recognised the need for an academic programme for those entering industry as technical communicators. The placement was seen as integral to the course, enhancing links with industry and enabling students to gain first-hand experience of the workplace while developing their understanding of the profession within industry. The placement also provided an opportunity to develop and maintain links between staff and industry, allowing staff to stay current with advances in technology and work practices.

The course built up a reputation among employers and many were happy to offer paid placements to students. Students were usually prepared to move for the duration of the placement (up to six months) and employers were almost always helpful in finding accommodations for them. The course team encouraged students to apply for, and accept, placements in large companies as an introduction to the professions of Technical Communication, Information Design and Graphic Design.

In the early 1990s, there was an abundance of companies offering placements, and enough professional contacts between departmental staff and industry managers. The process of arranging student placements virtually ran itself.

A lecture series prepared students for placement. During the placement itself, each student was assigned a personal tutor who visited the student at least once, and was available to offer practical and pastoral support.

Economic Influences

Changes in the economic climate have had a significant impact on the placement market. When industries thrive, they are more likely to offer money, time, and personnel to support and encourage placement students. In the boom years of the early 1990s, large companies were thriving and most had in-house Technical Documentation and Graphic Design departments. These departments recognised the need to support the next generation of professionals.

As the economic climate declined in the mid 1990s, the same companies that were so willing to offer placements in the early 1990s all but closed their Technical Communication, and Graphic Design departments, preferring to outsource their work or make do with much smaller teams. This situation has not changed in the more affluent years of late.

Those companies that still take placement students are far less likely to offer them a salary or a long-term contract.

Many of the staff who once worked in these companies now work as consultants, free-lance designers, or in their own small design and communication companies. They too have had to adapt to the new economic reality. They are not able to offer long-term, salaried placements, but are keen to maintain their ties with the academic community.

Students too have had to adapt to these and other changes. In the UK, until recently, most students enjoyed free tuition and subsistence grants at university. The recent introduction of university fees and the abolition of subsistence grants have changed students' attitudes to their education. In addition, many are tied into 12-month accommodation contracts which tie them to the local area. They are now concerned with their own subsistence and usually have to fund their studies, often incurring debt and having to commit themselves to part-time work to finance their education.

Assessment

The placement module is an integral part of the programme of study and is assessed as such. The assessment must reflect the aims of the module, which will naturally change over time to reflect the prevalent attitude towards placement in Higher Education. By looking briefly at the nature of the assessment over the past 10 years, we can gain some insight into the aims of the placement module.

In the Beginning

In the early 1990s, assessment was based on an evaluation of the student's performance at work. The workplace mentor was required to complete an assessment form that looked at *'how well the student has achieved both the general objectives for the placement and the individual objectives agreed for their placement, and also the overall standard of performance and behaviour'* ("Course Documentation").

In addition to the mentor's report, the students prepared a report on their placement which was assessed by the academic team. The final mark for the module was based on a combination of these two reports and moderated by the tutor. However, with little or no experience of teaching in higher education, mentors' assessments were often inconsistent and marks varied greatly.

The emphasis at this time was on learning through work. Students were encouraged to take placements so that they could gain an understanding of the practice of Technical Communication. The placement was integral to the course because of the learning that took place during the experience. Industry offered placements to develop the community of practitioners in the UK.

The Mid-1990s

As the course developed, assessment methodology evolved together with attitudes to placement learning. It was no longer considered appropriate for external (non-academic) mentors to assess student work. The course team considered that the degree of support and assistance provided to students in the production of a single artefact or product was impossible to determine accurately.

Therefore, assessment of a single artefact produced by a student on placement was not a fair or accurate measure of that student's true ability and experience.

Placement assessment reflected the prevalent trends of the time: building a body of knowledge for the profession and notions of 'professionalism'. Students were required to write a research essay and a reflective journal. They were asked to consider an aspect of their placement and contextualise it through research and relevant coursework. In their reflective journal, they were asked to identify a number of measures of 'professionalism' and to evaluate how they themselves had developed against these measures. They were assessed after the placement had ended, giving them ample time to reflect.

The emphasis of the placement at this time was on the professional experience of students. In the United States, technical communication was identified as one of the emerging professions of the late 20th century ("Occupational Outlook Handbook", 2004), yet in the UK it was, and remains relatively unknown. The academic community was struggling to identify a body of knowledge, and the student community was struggling to identify a career path and profession. The placement module was seen as a place where both communities could explore the wider context, allowing students to consider their career options, while academics explored the content and nature of the academic programme.

Current situation

The economic climate of early 21st century is in the ascendant, but is different to that of the early 1990s. Many large companies have restructured, outsourced and downsized. In-house technical publications and graphic design departments have not been resurrected in this new climate. Consequently many of our colleagues in industry are either self-employed or working for small, specialist companies servicing the companies in which they were previously employed (Harvey and Blackwell, 1999).

In our experience, this restructuring has provided for fewer student placements, shorter periods of employment and less opportunity for salaried experience.

The nature of the placement experience is changing, as is the method of assessment. The trend towards reflective practice in education has had a strong effect on placement experiences. Students are now required to keep a journal during their placement and to reflect on their personal development in the assignment. They are encouraged to consider their strengths and weaknesses, acquisition of new skills and ability to react and cope with new situations.

Today and tomorrow

The evolving economic landscape and the new economic reality for students present us with both a challenge and an opportunity for the placement experience. Students are less willing to move away from university for their placement experience; most have commitments to accommodation, part-time jobs, and family. Changes in Higher Education in the UK, and local changes in the university and school, have had a profound effect on the nature of the placement module. Coincidentally, local changes in the School of Art and Design resulted in the transfer of the Technical Communication course from its partnership with Graphic Design, into a new department – Communication, Media and Culture (CMC).

These changes have affected the placement module over the past two years in a number of ways. Students no longer expect to be paid for their placement and therefore prefer to remain in the university, completing their placement during university time. There are fewer offers of placement from industry, requiring students to be more pro-active in the search for a suitable placement.

Students also seem to be more discriminating in their choice of placements. They see themselves as consumers as they now have to fund their education. They seek value for money and are keen to develop their careers. They are more strategic in their approach seeking the placement opportunities that would best serve their career plans.

A Model for the Future

The new buzz words in British Higher Education are *employability* and *entrepreneurship*. Employability is defined by Yorke as:

> "A set of achievements – skills, understandings and personal attributes – that make graduates more likely to gain employment and be successful in their chosen occupations, which benefits themselves, the workforce, the community and the economy" (Yorke, 2004).

In Art and Design, the trend now is for graduates to be employed in a number of roles prior to developing careers as sole practitioners or in small/

/medium sized businesses (1999). These roles will often include self-employment, education, training and community projects. Graduates now require entrepreneurial and business skills to work as sole-practitioners and survive and adapt in a competitive business environment.

In the UK, employers appear more interested in students who can demonstrate a range of transferable skills, rather than a degree subject. Harvey and Blackwell (1999) identify three skill sets that employers seek:

- interactive skills – communication, teamwork, interpersonal skills;
- personal skills – attitude and ability, including intellect, willingness to learn, ability to find things out, flexibility and adaptability;
- self skills – self-motivation, self-assurance and self-promotion.

It is clear that we need to develop a professional practice module to prepare students for this new reality, whilst still offering them a valuable, educational experience. This module could offer both placement opportunities and live project work to allow students a range of options more suited to their personal situations.

Perhaps it is time to further develop our links with industry to encourage them to engage students with live projects that can be managed in the university. These, and other options need airing to help us provide the best solutions for our students of the future.

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Exporting Students, Importing Content: Global and Political Diversity in Homogenous Universities and Technical Communication Programs

David Alan Sapp, Fairfield University

Keywords: diversity, global partnerships, internships, international

Many U.S.-based technical communication programs are developing formal relationships with global partners. Benefits of global partnerships include preparing students for the workplace by immersing them in intercultural interactions and increasing the complexity of their understanding of diverse global economies and understudied regions and populations. Especially for homogenous TC programs, faculty and students can become more aware of and engaged in global politics as they learn to communicatemore effectively across cultures, critique workplace practices, and produce new ways of being in global relation to others.

My university is in the late stages of developing a global partnership with Universidad Centroamericana, the Jesuit University in Managua, Nicaragua. This partnership will allow U.S. faculty and students to interact with some of the most marginalized in the current world political order and information economy; Nicaragua is the second poorest nation in the Western Hemisphere after Haiti, and shares a unique political history with the United States. Meanwhile, the racial, ethnic, and international diversity at my University, situated in the affluent and largely white suburbs of southern Connecticut, is less than 12 percent among students. The faculty in the technical communication program, though diverse in gender, is entirely of Anglo-American descent. Thus, this partnership with a Nicaraguan university holds great promise for bringing diverse students, ideas, and research opportunities to my relatively homogeneous campus.

The vision of the partnership is to place primary emphasis on communications, business, and technical fields, which are of particular interest to the Nicaraguan university, and will involve student exchange, faculty research collaboration, and sharing technical resources. Already Nicaraguan faculty members have received approval to use all of my university's library databases through the granting of affiliated faculty status. This is a tremendous assistance to under-resourced faculty members who otherwise have little access to printed or online reference materials. It also provides web support for online communication between members of the two university communities. This example points to fascinating opportunities for TC research about cultural differences in communication needs and styles, as well as the use of online facilities. Research collaboration can also reveal much about technical communication that is not taught in most U.S. colleges. It will be important to learn, for example, the nature of technical communication practices in a nation with little high technology, an enormous digital divide between rural and urban sectors, and significant rates of adult illiteracy. With the framework of a dual university partnership, there will be sufficient resources and structures in place to support long-term research projects, which are often difficult to sustain by individual faculty members working independently.

Cross-cultural and interdisciplinary collaborations such as this one promise to make unique contributions to our students that are conceptually important to their academic preparation, as well as critically valuable for their professional development as technical communicators. For example, it would be appropriate for a TC class in the U.S. and our counterparts in Nicaragua to collaboratively develop a bilingual website about the university partnership as a class project.

Exposure to issues in this developing country along with the opportunity to form relationships with students in Nicaragua online or while they are studying in the U.S. might increase the likelihood that our provincial New England students will study abroad in Latin America (especially in Nicaragua) rather than in the traditional European sites. Through new information faculty bring to course preparations, collaborative class projects, and short-term and semester-long study abroad programs, faculty and students alike will develop better cross-cultural communication skills. Larger objectives include the reduction of ethnocentrism and an increased value for diversity of all kinds, as well as nurturing an investment in just economic relations—all goals consistent with my Jesuit University's mission.

While it may initially seem both easier and more profitable for U.S.-based technical communication programs to develop partnerships with academic programs and industry in first-world counties in Europe and Scandinavia, the value of establishing relationships with partners in developing countries should not be overlooked. Creating global partnerships in developing countries is in our best interest as technical communication teachers, students, and program directors to develop skills in global citizenship and as humans who teach and learn, profit and share, and take turns accommodating others' *needs rather than insisting upon the assimilation of our* international partners to dominant Western practices.

While this new partnership, and others ongoing with universities in Russia and Cuba, presents exciting prospects for TC faculty and students at my university, a number of philosophical, ethical, and practical questions remain, and may serve as a springboard for our discussion: What are the specific roles that TC programs, faculty, and students can play in creating and sustaining these international partnerships? What courses can U.S.-based TC programs develop in order to take full advantage of global partnerships? Do an institution's international partnerships increase the desirability of a TC program to diverse faculty seeking employment opportunities? Can such partnerships serve to recruit greater numbers of diverse students to our programs? To what extent are these kinds of partnerships implicated in the long history of colonialism in general, and U.S. imperialism in Latin America more specifically? What can be done to reduce the negative effects of these historical relations? To what extent does our work in international settings facilitate the flight of jobs and capital from U.S. soil? What are the short- and long-term implications of this process?

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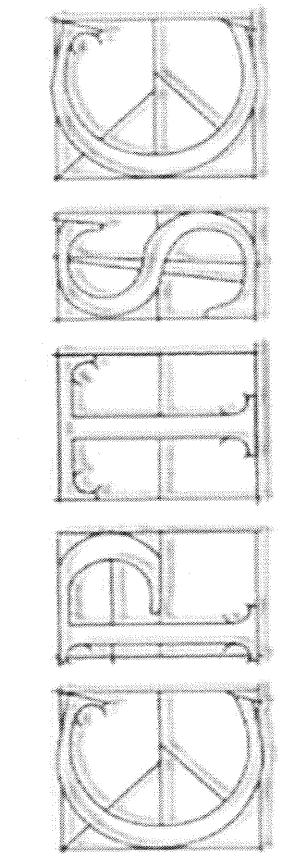

Concurrent Session Abstracts

Global Partnerships in Technical Communication Programs: Practices, Processes, and Principles

Doreen Starke-Meyerring, McGill University; Ann Hill Duin, University of Minnesota

Current global trade negotiations, such as the General Agreement on Trade in Services (GATS) by the World Trade Organization (WTO) and the Free Trade Agreement of the Americas (FTAA) are expected to spurt global trade to unprecedented levels and, with this growth spurt, the need for global technical communication will likely expand as well. Already, many technical communicators spend considerable time collaborating in global work teams, writing for audiences around the world, or managing projects in global networked environments.

To succeed in such environments, technical communicators need to develop global literacy—the ability to think, work, and communicate in global networks (Castells, 2003) and doing so ethically, effectively, and with critical awareness. To foster global literacy, programs need to partner globally and build networked electronic learning spaces that offer regular, just-in-time opportunities for learners to interact with instructors, peers, and technical communicators in collaborative or coordinated courses, programs, or projects, allowing learners to take courses jointly with their peers or from faculty in diverse cultural contexts, and to collaborate on global team projects.

To understand current trends and issues in developing such partnerships we conducted a CPTSC supported study of such partnerships in technical communication programs. We found that the majority of CPTSC members who responded to our survey indicated that they have developed such partnerships, are planning to develop them, or would be interested in building them. Yet, research on program partnerships, in particular global partnerships in technical communication, is scarce.

In this presentation, we share the results of our study thus far, providing an overview of the trends as they emerged:

- What priority do technical communication faculty and their programs assign to global partnerships?
- What kinds of partnerships are technical communication programs building, with what types of partners, and for what purpose?
- What strategies and issues have occurred as programs are planning, implementing, and maintaining global partnership initiatives?

Our research showed that the largest group of respondents indicated that their programs currently do not have such partnerships, but would be interested in developing them. Therefore, we will also discuss the following questions:

- How have programs developed their partnerships? What operational processes, structures, and principles, as well as resources, are needed to make them work and to sustain them?
- What are the key questions programs should address before and while embarking on such a partnership?
- What role might the CPTSC play in furthering such partnerships and helping programs position themselves in a globalizing world?

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We wish to thank the CPTSC for supporting this research, Bruce Maylath, Kelli Cargile-Cook, and Karen Schnakenberg for their logistical support, and our CPTSC colleagues for giving so generously of their time to participate in this research.

Report of a Survey of Managers About Core Competencies

Kenneth T. Rainey, Roy K. Turner, and David Dayton; Southern Polytechnic State University

This study is one component of an on-going effort we are pursuing to determine the core competencies of technical communicators by looking at a variety of data. We have researched existing skill, vocational, occupational, and curriculum standards from around the world in an effort to isolate those competencies that cross-reference through the data (Turner and Rainey, 2004). Survey data and interviews with STC managers provide another source of data that is authoritative and contemporary. This current project is the final component of the study to determine which competencies managers seek in new employees. This report summarizes the results of both the survey and of the interviews of STC managers that we conducted to determine which competencies managers seek.

Methodology

We analyzed the course descriptions from the top ten technical communication programs in the U.S. in terms of undergrad enrollment and extracted the competencies embedded within those descriptions. With this approach, we found the competencies, skills, and tools that are currently valued in the field of technical communications as judged by academics. As a result, we had a list of 142 competencies, but the list was filled with overlapping descriptions. With a cooperative close edit of the 141 competencies, we trimmed the list to 63. We added a section from an STC draft survey to extract demographic data and to highlight the information products used by technical communicators. Lastly, we placed a text box at the beginning of the survey where respondents could list competencies information before taking the survey. Then we invited technical communications managers from across the country (and around the world) to rate the academic competencies.

We first invited listserv subscribers belonging to the Special Interest Group for Managers of the Society for Technical Communication to take the survey and received 47 completed forms from that group. We then invited subscribers of the TECHWR-L listserv who were managers to take the survey and received data from 24 additional respondents, for a total of 71 responses. After eliminating four duplicate responses, two from each listserv, we had 67 completed responses. The survey is still available on the site where we published it: *http://www.oakhillfarmalpacas.com/Manager's%20Survey/index.htm*. See link at the end of the survey for summary results at *http://www.oakhillfarmalpacas.com/Manager's%20Survey/results_page.htm*.

The survey gathered data on management expectations of skills and competencies required of technical communicators—irrespective of the industry in which they work. Two questions in the survey determined if the respondent would be attending the Annual Conference of STC in Baltimore in May 2004 and would be willing to participate in a follow-up interview lasting 30-45 minutes to explore their survey responses in more depth. A colleague who attended the conference tape-recorded three interviews for us. Data were compiled and analyzed using accepted statistical and qualitative methods.

Executive Summary

From a survey of 67 managers of technical communicators, data reveal that the most important competencies for technical communicators are skills in collaborating with both subject-matter experts and co-workers; the ability to write clearly for specific audiences; the ability to assess and to learn to use technologies; and the ability to take the initiative (be a self-starter) and to evaluate one's own work and the work of others. Secondary

competencies include skills in using technologies to accomplish documentation work in various media and the ability to write, edit, and test various technical communication documents. Tertiary competencies include skills in usability testing, single-sourcing and content management, instructional design, budgeting, oral presentations, research, multimedia, and awareness of cultural differences. Based on this research and the research of others, the article concludes with some specific recommendations. Technical communication programs should:

- Find ways to develop students' interpersonal and collaborative skills; to the extent that this instruction is already included in the curricula, assess the effectiveness of the instruction;
- Assess the approach to technology instruction so that it focuses on the "complexity of skill building and the depth of cognitive insights" (Allen and Benninghoff, 2004) into the use and impact of technology on their work and on the human community;
- Accept the idea that "tools" include language—and especially foreign language;
- Increase efforts to internationalize their programs by including international exchange programs and studies of foreign languages;
- Assure that technical communication majors acquire project management skills;
- Assure that technical communication majors acquire understanding of business operations and their roles in the organization; and
- Counsel students not to be intimidated by the language of job descriptions that focus on tools requirements and to provide students with instruction in actively learning how to learn new technologies.

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Trends in Undergraduate Curriculum in Technical & Scientific Communication Programs

Sandi Harner, Cedarville University

The Society for Technical Communication lists a total of 131 programs that "prepare students for a career in technical communication." Of those 131 programs, 75 award BA degrees, while 56 award BS degrees. A study of approximately 100 of those programs demonstrates the differences and similarities of the curriculum offered in these undergraduate degree programs. Presently, when a department wants to develop a new program or revise an existing program, they cannot access curriculum standards as departments such as engineering, education, nursing, and accounting can. This results in tremendous flexibility in curriculum from one program to another.

In this presentation, I report findings from the study of approximately 100 of these degree programs. This study will attempt to address the following issues:

- Trends in curriculum, specifically outlining required courses and elective courses;
- Requirements for internships and portfolios;
- Differences in requirements for BA and BS degrees;
- Curriculum differences based on where the program is housed;
- Differences in course offerings based on the name of the program; and
- Required cognates.

Finally, I will look at sample course descriptions and innovative course adoptions. Majors, as well as minors, emphases, concentrations, and tracks, will be studied.

During the discussion portion of my presentation at CPTSC 2004, I will ask for input from conference attendees to identify ways in which this information can be useful in building new programs and revising existing new ones.

Knowledge, Policy, and Practice: A PhD Program for the Future

Carolyn Rude and Jim Dubinsky, Virginia Tech

For years, members of our field have resisted an identity that is based merely on an instrumental view of writing: writing that captures, records, or contains knowledge developed by others and that makes it usable. The instrumental view creates opportunities and recognition for our work, particularly in the corporate workplace, but it also imposes limits, such as tying us to specific sites of practice (especially technology-related industry). Because this view also encourages a short-term time horizon, it may diminish the perception of what we can accomplish intellectually.

Doctoral programs may feel the tension between instrumental and intellectual goals and between the identity that has current market value and an uncertain, more expansive identity. On the one hand, programs need to prepare faculty to teach best practices of information development, responding to the needs of students who seek corporate positions and to those of their potential employers. The risk of ignoring these stakeholders is loss of the identity we already have achieved and possible loss, as well, of the knowledge of practices that add value in many workplaces. On the other hand, doctoral programs need to develop a research agenda that pursues this field's particular contributions to knowledge and diversifies the field beyond its present definitions. This goal may take the field in directions that are unfamiliar and uncertain, with questions such as those listed emerging.

Given the needs for this field's work beyond instrumental uses in the corporation and given our university's proximity to the nation's capital, we seek to define a graduate program with the ambitious (but ancient) goal of developing and using the knowledge of our field to help leaders make decisions in conditions of uncertainty. Central to the process of decision making will be documents, informed by all we know and can learn about processes of information development. We will prepare future faculty both for teaching and for inquiry related to communication in government, non-government, and nonprofit organizations, as well as in corporations. These organizations are potential sites of practice for our undergraduates, but they also offer research sites. We believe that the time is right for a program that teaches students at all levels to engage with civic issues, test ideas, and participate in ongoing social and political debates. Our focus will be on principles of reflective practice such as "open-mindedness" and "responsibility," principles emphasized by Dewey when he argued for a "process of growth, . . . improvement, and progress, rather than the static outcome and result" (1993). Such a program embraces our core knowledge of practice, but it expands our identity by diversifying both our sites of practice and the types of research questions we ask.

Diversification will also require expanding our realm of influence, not just in terms of the stakeholders with whom we interact, but also in terms of the nature of our interactions. In developing a PhD program at Virginia Tech, we are still very much in the process of definition and exploration, but we aim to develop a picture of a program that explores ways in which issues in diverse fields can serve as areas of inquiry in ours. We are exploring and defining relations with colleagues in Composition Studies, Literature, Engineering, Computer Science, Biotechnology, the School of Business, and the College of Osteopathic Medicine, as well as with Communications and Political Science. We believe that all of these areas are concerned with information and are ready to acknowledge a need for more knowledge about how information is

constructed, organized, and managed and how it may influence decisions and policies in the long term, as well as the completion of tasks in the short term. One challenge for us is helping these partners recognize that we have intellectual and research aims, as well as instrumental skills.

Perhaps another challenge is for us to learn more about what these research aims might be. For example,

- Are we prepared to consider the relationship of information products to long-term planning and policy making in a variety of sites?
- Can our field contribute to the needs for leaders in all types of organizations to make effective decisions, both by the instrumental work we teach people to do and by the ways in which we envision knowledge and planning and strategic action?
- Does what we know, whether planning, collaborating, international communication, risk communication, document design, or knowledge management, apply to all fields in the same ways?
- Can our work prevent communication failures and increase communication successes?
- Can our rhetorical knowledge apply in corporate planning, as well as in policy making in other organizations?

As we proceed with program planning, we still have many questions, not unlike those outlined by Jeff Grabill in his description of the new PhD program in "Rhetoric and Writing" at Michigan State. We will have to negotiate our place within the department, college, and university; seek to define our graduates in such a way that they will be attractive to industry and government; and balance the demands placed upon us and our students for an increasing emphasis on technological proficiency. As we do, we expect that our gaze will turn toward the past, toward the goals of rhetorical education in classical Greece and Rome, as well as in the pre-Civil War United States, to help guide our vision toward the future and toward creating a program that will be a "techne for citizens" (Romilly, 30).

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Are Professional Writing and the Liberal Arts Mutually Enriching?

W.J. Williamson, University of Northern Iowa

I begin with a series of questions about institutional and intellectual diversity. Is professional writing philosophically compatible with a liberal arts education? What does *professional development* mean in a liberal arts context? Is the phrase *liberal arts* still meaningful to faculty and students?

According to the university mission at the University of Northern Iowa, we follow a liberal arts tradition. But what exactly does that mean to faculty and students? The answer may be difficult to ascertain, because there are conflicting interpretations offered of what it means to be a liberal arts institution:

- In one place, the liberal arts are defined as general education. The studies (language, philosophy, history, literature, abstract science) in a college or university intended to provide chiefly general knowledge and to develop general intellectual capacities (such as reason and judgment) as opposed to professional or vocational skills.
- In another place, these arts are defined as a form of critical citizenship.

A truly liberal education is one that prepares us to live responsible, productive, and creative lives in a dramatically changing world. It is an education that fosters a well-grounded intellectual resilience, a disposition toward lifelong learning, and an acceptance of responsibility for the ethical consequences of our ideas and actions. Liberal education requires that we understand the foundations of knowledge and inquiry about nature, culture, and society; that we master core skills of perception, analysis, and expression; that we cultivate a respect for truth; that we recognize the importance of historical and cultural context; and that we explore connections among formal learning, citizenship, and service to our communities.

In yet another place, the materials that describe this institutional philosophy explicitly suggest connections to the professional skills valued in the world of work.

If students recognize such contradictions, they make no indication. If they recognize the significance of the liberal arts mission and philosophy, they make no indication.

Our dilemma (if indeed there is one) at UNI is not unique. In an increasingly competitive educational market, the distinctions between liberal arts and more professional or technological institutions has become less defined. The notion of what it means to acquire or offer a liberal arts education has become muddied in the attempt to make student investment in an education pay off with quality professional opportunities for graduates.

In the context of the CPTSC, I ask the following question: in what ways can our programs benefit (and profit) from this ambiguity? I would suggest that it is in answer to my title question. Professional writing is in many ways a contemporary combination of liberal arts ideals in a practical, professional framework. I believe these are mutually enriching possibilities that can reconcile the apparent contradictions between liberal arts and professional development. I invite the CPTSC community to engage this set of programmatic issues.

Technical Communication as Civic Activity: Content Development for a Youth-Services Information System for a Local Community

James P. Zappen, Rensselaer Polytechnic Institute

Technical communication practices have become increasingly and ever more deeply embedded within complex technical and social systems and thus require a wide range of competencies and skills, including writing and communication, computing, graphic design, management, and social organization, among many others. As a civic activity, technical communication offers opportunities for both students and community members—including underserved and underprivileged community members—to develop and refine these skills.

As an illustration of this kind of civic activity, I have been working with colleagues from Rensselaer Polytechnic Institute and SUNY-Albany to develop a youth-services information system for the City of Troy and Rensselaer County, New York, called Connected Kids. The Connected Kids information system is an Oracle database and World Wide Web interface with information about programs, services, and activities for children and their families. The system is supported by an active program of computer software installations, networking, and instruction, which provides for distribution of information to low-income housing areas and development of information and creative content by and for children. For the past three years, Connected Kids has engaged representatives from youth-services organizations, families, and children as participants in the development of the design and the content for the database. Connected Kids has also engaged graduate technical communication students and undergraduate computer science and information technology students to rebuild computers with Linux software and to provide instruction in the use of the software for children at the Troy Housing Authority's Martin Luther King Apartments and other sites. Representatives from the youth-services organizations develop information content on programs, services, and activities for young people and their families. The children develop creative content, such as artwork and stories, for display in the system and, in the process, develop writing, computing, and drawing skills as they work with graduate and undergraduate students, who provide both instruction and positive role models for the children.

The Connected Kids information system is supported by funds from the National Science Foundation's Division on Digital Government, the 3Com Urban challenge program, Rensselaer's School of Humanities and Social Sciences, and other organizations, and by the efforts of Rensselaer students—including graduate students in technical communication and HCI, who provide expertise and assistance in interface design and testing, information-system documentation, development of instructional materials, and management of undergraduate students; and undergraduate computer science and information technology students, who devise and implement the Linux software installations and networking; provide instruction in writing, computing, and drawing for children, using the Linux software; and design galleries of children's art work and stories for display in the system. These activities are supported, in turn, by changes in Rensselaer's graduate and undergraduate programs, including the gradual transition of our MS program from technical communication to technical communication with an emphasis in HCI and the more sudden shift, driven by student demand, from our conventional service course in technical and professional communication to a new (five years ago) course called Writing to the World Wide Web.

The practice of technical communication as civic activity offers opportunities for faculty and students to share their expertise across socio-economic

boundaries and to provide valuable services to their local communities, to help members of these communities to develop skills in information content development, and to open the door to opportunity for underprivileged children, as they begin to develop the composite of writing, computing, design, and social skills required of productive working adults, including future technical communicators.

This material is based upon work supported by the National Science Foundation under Grant No. 0091505. Any opinions, findings, and conclusions or recommendations expressed in this material are those of the author(s) and do not necessarily reflect the views of the National Science Foundation.

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The Role of Gender in the Curriculum of Technical Communication Programs

Lee Brasseur, Illinois State University

Gender has been, within the last twenty years, one of most frequently cited cultural considerations in technical communication scholarship. Mary Lay and Jo Allen have provided us with rationales for gender inclusion in technical communication courses and authors like Carol David have studied gender through examinations of photo portraits of business women. In light of this focus, the first question for those of us in Technical Communication programs is whether gender should be a part of the curriculum across the board. Do we need full courses in gender issues?

Should gender issues instead be part of a larger cultural studies course? Should all courses include some gender-based content?

Whatever decision is made about gender inclusion in the curriculum must involve discussions of what is meant by gender studies in the field. For example, a gender-based curriculum could explicitly involve women's perspectives on science and technology with authors like Evelyn Fox Keller, Beverly Sauer, and Donna Haraway dominating the discourse. This approach would focus on feminist critiques that do not always explicitly discuss women, but use a gender-based perspective to critically assess science and technology. Another approach would be to extend the idea of gender to examine it from both a male and female perspective, as well as from the perspective of gays and lesbians. This approach could focus on the role of genders rather than gender as a female perspective and might, for example, study how gender on all levels affects communication and reception in the workplace. On the other hand, a gender-based curriculum could focus solely on women in the workplace and provide a place for examination of women's discourse and responses to them.

Finally, the curriculum could provide a place for a study of women's design and use of technology. This would be a particularly relevant and timely perspective with inclusion of recent work by Laura Gurak, Sherry Turkle, and others.

As we can see, there are many different aspects of gender that can be discussed, but the two basic questions I would like to pose to the panel and audience are: Should gender be a required part of the curriculum? And how should gender be defined for Technical Communication programs?

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Queer Eye for Straight Communication

Thomas L. Long, Thomas Nelson Community College

How does one situate queer sexuality within a technical writing course or a professional communication pro gram? Although in recent years the academic field of professional and technical communication has acknowledged and explored the gendered history of these disciplines, and feminist research has disclosed the gendered dimensions of workplace communication, and although academic institutions have striven toward inclusion of historically marginalized groups, queer sexual orientations have occupied a less prominent place in research and discussions. At this point, defining questions may be more purposeful than proposing models for the exploration of queerness in a professional communication setting:

Does queer sexuality constitute a distinct "culture" that is the object of study in a technical writing course's examination of multicultural communication? Does queer subjectivity constitute only a legal category in the employment practices of a technical or scientific workplace? Are all queer subjectivities-including gay, lesbian, bisexual, transgendered, and transsexual people-equivalent (a monolithic queer "culture") or simply commensurate? In addition to elucidating these questions, this position paper will suggest the utility of performance theory and concepts of performativity as relevant to understanding the intersection of queerness and technical communication.

From Users to Writers: Training Technical Communication Students With Disabilities

Suzanne Black, Southwest Minnesota State University

When analyzing their audience and designing documents, technical communicators are frequently urged to consider users with disabilities. For example, Mike Markel's textbook suggests ways of making websites accessible to blind or deaf users; at one STC meeting I attended, a presenter commented on the difficulty of using a cell phone interface with small buttons and smaller numbers. Such occasional awareness, along with some of the idealized imagery surrounding new technology, may make our field seem welcoming to students with disabilities. However, there has been relatively little discussion of the experiences of technical communicators who themselves have disabilities. For example, Savage and Sullivan's *Writing a Professional Life* does not include the experiences of a writer who has a disability, nor do the contributors mention colleagues who do. In other words, if we see the disabled only as users of technology, rather than as fellow technical communicators, we would seem to be out of compliance with a motto used by some disability rights activists, "nothing about us without us."

This gap has a number of implications for technical communication programs; it also suggests future avenues for research. Some of these programmatic implications are relatively obvious, such as the need for more collaboration with writers or activists and recruitment of scholars with disabilities, or a concern for the usability of one's own program materials (especially standardized forms, like course evaluations).

Less evident challenges for program coordinators involve advising, particularly with regard to career counseling, and distance education. Students frequently ask about employment prospects and job searching. When they may need or want specific accommodations, their questions can pose a new set of rhetorical strategies. For example, will companies really hire me? Which ones have a good record on disability issues? If my disability is not apparent, is it better to hide it? Such questions are particularly difficult to answer given both the variety of work environments our students may occupy and the differing disabilities they may have. Clearly more research on the experience of disabled individuals in TC workplaces would be helpful in addressing such concerns. Likewise, learning outside the classroom, although valuable in giving students a sense of the TC profession, can pose logistical challenges (such as transportation) for students with disabilities. In the case of distance education, these can sometimes be daunting. How is one to encourage students to take advantage of such opportunities for tours, meetings, or shadowing, while respecting for their sense of what is possible? What alternatives might be arranged?

There are no single answers to these questions, but my experience with several students suggests they need to be considered, and that more attention to scholarship in disability studies might help us think critically about such concerns and about our discipline.

Towards Formative Assessment: Valuing Different Voices

Nancy W. Coppola and Norbert Elliot, New Jersey Institute of Technology

What rhetorical forms are privileged in technical communication programs? To what extent is the program simply reproducing a narrow model of technical writing that values hegemony? And what voices are validating the structure and design of the program core? These questions emerged as the program faculty in the Master of Science in Professional and Technical Communication at New Jersey Institute of Technology worked through a four-phase assessment of program and student outcomes: 1) development and validation of core competencies; 2) formative student review; 3) summative online portfolio review; and 4) continuous quality improvement loop. The literature of technical communication's connection to issues of gender and authority has been addressed by many scholars, including Jo Allen; Stephen Bernhardt; Lee Brasseur; Katherine Durak; Carl Herndl; Steven Katz; Mary Lay; and Beverly Sauer. Applied to technical communication pedagogy then, and to entire programs of technical communication, one would expect to find homogeneity exerted throughout, in dominant rhetorical forms, in acculturated values of faculty, and in utilitarian goals and purposes.

This was not the case in our recent assessment experiences. In phase one, validating core competencies, we invited our industry board to evaluate our criteria, knowing that the perspective of someone not acculturated to the values of the graduate program would be important. After these multiple inquiries into the process, we began phase two, the formative student review. With completed cognitive and affective skill matrices, expanded with a column to allow for student evaluation, and with sample documents and web pages at the ready, faculty met to undertake a collaborative formative review. The meeting was taped and transcribed, with the notes becoming a progress report that was then sent to each student. Sharing these progress reports with students allowed them to become collaborators in the process as they too reviewed the validity of the matrix. And during the collaborative meeting, faculty challenged the received wisdom of traditional technical communication. Our instructor of visual design, for example, talked through his students' web sites using language of aesthetics, not pragmatics. Our instructor of research methods noted the absence of narrative from our matrix of rhetorical forms, pointing out the value of personal writing. And our instructor of technology-society-culture argued for cultural reflection. Finally, we realized that our perception of students is not gender specific because, in gathering, we found that we often did not know whether our online students were male or female. These outcomes have been felicitous; we knew that, following Carol Gilligan, we wanted to open up our program to other voices and to outsiders in order to ensure quality programmatic outcomes. However, we did not anticipate a diversity of voices from within our program.

Will an English Studies Ph.D. Be a Viable Option?

Dale L. Sullivan, North Dakota State University

North Dakota State University's English department has a Ph.D. in English Studies pending approval. It has passed all stages except the last—the State Board of Higher Education.

When I came to NDSU as the new head of English a year ago, I thought that perhaps there would be a way to turn the Ph.D. toward a degree in rhetoric and technical communication. Although there is room for someone to craft such a degree under our proposal, the proposal clearly claims that the Ph.D. will be one in English Studies based on a fused curriculum. The proposal calls for a mandatory internship. This proposal enjoys strong support from the whole faculty that is made up of literature, composition, and linguistic professors, the mix being eight to five to one.

I have now come around to the faculty's perspective, and I believe that our proposed Ph.D. in English Studies is the best proposal we can put forward. I am strongly committed to the Humanities and a strong liberal arts orientation; I believe the study of language practices is important for all writers; and I think studying literature hones one's writing style, but also creates what Martha Nussbaum calls "empathetic imagination," the ground work for making judgments about ethics. It seems to me that such a program creates flexibility so that students can craft a degree that suits their interests. It also allows them to seek interships that have strong local connections in government, social action groups, education, or industry. And students should come out looking assimilated to English department culture.

However, I'm not sure about implementing the program or about the employability of students who would come out of such a program. I am interested in hearing a discussion from my colleagues in technical communication programs about the viability and sustainability of an English Studies Ph.D. that makes room for a scientific and technical communication emphasis. Several questions come to mind:

- How would you fuse the scientific and technical communication with more traditional literary and linguistic studies?
- Given the need to fuse the specialty in tech comm. with other areas in English Studies, what combination of emphases would work for a student seeking to represent herself as a professional communication specialist?
- What obstacles would such a Ph.D. present for students seeking a career in professional communication in the academy? In industry?
- What advantages might such a Ph.D. offer a student interested in either the academy or industry?
- What experiences do those of you from traditional English departments have to share that would be instructive as we move forward with our proposal?
- Is there any real difference between a Ph.D. in English Studies with a fused curriculum and a traditional Ph.D. in English in which students have the option to take several courses in composition and technical communication?

Technical Marketing Communication: Shall We Welcome It In or Leave it Out?

Russell Willerton, Texas Tech University

The 2004 CPTSC conference encourages us to consider diversity in our programs. Many of our programs struggle amid pressures of reduced funding and increased competition for stature, students, and resources. In response to these forces, we must consider expanding or changing our curricula in order to serve our students, our institutions, and the technical communication profession.

Jim Romano, who delivered the keynote address to the 2004 ATTW convention, encouraged the audience shift their "paradigm" of technical communication. Some of his key points included thinking in terms of a business case to justify our worth; thinking in terms of the total company "brand experience"; and teaching the importance of the customer. In many respects, he encouraged technical communicators to add principles of marketing to their technical communication worldview.

To date, technical marketing communication (or "marcom") has been a fringe topic among academics. The Allyn and Bacon textbook series has added Technical Marketing Communication by Harner and Zimmerman, but the topic rarely appears in our journals or conferences.

It is likely that *marcom* would face stiff opposition in the humanities-related departments in which many of our programs are based. Leigh Henson has shown that some consider marketing inherently deceptive and unethical (Henson, 1994). John Bryan has described challenging ethical issues he encountered in marketing writing (Bryan, 1992). More recently, Patrick Moore has analyzed humanists' suspicion of economic capitalism and the profit motive (Moore, 2004). Other factors working against *marcom* in the curriculum might include a lack of instructors who are qualified to teach on marketing topics, or other departments' claims on *marcom* territory.

As part of my dissertation (which is currently in progress) on white papers and technical marketing within technical communication, I will conduct a survey of academic program directors in technical and scientific communication programs. This survey will present a picture of the extent to which marcom is being taught in our programs, and it will assess program directors' attitudes toward the subject. It will also identify the most common reasons why programs do or do not teach marcom.

This survey has been approved by the IRB at Texas Tech. I plan to administer the survey in August 2004 to the directors of technical communication programs in the list on STC's website. I would like to present the results of this survey in a panel presentation at CPTSC 2004.

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The Negotiated Boundaries of Certificate Programs

Tracy Bridgeford, University of Nebraska at Omaha

Keywords: negotiated boundaries, certificate programs, practical v. theory, communities of practice

When I interviewed for my current position, I didn't have enough experience with program development to ask the questions I needed to ask. My department was looking for a technical communication specialist to develop a certificate in Technical Communication and indicated that once developed, students would be lining up outside my door. This has not been the case. Despite my best efforts, only one English graduate student in three years has expressed interest in the certificate program. Through discussions in various classes and with colleagues, I've surmised that the perception of technical communication as practical is the most telling culprit.

This old song came to light for me during a discussion on advising students about the "practical nature of my classes," demonstrating what I'd like to talk about here: the role of technical or professional certificate programs in English departments dominated by literature. I hypothesize that the certificate program I developed exists as an island cut off from the mainland—the dominant literature ideology—where the boundaries that define technical communication also define the level of participation expected in the community of practice of the English Department. Despite the wealth of support I received for developing, and continue to receive for coordinating the TC graduate certificate, the literature power structure in my department tolerates its existence as long as it stays on the periphery of the "real" curriculum.

From a communities of practice perspective, "miscommunication and misunderstandings are commonplace" (Wenger, 2000) at the peripheries because each community has different enterprises, different repertoires of practices, and especially, different identities. Various elements clash at this boundary between literature and technical communication ideologies: a) solitary author v. collaborator, b) discussions about literary works v. application of technical communication principles (the old theory v. practice debate), and c) writing as an exploration of ideas v. writing for a specific audience and purpose. Each of these elements essentially boil down to what Carolyn Miller (1988) categorized long ago as high and low senses of practical. Even with nearly two decades of scholarly research, this incredibly old battle continues mostly, I think, within English departments hosting a single technical communication specialist.

My intentional use of "hosting" grows out of observations while taking part in curriculum discussions. In developing the certificate program, I viewed it—naively perhaps—as embedded in the English Department English major and therefore as a shared space for learning, not ancillary to the "real" learning with which literature majors engage. This perspective is evident in the required courses for English majors (whatever their chosen track—American Literature, British Literature, or Writing and Linguistics), which always begin with a sophomore-level course in Critical Approaches to Literature. To be fair, writing and linguistic majors can choose to take the sophomore-level "Critical Theory and Writing" course instead; however, literature majors are not afforded the same option. Similarly, English graduate students are required to take Literary Research, a required research course for the MA, a course that does not always include the area of technical communication.

As long as the graduate certificate in Technical Communication is viewed as ancillary, the English department, as a community of practice, cannot "truly become a knowledge asset" because the core and the boundary are not "active in complementary

ways" (Wenger, 2000). The negotiation of boundaries with certificate programs, at least in my circumstance, appears to be one of tolerance as long as it does not interfere with the major's curriculum. Consequently, the "learning" involved in this community of practice is not interactional in ways that support, recognize, and leverage the knowledge base; rather, they are allowable and ephemeral.

With the influx of certificate programs, I am interested in discussing their influence in these traditional departments and how program coordinators negotiate these boundaries.

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Different Campuses, Different Programs: Diversity or Fragmentation?

Kevin LaGrandeur, New York Institute of Technology

When a school has numerous campuses, all under the same administration, how does it maintain program unity? Or is it preferable not to try, but instead to allow different sorts of programs to evolve at different locations?

The school at which I work provides an interesting test case for this question. At NYIT, we have three main campuses. Our Technical and Professional Writing Program is part of the English degree, and it has the same requirements across all three campuses; it is also, supposedly, available on all campuses. But in practice, the English departments on each campus have developed different focuses, and so the program in Technical and Professional Writing has become fully available at only one campus.

I will set aside discussion of our campus in Eastern Long Island, because the departments there are so small that no matter what they do, they cannot offer much of a choice in classes, so students must travel to other campuses to take many of their required classes—including those in Technical and Professional Writing.

The Professional and Technical Writing Program in Manhattan is another matter. They have a full complement of faculty there, but they tend to focus on teaching literature when they are not teaching the composition courses required of us all. This is, in a sense, in the name of diversity; they feel that they can attract more students and field more courses relevant to them by focusing on literary topics based on gender, urban, and ethnic studies. Few of these faculty, as a result, teach Technical Writing, and the few that do teach only introductory courses. This leaves students who want to specialize in Technical Writing little choice but to travel many miles onto Long Island to finish a degree in Technical Writing—a choice which discourages many of them. None of the faculty anywhere but at the campus in Central Long Island teaches upper division courses in the Program and they have also been increasingly providing most of the leadership curriculum innovation for the program.

The question is, is this kind of "campus specialization" a good thing, providing offerings for the students, or is it detrimental, because students have to travel to different campuses for different programs? I worry that it balkanizes the faculty, causing misunderstandings and resentment between people who may have lost touch with what their colleagues are doing; that students who must go out of their way to get particular classes are not being adequately served; and that we may be guilty of false advertising of sorts, since not all of our programs are available at all campuses (though that is what our catalogue implies).

A partial solution to this problem is, perhaps, to put more upper division courses online. But though this may serve our students better, will it merely encourage further fragmentation of the faculty into micro-specializations? Or are there other solutions?

Online PhD Program at TTU

Locke Carter, Texas Tech University

The English department at Texas Tech University has won approval to offer its existing Ph.D. degree in Technical Communication and Rhetoric via distance education. This degree comes about after two years of planning, research, and debate. At Purdue, I will share the origins of our proposal and detail the various arguments we had to make regarding residency, quality, budgets, and outcomes.

The origins of this degree lie at the intersection of two core competencies in our program: distance education and doctoral education. Our doctoral program had a good record of placement and had expanded the number and scope of course offerings from 16 to 24 in recent years and expanded the number of faculty from eight in 1998 to 14 in 2004. We felt we had the knowledge and the capacity to expand our doctoral education mission.

The second competency was our experience in distance education. Since 1997, we have delivered 37 graduate courses in technical communication to our online MA students and we have graduated eight of these students (who take approximately three years to finish coursework). All faculty participate in this endeavor, and the program has grown from one course per semester to a whopping five per semester. Beginning three years ago, we began to field more and more queries regarding doctoral-level courses, to which we had to reply, "sorry, we don't do that, but if you want to move to Lubbock, I know we can help you."

Through answers like this, we began to realize that there is a very large population of working educators and communicators who are interested in pursuing a Ph.D., a fact that continues to assert itself in queries and applications to our new program. Although this population is not what we typically mean when we talk about diversity, it is nonetheless clear that we have diversified our department through the inclusion of this new population, which is older, professional, and driven.

Several issues that we thought would be insurmountable turned out to be easy arguments to make, including residency requirements and the quality of degrees. At Texas Tech and elsewhere, the definition of residency is increasingly seen as irrelevant for certain fields, and distance education is one of the things that has brought about changes.

We learned early in our proposal process that residency was being redefined discipline by discipline, and that we were free to define it as we saw fit. The question of quality was raised from time to time, but our proposal had gone to extraordinary lengths to argue that the only way we would propose such a program was that if it were perceived as equivalent to the on-site degree—by the students, the faculty, and the field. One way we helped smooth out both the residency and quality concerns was to create a two-week summer seminar, which would be required of all online doctoral students. During coursework, this seminar would center on an intensive course that made sense to teach on-site: usability testing (using our usability lab), document design (working daily in software applications), or even reports/proposals that took a southwestern approach (taking advantage of local library holdings).

After coursework is over, this two-week period will be devoted to meeting with committee members, working intensely on dissertation research, and revising articles and chapters. The second benefit of the summer seminar is that the faculty is committed to sharing its ongoing research and publications in a series of lunch speeches and afternoon workshops so that the program can address that potential objection that while it delivers coursework online, it can never hope to replace the culture and expectations of scholarship,

research, and publication.

With two weeks of immersion into the values of faculty, on-site doctoral students, and guest-speakers, we feel we answer those objections.

Issues that we did not initially anticipate, but which eventually caused a substantial amount of revision and new argumentation included budgets (especially revenue projections), the mingling of doctoral and masters students in the same courses, and in-state vs. out-of-state status.

Transforming the Program in Engineering Communication Through Genre Analysis and Professional Workplace Contexts

Richard House, Anneliesa Watt, and Julia Williams; Rose-Hulman Institute of Technology

For faculty and administrators responsible for the technical communication service course, engineering students often pose a particular challenge. If the course is taught out of a technical communication program that offers majors, the presence of engineering students in the classroom represents yet another constituency that must be served, along with the business majors, nursing majors, and so on. If the course is taught within the boundaries of the school of engineering, the challenges may be equally formidable; are the students majoring in electrical or mechanical engineering, civil or biomedical engineering? In this case, engineering students and faculty alike may see the work of the technical communicator as remote from the practice of communication in the engineering workplace, where each engineering discipline demands its own means and genres of communication. If we consider, in addition, the kinds of textbooks available for teaching a course in engineering communication—most of them targeted toward technical communication majors, others that approach engineering communication as a monolithic, undifferentiated field—then the task of teaching engineering communication becomes a challenge indeed.

Engineering communication at Rose-Hulman must serve many different engineering majors through a single course and through an informal writing-across-the curriculum approach that encourages technical faculty to incorporate communication assignments in their technical courses. When the course was first taught in the mid-1980s to only civil engineering majors (2 sections of the course per year), it remained focused on the kinds of communication appropriate to the civil engineering workplace, i.e., the long technical report. Since 1995, however, the number of departments requiring the course has grown from two to six, and the number of sections offered per year has increased from two to 12. By necessity, we have had to reconsider how we can bring the practices of so many diverse engineering workplaces into the course.

Our solution is the Professional Engineering Genres (PEG) Project. Since 2000, we have collected samples of engineering workplace documents from Rose-Hulman alumni at different stages of their professional careers. We have developed a survey instrument that is delivered electronically; respondents then send us samples accompanied by explanations of the context in which the samples were produced. As a result of PEG, we have been able to bring real workplace documents into the classroom; we have also developed new assignments that require students to induct the conventions of workplace documents in their disciplines based on sample types, such as standards documents for electrical engineering students, requirements documents for software engineering students, and proposals for engineering services documents for civil engineering students. This panel discussion will demonstrate the emphasis on genre that currently characterizes our efforts in engineering communication. We also plan to show the new assignments and discuss the impact of genre and contexts on both student, faculty, and alumni support for the service course.

International Virtual Team-Projects for Engineering Programs

Charlotte Kaempf, Universitaet Karlsruhe; Frank Molkenthin, Technische Universitaet Berlin

Academic programs have to be adapted rather quickly to changes in graduates' workplaces. More and more institutions prepare students to work efficiently in transient distributed project teams that are characterized by cultural and disciplinary diversity. This means program directors are challenged to offer students opportunities to learn in communities of practice (Wenger, 1998).

The online education project "HydroWeb," introduced in 1999 (Molkenthin, 2003), is designed for civil engineering students. 2003 marked the fifth round with 109 students from 20 nations around the globe forming 12 teams of eight to 10 members from at least three different locations; such heterogenous team makeup corresponds to professional settings. The task of the two-week project is solving a river management problem using state-of-the-art simulation software (Molkenthin, 2004).

This course grants students four EU credit points (ECTS, European Credit Transfer System); for comparison: a 13-week full-day internship and Master's thesis earn 20 and 30 EU credit points respectively. Interested students attend two introductory audio-/video-conferences to familiarize themselves with the technology of the project platform (i.e., a server for *exchanging* of basic information (Syllaweb, e-board) as well as *sharing* of simulation data and models). To launch the kickoff meeting students use a best-practice guide from the syllaweb. At the end of the two-week project phase students summarize their engineering results, as well as collaboration experiences with their peers in a precis. In opposition to most other course partner institutions, the Karlsruhe team members are expected to attend a short course on relevant communication issues for virtual teams such as management and presentation of data, information, or knowledge (Kaempf, 2003 a/b).

We would like to discuss collaboration-oriented multi-modal teaching units to enhance graduate engineering curricula. In particular, we are interested (a) whether two-week courses are considered sufficient to test and hone students' abilities to collaborate in virtual teams; (b) whether a combination of online and onsite phases seems useful; and (c) whether such courses should be different for various engineering curricula such as mechanical, electrical, and civil engineering.

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Integrating a Range of Discipline-Specific Materials With General Analytic Skills in a Technical Communication Course

Lisa McNair and Judith Norback, Georgia Institute of Technology

The diversity challenge that I would like to discuss is how to integrate discipline-specific goals into a technical communications curriculum that teaches general analytical skills. While discipline-specific materials are valuable for motivating and demonstrating, it is the general analytical skills that will help students stay afloat when they enter professional life. We want to build their ability to adapt to communication scenarios, including new media and new contexts that we cannot foresee.

Many technical communications programs serve a variety of engineering schools, as well as students from schools such as Computing, Management, and Architecture. This is true of our humanities department, which is also dedicated to building its own unique academic structure within a technical institute. Our major, a B.S. in Science, Technology and Culture, offers a focus in media studies that could combine productively with a technical communications course that directs students to examine "affordances" offered by different media and different scenarios.

The discipline-specific component is an NSF-sponsored initiative for obtaining workplace materials for the Technical Communications classroom through interviews with industry professionals. Although these materials are motivating for students and offer value-added sample documents, they are not general enough for a curriculum that will prepare students to tackle a variety of communication circumstances.

Specifically, how would a technical communications course both serve a diverse group of majors and offer discipline-specific instruction that motivates and provides real-world examples? Our current effort is to design instructional packets that can be dropped in to any course on a group basis or to an individual. For example, in a class of 12 Industrial Systems Engineers, two Polymer Engineers, and 10 Computing students, we would teach a general curriculum supplemented by workplace materials specific to each discipline and accompanied by exercises that students can work through on a self-guided basis.

Still, even with a stand-alone deliverable, implementation problems remain (e.g., how does the instructor stay engaged?). Although a de-centered classroom is often beneficial for the learning process, it is still important for the instructor to maintain a position of guidance. Also, how does the instructor navigate the seams between the specific workplace materials and the more transferable analytical skills? A discussion of how to combine these assets in a curriculum that still prepares students for the diverse environments that lie ahead would be very valuable to our project, and perhaps also helpful to other organizations that are faced with teaching communication skills to a diverse population of students with a variety of career goals.

Dr. StrangeFish or: How I Learned to Stop Worrying About Diversity and Love The Academic Bill of Rights

Kelli Cargile-Cook, Utah State University

This year's CPTSC call for papers on the topic of diversity is particularly timely given the current national controversy surrounding David Horowitz's *Academic Bill of Rights*. In this position paper, I will briefly outline the controversy surrounding the *Academic Bill of Rights*, summarizing arguments both for and against it. In considering these viewpoints, I would like CPTSC members to discuss the impact the *Academic Bill of Rights* has had or is having on their campuses and programs and to think about the impact this movement may have on how we teach our technical and scientific communication courses.

Mr. Horowitz wrote The *Academic Bill of Rights* to promote what he calls "intellectual diversity" on college campuses. Its purpose is to "empha[size] the importance of intellectual diversity to a free education and codi[fy] protections for students that are currently being systematically neglected" (Horowitz, 2003). Such protections are necessary, Horowitz argues, because college campuses have become hotbeds of liberalism and Democratic bias in which other political views are stifled or silenced. He supports these claims with surveys of professorial political affiliations conducted by the Center for the Study of Popular Culture, which he directs. (To see an example of one such survey, read "The Shame of America's One-Party Campus" in *American Enterprise Online*, *http://articles.findarticles.com/p/articles/mi_m2185/is_6_13/ai_90753087).*

In citing examples of neglect caused by academia's biases, Horowitz claims that across the country (and at my own institution), professors have failed students for supporting the war in Iraq and for identifying themselves as Republicans or espousing Republican ideals. Furthermore, Horowitz writes: "Under the name 'political correctness,' student speech rights have been curtailed and students' academic freedoms abused on an unprecedented scale. Courses of indoctrination masquerading as education have spread through the curriculum and become familiar objects of public ridicule" (Ibid). With the support of Students for Academic Freedom (SAF), which currently claims members on 135 campuses, ("Students For Academic Freedom), Horowitz has taken *The Academic Bill of Rights* to student councils and associations as well as legislatures across the country. (For specific details on adoptions and legislative actions, see the SAF's Year End Achievement Report at *http://studentsforacademicfreedom.org).* Horowitz's arguments and the Academic Bill of Rights have been in the spotlight at my own institution since October 2003 when the association of students proposed and adopted a version of the bill.

On a national level, the controversy over the Academic Bill of Rights has also been highly visible with Stanley Fish, the outgoing dean of the College of Liberal Arts and Sciences at the University of Illinois at Chicago, weighing in most frequently as a cautious supporter of Horowitz. According to Fish, "No university and therefore no university official should ever take a stand on any social, political, or moral issue....Academic virtue is the virtue that is or should be displayed in the course of academic activities—teaching, research, publishing. Teachers should show up for their classes, prepare their syllabi, teach what has been advertised, be current in the literature of the field, promptly correct assignments and papers, hold regular office hours, and give academic (not political or moral) advice....Teachers should teach their subjects. They should not teach peace or war or freedom or obedience or diversity or uniformity or nationalism or anti-nationalism or any other agenda that might properly be taught by a political leader or talk-show host" (Fish, 2003). Arguing that academics should not be political advocates, Fish

cautiously supports *The Academic Bill of Rights*, although he admits that taken too far, the bill could result in monitoring of professors' political affiliations and governmental requirements to hire conservative instructors and to revise reading lists to make them more "pro-American" (Fish, 2004). Ostensibly, *The Academic Bill of Rights*, Mr. Horowitz, and Dr. Fish would argue that the role of university professors is not to promote political viewpoints, but to encourage the free exchange of ideas, whatever ideology an individual espouses.

In response, the American Association of University Professors (AAUP) has strongly opposed *The Academic Bill of Rights*, calling it "dangerous" and "a grave threat to fundamental principles of academic freedom" (Academic Bill of Rights" a). Its opposition is based primarily on three concerns about the bill: it reduces the definition of diversity to a political measure, it removes academic judgment from professors' domain and places it in the domains of administrators and legislators, and it asserts that all opinions are valid, eliminating quality and scholarly criteria from the evaluation of opinions.

Given these differences ranging from Horowitz's arguments for "intellectual diversity" (Hebel, 2003) on college campuses to the AAUP's concerns that the bill's guidelines "invite diversity to be measured by political standards that diverge from the academic criteria of the scholarly profession," ("Academic Bill of Rights" b) I propose we discuss the following questions:

- Is this movement affecting the way diversity is viewed on your campuses or in your programs?
- Is *The Academic Bill of Rights* affecting or shaping the way you are thinking about or are teaching diversity in your classes? For example, have editing professors found students more or less open to discussions of the use of discriminatory or nonsexist language in technical documents? Or, in document design classes, would a discussion of "green" publishing techniques be considered a political agenda? Should we continue to foster such discussions, or should they be eliminated as too political?
- As technical and scientific communication professors, do we not engage our students politically, teaching them to be political advocates for their users? And, in doing so, are we then advocating for or against certain political agendas?
- In general, can and should we remove political advocacy from our classrooms and curricula? Where do we stand in relation to *The Academic Bill of Rights?*

In asking these questions or others that arise during the discussion, I hope that we can explore the question of professorial values/politics and their places in the classroom and examine how and to what extent we believe diverse political opinions should be addressed in our classrooms and curriculum.

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"College Club:" Using Service-Learning in a TC Program to Encourage Awareness of Diversity

Thomas Barker, Texas Tech University

According to researcher Emily Thrush, intercultural communication requires three areas of teaching and learning: awareness of one's existing culture and cultural differences, information about categories of cultures and cultural variables, and practice communicating with readers from other cultures. The reasoning behind this three-pronged approach is that the experience of intercultural communication requires students to appreciate the ethnic and cultural diversity represented by their readers.

Service-learning pedagogy, wherein students take on communication projects for community non-profit organizations, can provide opportunities for all three areas of teaching and learning.

Students majoring in technical communication get some opportunities to interact with persons from diverse ethnic and national cultures in their courses by virtue of the need to find clients for their projects, but intercultural communication might not be central to their experience if they only select non-paying clients (as opposed to non-profit clients). One way to enhance the centrality of diversity in a technical communication program is to provide an opportunity for service-learning in the capstone course of the program. This paper will discuss the service-learning project in the capstone course for TC majors at Texas Tech University.

Recent revisions of the capstone course for TC majors attempted to reinforce professionalism in three areas: professional issues, community involvement, and employment. Professional issues means trends in design, technology, research, and genres; and employment issues means preparing appropriate materials for succeeding in the TC job market. Community involvement means helping students recognize a commitment to the location in which they practice. This area implies ethics, values, diversity, and other elements of professionalism that in recent years have become the focus of scholarship in technical communication. The area of community involvement is most difficult to teach, because the traditional classroom paradigm needs to be changed to accommodate a greater involvement of students in the community.

Our attempts at community involvement in technical communication had, in the past, been satisfied by having students seek real-world clients. However in the capstone course we wanted students to experience a sense of sharing and accommodating various communities in a spirit of giving back. In the first year this course was taught, we had an opportunity to link up with students in marketing and engineering to create an interdisciplinary service-learning project. Typically technical communicators team with marketers and engineers in the workplace to create, sell, and maintain products. As part of an American Academy of Higher Education project in service-learning, we worked with faculty and students as a team to describe a project in a local high school where students are typically under-represented as college students. The project, called "College Club", was intended to create materials to help students make the transition from high school to college, taking into account factors of community and diverse ethnic and cultural values. Working as part of the interdisciplinary team, our students created a series of seven lessons/tutorials to assist the project. These materials comprise a set of meeting agendas with complete background materials and presentation slides to conduct meetings of the "College Club."

The College Club project is an example of how majors in a technical communication program can, through service-learning, participate in the diverse populations in a city and gain an expanded view of their profession. Using such a project as part of the capstone course in a technical communication program reinforces the emphasis on addressing diverse audiences.

The Problem of Diversity and Reinscribing Power Structures in Course and Program Development

Steven T. Benninghoff, Eastern Michigan University

It might seem, given the tremendous diversity in types of jobs and applications of technical communication, that diversity would be less of a problem here than elsewhere. But diversity, for technical communication, is clearly a problem different from, say, diversity for our colleagues in English studies. In literature, or in creative writing, recent moves reach out to, and embrace, work, visions, and voices external to the mainstream. But technical communication, as a field seeking to bridge discourse communities separated by different knowledge areas, and hence social and political worlds, all too often works as building a one-way bridge, from the lower ranking community to the mainstream (Herndl, 1993). I contend that we need to think about how technical communication can thus work in a colonizing way, and in order to foster diversity, think about how assignments, courses, and programs can be redesigned to ameliorate this process.

For us to foster diversity, we need to value and develop connections to "small cultures" in a technical communication program. The issues surrounding diversity are significant because our students are working to assimilate the industry and production-minded models of current post-industrial capitalism. While technical communication can function subversively in that we can argue things like usability testing or user-centered design invert the usual power and social hierarchies and offer opportunity to the non-expert, by-and-large such opportunities are only offered because these skills of designing for specific audiences are easily used in situations that can "create markets" - i.e., control rather than empower the audiences we would like to serve (Spinuzzi, 2003). These kinds of political imperatives are certainly not lost on our students, as they readily assume the stereotypical roles offered by case-based and consulting projects. The problem seems to be how we value and support variant small cultures while teaching the methods of communicating across boundaries of culture and hierarchy. It is one thing for us to talk the big game of empowerment and offering opportunity, but we need to recognize the politics built into the systems of technical communication as we extend and develop them. Several current trends in technical communication, such as the out-sourcing of jobs and the greater emphasis on the ability to write and design for global audiences, hold potential for such discussion. But the largest need for discussion currently seems to be the explosion of service learning emphasis in course and program development.

Of course it matters what we mean by fostering diversity—for this purpose let's focus on the effects our assignments and the politics of their tasks have on our students. For example, the common employment documents project in technical communications courses asks students to evaluate and arrange their work and life experience in as attractive and rhetorically effective a way as they can in order to land a job. We emphasize, rightly, how important the audience is to the success of the documents, and how they need to present or "package" themselves to these readers. The problems for students coming from communities more removed from the mainstream seem clear-experiences that more obviously relate to the goals of the potential workplace, and in particular those that share its values, become emphasized and highlighted. Clearly this sort of experience can have a homogenizing effect. But it need not do so so emphatically. Indeed, while the tendency is for students to look at their own life experiences and to disregard them as culturally separated from the goals of the mainstream employer, it is certainly possible, so long as we are teaching the rhetorical representation of different experience, to work

explicitly to help students value their local community experiences in different ways, and see how they can be "marketed," in effect, to the mainstream culture. I am confident, in fact, that this is what many of us already do. Still, it can't be denied that, for instance, students don't need to "apply" with a cover letter and resume to their other cultural pursuits. While they certainly may have other, and potentially even more difficult rites of passage to particular communities, it is clearly safe to say that the mainstream, capitalist culture of working America is holding all the cards.

Thus the point is that to foster diversity in and across technical communication programs, we must recognize the political articulations the field and its practices already perform, and think about how we can work with and ameliorate them at the project, course, and program level. These are no easy tasks. In particular, service learning projects seem to be invoked all too often unproblematically. While they certainly are effective in immersing students in realistic, if not real, workplace environments, maybe offering access to situations students from marginal cultures would not otherwise get, and in the best of situations offer a safe place to reflect and question the politics and situation of such communication, they don't necessarily support or develop the value of marginalized cultures themselves. And if we wish to foster diversity in our programs, these are difficult problems we need to think more about.

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Diversity in Education and the Erosion of Public Support

Sam Dragga, Texas Tech University

We are seeing it almost everywhere: the erosion of public support for public higher education. More and more of the costs of college are being shifted to the individual student. A college education is today widely viewed as a benefit to the student only instead of a benefit to his or her entire society—as almost entirely a private good instead of a public good, a notion often reinforced by programs of "outcomes assessment" that give little weight to the collective impact of higher education. And thus we see the privatization of education, the raising of tuition and fees and a ubiquitous emphasis on donations from individual and corporate sponsors (though such sponsors might also go to extraordinary efforts to resist or avoid paying the taxes essential to the vigorous support of public education while nevertheless thinking of themselves as generous contributors to specific institutions).

On the days that I'm feeling especially cynical, I believe in my heart that the cutting of funding to higher education is the height of legislative ignorance and immorality. I am convinced it is class war—a war of the rich on the poor. The individuals and institutions giving money to legislators and the legislators accepting that money have received their inexpensive public education and are closing the door on the growing numbers of poor people and people of color waiting in line to receive their inexpensive public education—closing the door to opportunity, to the professions, to power—closing the door to change. I can't imagine a better way to disrupt efforts at diversity except by pricing education so that it is chiefly the rich (and chiefly the white) who have the ability to cover the cost. And I know the rich have options the poor don't, such as a variety of financial incentives and tax credits that make it easier to save for college and pay rising tuitions. And I know that if you don't make enough money to pay taxes, tax credits for tuition or a program to put aside money today for tomorrow's college tuition—such programs don't do you much good.

But if I am of a more genial disposition, I imagine it's a case of insensitivity instead of animosity, and bumbling instead of bigotry. I am nonetheless distressed, but without the special sting of despair. And I try to exercise my faith in the power of words to educate and influence potentially receptive minds.

I think educators have a big job to do. It isn't enough for us to recruit more majors and minors. I think we have a bigger job. We have to help restore public support for public education. We have to demonstrate to the public the merits of public education, to prove that it is a public good as much as a private good. It isn't enough for us to make the students who come to us better writers and readers; we also have to make them better citizens—civic-minded, socially responsible citizens who realize the collective benefits of higher education. It isn't enough for us to recruit majors and minors to rhetorical studies; we have to recruit voters and legislators to realize the essential contribution to the public good that a public education has to offer.

And who better to do this but specialists in technical and scientific communication? Who is better at gathering the salient evidence, creating the narratives and analyses, and devising the illustrations that will motivate a timid and inattentive public to resist the erosion of public education?

A generation of scholars in technical and scientific communication has devoted itself to building the discipline, to establishing journals and professional

associations, to publishing the books and articles that constitute the critical principles and practices of the field. While we were thus focused, however, we have allowed the bridges that link us to the public to deteriorate.

We must do more as scholars to revive public support by writing and publishing for the public instead of only for each other. We have developed a habit of writing only to and for each other, gaining a reputation for being isolated (and often elitist), and for publishing esoteric articles that only fervid specialists read (and we don't read all the articles). We ought to be making a greater effort to address the public regarding the research we do through magazine and newspaper articles that the public will read and giving greater weight in tenure and promotion and merit decisions to such publications. The objective of scholarship can't be to contribute exclusively to the knowledge of colleagues; if we desire or expect public support, we must contribute to the knowledge of the public, including the public that isn't in the classroom, the public that pays taxes instead of tuition. If we expect public support, we must be public intellectuals

If we expect public support, we must commit to the public performance of verbal and visual rhetoric—creating technical communication materials that support public life and advance the shared interests of the communities in which we live—and crediting such materials in tenure and promotion decisions as publications and presentations. The public must hear us and see us as contributors to the public good, must hear and see the students we teach as contributors to the public good.

We have been entrusted with a sizable responsibility as instructors of technical and scientific communication. We must create a learning environment for individuals who will look to us for both instruction and inspiration, who will see us as representatives of the discipline, of the academic profession, and of higher education. This is a job that doesn't stop at the perimeters of campus. We teach students what to think and know and do, but also who to be. Parents, neighbors, friends, and relatives also see us as representative of the field. Their opinion of this discipline—and of higher education itself—is influenced by the integrity, energy, generosity, and wisdom we exhibit.

Make no mistake: we are the embodiment of the discipline. We determine the public's attitude to technical and scientific communication; we influence their inclination to be writers and readers. We have the capacity to encourage their devotion to higher education and their recognition of a civic obligation—a moral obligation—to support higher education for all citizens of all colors.

Enhancing Technical Documentation in Ghana: Modest Suggestions for Adaptation in Training Programs

Michael Jarvis K. Bokor, Illinois State University

The use of technical documents in both the public and private sectors of Ghana is widespread. Government and quasi-governmental institutions, especially, tend to use technical reports and project proposals as driving forces to seek funds and goodwill for their operations. Training in writing is provided primarily in two ways: through an apprenticeship approach where senior professionals in an organization model prefer documentation forms for their subordinates, and through seminars and workshops that are organized usually when problems arise and management wants to control the damage. My paper examines the imbalance between the extensive use of technical documents and the training available for those who do the technical documentation.

No discipline known as "technical writing" or its equivalent is taught in any of the schools, colleges, polytechnics, or universities. Perhaps the closest to such a course is offered at the Kwame Nkrumah University of Science and Technology (and its School of Mines), a course called "Project Proposal Writing." It is offered at the first degree level, but nothing more is done in the country. Industries, as well as governmental and quasi-governmental institutions provide training for their employees when the need arises, primarily emphasizing project proposals and formal reports. Training programs are facilitated by well-paid resource persons, mostly trained overseas.

A two-week workshop on project proposal writing would attempt to prepare the participants to write project proposals to win contracts with the UNDP, AIDS Commission, World Bank, Poverty Reduction Secretariat, JICA, CIDA, USAID, etc. The main instructional methodology is the lecture, providing formulas which supposedly can be applied in all writing tasks and contexts. Participants are expected to share what they learn with their colleagues who could not participate in the training programs.

To its credit, this model responds quickly to local exigencies, it has strong buy-in from management, and is not expensive. Its disadvantages include lack of outcome assessment measures, low buy-in from participants, high entropy in the transfer of learning process, and a pedagogical model (the current-traditional episteme and Freire's "banking" concept) that is widely regarded as obsolete and ineffective.

What, then, can be done to enhance the training of the country's technical communicators? The country's educational system has remained fixated on the British colonial model and is resistant to change. A more pragmatic solution may be to work within and modify the existing industry-based system of training, replacing the lecture approach with more student-centered workshops, providing hands-on projects addressing real problems that concern the Ghanaian public and impact the organizations providing professional writing training for their employees, and developing credible outcome measures for the training provided.

Reform Without Reformers: The Plight of English Education in Japanese Schools of Science and Technology

Thomas Orr, University of Aizu

Keywords: university reform, English language education, nonnative speakers, Japan

The globalization of society, due to the Internet and other forces, has not only strengthened the international pervasiveness of English in fields of science and technology, but it has also intensified international competitiveness in research and industry, thus making English crucial for success in global ventures of all kinds. Corporate projects and professional gatherings that once confined themselves to narrower domains are becoming increasingly international, with global memberships meeting global needs through virtual communities worldwide. Communication in such an environment, of course, requires a global lingua franca. And for now, that is English.

For nations with large populations of native or near-native speakers of English, participation in global discourse presents little difficulty. English skills come easy. But for nations with languages quite different from English, the enormous amount of time and effort required to master this tongue puts them at a considerable disadvantage. Generating products and services for international markets and participating in international decisions requires levels of English competence that many nonnative speakers seldom achieve.

Japan in particular is disadvantaged by the increasing necessity of English in the sciences and technologies, for it relies heavily on the development and export of products and services in these fields for survival. International trade generates income to buy raw materials for its industries and food to feed its 127,000,000 people. Japan needs English to stay up-to-date on international trends and technologies as well as to invent new products and services for the global marketplace. Without it, Japan cannot survive very long in the 21st century.

Some nations are better at overcoming the challenge of learning and using English than others, and Japan is well known for not being one of them. In a global economy, this is causing trouble for Japan. The combined forces of cheaper production costs and increasingly better English in other parts of Asia, for example, have occasioned a major shift in profits from Japan to its neighbors that is currently swelling unemployment, closing companies, and inducing prolonged economic decline within a country that used to be much better at economic comeback. Insufficient English skills seem to be largely responsible

Now seriously concerned about Japan's future, the Ministry of Education, Culture, Sports, Science and Technology (www.mext.org) has begun discussing strategies, holding seminars, producing papers, and calling for reform in all aspects of education (English and otherwise) in order to better equip Japanese citizens for more effective participation in international society and thus save the nation from potential economic ruin. In particular, it has begun calling for English education reform at the university level to produce graduates who can use English in the workplace and thus more effectively internationalize Japanese companies so they can attract more international business and compete in international markets. Students with superior English skills in science, technology, and commerce are the educational goal.

Genuine reform is not possible, however, without reformers who not only know what needs to be reformed, but also who can actually bring it about. Universities of science and engineering would like to improve their programs in discipline-specific English, but there are few specialists in Japan who

know the English of technical and scientific communication well enough to provide suitable training, and few administrators in government or academe who know what kind of instruction would prove most effective.

In surveys conducted by Orr, Smith, and Watanabe (2003), university administrators at several major graduate schools reported that although they recognized the need for better English language instruction at the graduate level, they had considerable difficulty finding English faculty with enough knowledge of disciplinary discourse and documentation to satisfy their English training needs in effective ways. Content experts in Japan typically do not excel in English well enough to teach it, and most of the English educators available locally do not posses enough knowledge of professional content and culture to provide proper English training for professional practice. Simply being a native speaker of English does not endow one with enough qualifications for the work, nor does graduate training in Teaching English as a Foreign Language (TEFL) or English literature. Language experts with a good understanding of science or engineering and the disciplinary discourse of the field are the kind of educators needed most, and these are hard to find in Japan.

In this same study, administrators also revealed that they had fairly good intuitions for specifying what kind of training might be needed, but that they had too little understanding of learning theory, needs analysis, instructional design, and assessment procedures to be able to implement the kind of program that would generate the results they really wanted. Intuition alone was not sufficient for creating appropriate plans and programs.

Large international companies in Japan have tried to make up for this lack of training by creating their own in-house English language education programs, but these tend to be equally fraught with problems. After visits and communication with managers at several major Japanese companies, for example, the author was surprised to find that most of the in-house training and English materials development were assigned to former managers who had experience working in overseas offices or had experience working with foreign clients. Investigation of the English training manuals and language programs, however, made it clear that most of the efforts were flawed, amateur, and generated poor results. At best, they could only pass along the traditions, so well ingrained, of poor English communication in spoken and written form.

Applied linguists in the field of English for Specific Purposes (ESP) have begun to come together within the Japan Association for College English Teachers (www.jacet.org) to address the challenge of developing suitable English education for the sciences and technologies, but enthusiasm for reform far exceeds the skills and numbers required to bring about much of a revolution in occupation-specific English education. Few language educators have much training in the disciplines they are hired to serve, and few materials exist that can help them teach specialized English for specific professional purposes.

Reform is not as easy as government officials may imagine. For major reform, major changes are necessary. And this will require the approval and commitment of many. Two of the changes I believe to be necessary are the following:

1. Greater openness at Japanese universities and in professional/technical societies to the diversification of their memberships through the addition of qualified internationals from abroad and the use of English as their official medium of communication.

2. Bolder efforts to draw upon professional expertise outside Japan through better use of academic exchange and educational consultancies.

Professional organizations such as CPTSC are clearly positioned to offer Japanese universities suitable advice in the area of technical and scientific

Internationalizing the Technical Communication Curriculum

Victoria M. Mikelonis, University of Minnesota

Each year, more and more companies outsource their production, computing, and translation departments abroad. This outsourcing challenges us to produce students who are competitive in the global business environment and interculturally competent. King and Fersh state that "the realization before us now is that the question is not whether international/intercultural education should be a significant part of our colleges; without it what we call 'education' is incomplete and insufficient for our contemporary and future needs." To meet this challenge, many institutions (such as the University of Minnesota) have set priorities that 50 percent or more of their undergraduate students will have a study/work abroad experience. But before we can fulfill this mandate, we have to determine what kinds of programs are in place to provide faculty with the knowledge, skills, and experience to broaden their own international/intercultural experiences, and, by extension, internationalize the curricula.

A three-year Bush Faculty Development grant at the University of Minnesota has as its goal to train 12-15 faculty each year from across the university to internationalize their courses. Some faculty in the S&TC Program have been instrumental in leading this training, while others have participated in it. The purpose of this position paper is to present and justify an approach we adopted to internationalizing the technical communication curriculum based on the larger efforts at the University of Minnesota to internationalize the entire university curriculum.

This position paper will provide definitions of what internationalizing the curriculum means, identify ways to internationalize an entire curriculum, and provide resources for faculty who are interested in broadening their international perspectives and internationalize their courses.

What does it mean to internationalize the curriculum? There are many answers to this question: curricula with an international subject, courses in which traditional subject areas are broadened by an internationally comparative approach, courses that prepare students for international professions, courses in foreign languages and linguistics that explicitly address cross-cultural communication issues and provide training in intercultural communication skills, interdisciplinary programs that cover more than one country, curricula in which certain courses are offered abroad with local faculty, etc. A combination of these approaches has been used in the undergraduate S&TC program for the past six years. This position paper will review these approaches and their effectiveness in preparing undergraduates to be competitive in a global marketplace. We agree with R. Michael Paige, who states that intercultural education, if it is to be effective, must help learners develop culture-learning skills and enable them to manage their emotional responses. Moreover, intercultural education must be inherently provocative, by necessity and design, if it is to be an appropriate preparation for the intercultural experience.

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communication, and would do well to diversify their own memberships and broaden their own activities to include assisting educational reform in Japan and elsewhere. Educational change is sought in many locations around the world, but proper reform will never occur without qualified reformers. Serious problems require broader pools of experts for assistance. Japan needs expertise from CPTSC, and CPTSC may equally need Japan.

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Positioning Intercultural and International Approaches in the Professional Communication Curriculum

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A growing body of research addresses the practices of intercultural professional communication and establishes the need to teach it (see for example, Lovitt & Goswami, 1999; Andrews, 1996), but very little research and theory actually explore teaching methods and curriculum. Devoss, Jasken, and Hayden (2002) examine intercultural teaching materials such as textbooks, but they only speculate about methods and curriculum (see also, Miles, 1997). Recently, a number of textbooks on intercultural professional communication have been developed (Bosley, 2001; Andrews, 2001; Beamer and Varner, 2001), but sufficient research and theory is not available to guide their use. Furthermore, no journal has yet been directed at the teaching of intercultural communication, although special issues have been devoted to intercultural communication in general: the 1997 issue of the *Journal of Business and Technical Communication*, a 1998 issue of *Technical Communication Quarterly*, and a 1999 issue of *Technical Communication*. The need for developing an international perspective in professional communication curriculum has also been starkly apparent because of the recent trends of outsourcing technical communications products.

The sparseness of available literature about teaching intercultural professional communication leaves many questions unanswered:

- How can distance learning be used in the intercultural curriculum?
- How do professional communication instructors need to adapt their teaching methods for intercultural inquiry?
- How can instructors and program administrators develop teaching materials and select textbooks?
- How can new instructors of intercultural professional communication be trained?
- How can the intercultural curriculum be assessed, setting an agenda for continuous reflection and improvement?

This paper seeks to position the issues, policies, and practices of international and intercultural approaches for professional communication curriculum.

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The Problem-Based Curriculum: Diversifying Our Construction of Diversity

Anthony Flinn, Eastern Washington University

In response to attacks on "multiculturalism" from the political right, "diversity" has emerged as a less vulnerable term to describe the value of pluralistic social and cultural constructions. As we apply the idea of diversity to the world of technical communications, images of greater numbers of students and faculty of color come to mind, as well as the transnational, transcultural reach of our audiences.

Such applications are, of course, vital to both the health and authenticity of our profession, but I would like to diversify our take on diversity. Specifically, our pedagogies have long been based in training students to master the particular forms technical documents take: proposals, manuals, feasibility reports, memos, complaint letters, and online documents of various sorts. Learning those forms has been an end in itself, providing challenging and meaningful employment as well. However, as the ATTW listserv discussion of PowerPoint disclosed last year, the tools—and, I would argue, the forms we use—shape not just the content the tools and forms permit, but our very thinking of the content's possibilities. The result can be a lapse in critical thinking, a lost opportunity to reach an audience that we sometimes mistakenly define by the means we choose to reach them.

Thus, genre-based instruction preserves a hegemony of current practice, a hierarchy that narrows the perceptual range of our students and ourselves and presupposes a set of professional roles and institutions. As Merrill Whitburn among others has argued, in workplaces now where technical communicators are employed, we have writing and design as a set of practices rather than as a means of making decisions, shaping perceptions, identifying paths of action. The goals have become the documents themselves rather than the result of the documents' *use*. Such a structure discourages dynamism and resists different approaches, much as some bureaucracies ultimately take as their mission the preservation of the bureaucracy rather than expediting a set of services. Our students, then, who come to us from a diverse range of disciplines in the natural sciences, social sciences, and the humanities, might learn the practice of procedure-writing—which they may never need to do again—but they may not learn how to fathom an audience's particular requirements and level of receptiveness for particular information.

The premise of diversity is that existing structures and processes are not just vulnerable to reinvention but are strengthened by it. A problem-based curriculum in technical communications is, we believe, fundamental expression of diversity because, by definition, there is no pre-determined solution, or hierarchy of solutions, to a rhetorical or communication problem. Criteria for any solution lie entirely with the audience's response, so to reach solutions, various conflicting ideas and possibilities must be continually at play in our students' minds.

The Ethical Dimension of Diversity: Extolling Our Unique Roles Through Similar Outcomes

Carroll Ferguson Nardone, Sam Houston State University

In an age where diversity figures prominently in the national social fabric, we must see that term and all its varied meanings as a way to reflect upon our missions as programs and departments engaged in technical communication. We do not all look the same; we are not all called the same. Some are housed within institutions' scientific disciplines and some are housed in the humanities. Some offer majors, while others are listed as simple emphases in professional writing. Some include highly specialized courses and others offer only a handful of advanced courses to supplement the service course. Just as we do not look the same, we cannot expect our outcomes to be the same. Should we be thinking of an ideal program structure or a set of common core courses? Should all students who major or minor in technical communication, in essence, be promised specific skill sets to help them meet the ever changing world of professional writing?

Certainly, to suggest that one size fits all is ludicrous. Programs in technical and scientific communication cannot be conceived under cookie-cutter designs. In the same way that varying institutional philosophies all play a role in the development of all of higher education, we should be looking to the uniqueness of technical communication programs to help us define the larger discipline. The challenge is not as great in larger, multi-faculty departments, but can become daunting in small or single-faculty programs. While we cannot consider large and small programs as congruous, it is incumbent upon us to be responsible to our students and to our discipline. We must use our roles as program developers and take advantage of the diversity of our schools and our missions. In this way we can ultimately provide a solid representation of the core values of our discipline, which in turn would inform us as we create our individual programs. Three general variables should be taken into account: geographic region, departmental location, and institutional philosophies. By extolling the virtues of these variables as much as possible and designing diversity into our programs, we can serve both student needs and program needs.

Building departments whose curricular focus is on problem-based learning is another way we can design diversity. By making sure that all courses are structured so that students are not learning the genre and format of technical reports, but comprehending how to make decisions about what that report will *do* in its professional setting, we can begin that shift to problem-based learning. This is the only way to be sure that there is any congruity between the larger and smaller programs that define our discipline. If we focus on individual courses and resources, the differences are astronomical and insurmountable. For example, as the usability sub-field has grown in the past decade, we cannot ignore its importance to our discipline and thus it's centrality in designing programs. However, a small program cannot offer the benefits of a full course on usability or even dream about the benefits of a usability lab. If, however, we focus on learning strategies and give students the ability to include usability issues within all coursework, even in the service course, then we are acting ethically in providing students, no matter their institution, the best that our discipline has to offer.

No matter the size of technical communication programs, students within them must be given the ability to think about their writing based on document outcomes and not document structures. They should also be able to learn from their unique physical locations within the academic universe, both geographically and institutionally. Diversity of programs and program size can then be turned into an asset as we work to build analytic and rhetorical skills—skills that are then transferable to a larger, intensely dynamic, highly heterogeneous professional world.

Technical and Scientific Communication Program Diversity and Complex Systems Theory

Ed Nagelhout, Indiana University; Miriam Barr, Purdue University Indianapolis

Complex systems theory offers the means to understand how a Technical and Scientific Communication (TSC) program functions on a variety of levels, offering program administrators the means for resolving one of the biggest tensions in their daily jobs. The choices made today, no matter how seemingly small or insignificant, can have a tremendous impact on a program in the future. To make the most informed choices possible, directors need to see and understand the multiple levels on which a program is operating.

The components of a TSC program are broadly diverse. From program structure to program identity, from scheduling to retention, from program and course assessment to staff development and evaluation, program directors need to appreciate how a complex system (like a TSC program) interacts with other complex systems (within a department, a school, the larger university structure); as well as how nested parts of that complex system interact at multiple levels (course(s) that function as part of a major, a minor, a set of general education requirements).

Complex systems theory represents a cluster of sophisticated concepts for understanding both interactions among systems and the nested features present within a system. These concepts include co-evolution, fractal structures, feedback loops, punctuated equilibrium, emergence, open systems, autopoiesis, and non-linear dynamics. Blended together or used separately, these components offer a comprehensive set of lenses for both reviewing a program in its current state and for helping to make appropriate choices for the future.

For example, if a TSC program director wishes to establish a standard set of course goals and objectives, she can unilaterally make that decision and implement those changes. But what are the consequences of that decision? Since a TSC program is a complex system interrelated with other complex systems, understanding how this decision affects those relationships is crucial. Co-evolution describes the simultaneous and continuous change that occurs through interactions among complex systems. Each system forms a part of the environment for all other systems. The actions of one system can trigger actions and reactions in other systems, which in turn trigger responsive actions in the first. Establishing a standard set of course goals and objectives will not happen in a vacuum. What is the impact on the program level? on the school level? on the university level?

At the same time, a TSC program contains nested features within the system. Implementing a standard set of course goals has an impact on the overall shape of the program itself. Fractal structures describe a rough or fragmented set of geometric shapes that can be subdivided in parts, each of which is (at least approximately) a reduced-size copy of the whole. Fractals are generally self-similar and independent of scale. Fractals do not define quantity, but instead are relevant to the quality of the system. Thinking in terms of fractal structures requires us to ask the following questions: What are the best choices for course goals and objectives? How are they connected across sections? How are they connected to other courses in the major? in the minor? as part of the general education requirements?

TSC program directors grappling with choices for program development must simultaneously focus on the specific program, as well as the larger system in which it operates. The lenses of complex systems theory offer a "multi-focal" perspective: drawing attention to the mirroring of patterns within the various smaller and larger systems; bringing into focus the ways in which the evolution of one system is interrelated to the evolution of another and the consequences thereof; and underscoring the degree of sensitivity of systems at different stages. In short, seeing our TSC programs as complex systems creates a greater awareness of possibility and provides TSC directors the means for analyzing the past, supporting and accounting for the present, and preparing for the future.

When the Writer Becomes the Boss: What Practitioners Can Teach Us About Developing Curricula in Writing Project Management

Stevens Amidon, Indiana University-Purdue University Fort Wayne

In her book *The Art of Technical Documentation,* Katherine Haramundanis identifies the five kinds of management environments in which technical writers typically work. In all but one of these environments, the technical writer is supervised by an individual who has broad responsibilities for the management of documentation processes. According to the *2003 STC Salary Survey,* nearly 20 percent of respondents work in supervisory positions, which the STC Management SIG describes as covering three areas: (1) project management; (2) people management; and (3) business management. These areas mirror the career path categories monitored by the salary survey and suggest that writers working in project management are situated at the intersection of the technical and managerial career paths in many organizations. Given the critical nature successful management of documentation projects will likely play in the future career success of our students, the professional writing faculty here at IPFW have made the design of a project management course a top priority in our continuing efforts in curriculum development.

A discussion of management issues with members of the Hoosier Chapter of the STC who worked in these types of positions suggested that some of these practitioners were working in a "contact zone" where the pressure from above to develop panoptic surveillance techniques such as production metrics was being actively resisted. It seemed that these resistant managers intuitively understood Peter Drucker's contention that measurements based upon minimum standards and maximum production are "almost the exact opposite of what is needed to increase the productivity" of writers because "in most knowledge work, quality is not a minimum and a restraint" (Drucker, 1999). The sophisticated way in which these managers were using arguments about "quality" to address major ethical and political issues regarding the nature of the work writers do, suggested to us that a series of interviews with practitioners who work in project management might provide us, and other CPTSC members who are developing curricula in this area, with useful feedback about the goals and content of such a course.

In my presentation, I will reflect upon these interviews, focusing on what these practitioners see as the key issues to be addressed in a project management course, and the ways in which such a course might both inform and be informed by managerial practice. The interviews will be conducted with both local members of the Hoosier Chapter of the STC, as well as with members of the STC Management SIG, and will address these questions: How do project managers see their role in terms of their relationships with the writers they supervise, their fellow managers, and the people they report to? Do they see their future role in the organization moving towards the managerial career track, or the technological career track, and why? What do they see as the core competencies needed to successfully manage technical documentation projects? What kind of coursework in management have they completed, both from colleges and universities, as well as from internal corporate training? How would they describe the value of such coursework? What further educational experiences do they feel they need, both to perform better in their current position, as well as to advance in their preferred career path?

My goal in presenting the results of these interviews is not to definitively answer the question "what should the content of a document project management course be?" but rather to suggest avenues we might explore while developing such curricula.

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Mapping Diverse Approaches to Project Management in the Technical and Professional Communication Curriculum

Stuart Blythe, Indiana University-Purdue University Fort Wayne

Numerous indicators suggest that project management skills are gaining importance for technical and professional communicators. Project management becomes more important as workplaces and technologies have become more complex and diverse. For example, as Kalakota and Robinson have recently argued, the growth of multinational organizations requires increased project management skills, as has the development of complex technologies that require teams of developers (2004). Thus, as Allen and Benninghoff state, project management "has new importance for writers' diverse professional positions" (2004). Such observations have been supported by writers such as Wilson and Ford who interviewed seven technical communicators with at least ten years of experience (2003). After looking at the career paths of these people, Wilson and Ford recommend that technical communication curricula should "include an emphasis on general business concepts" including project management (2003). Given these and other indicators, the professional writing faculty at our campus felt compelled to develop a course in project management and to give it a central place in the curriculum.

In my paper, I will explore the place of project management in technical and professional communication (TPC) curricula. Although my study addresses two key questions—How is project management being taught? How should it be taught?—in this paper I will focus primarily on the first by discussing the results of a survey of TPC curricula and of interviews with educators in those programs. Preliminary results show that project management is taught in diverse ways. Some programs offer their own course, while others bundle project management into one other course, such as editing or information design. Some programs require a course taught by another department, and others offer no such course but present project management as a recurring topic throughout the curriculum.

My goal in presenting this information is not to argue for one approach over another so much as to map diverse approaches. As is true of other issues in TPC, project management must be addressed to meet local needs. Even so, I will argue that project management, however it is fit into a curriculum, should be taught in a way that bridges the humanities and professional development. Participants in the panel presentation will be prompted to use the results of this study to reflect on their own approaches to project management.

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Reconsidering the Basics of Technical Writing: What Are the Basic Units of a Quality Writing Project?

Bill Hart-Davidson, Michigan State University

This paper reflects upon research from three recent studies of team and individual writing projects to raise two basic curricular questions for technical and professional writing programs:

1. Workplace writing research has shown that a fact we may intuitively understand about good workplace writing projects - that they involve the coordination of many communication events, oral and written, in several genres - is true (eg. Spilka, 1990). Why then do we not consider "communication events" the basic unit when we define "quality" in technical and professional writing?
2. How can we move away from defining "good writing" as a set of qualities that inhere in a single text, and towards a definition that takes a broader view of communicative activity involved in producing a quality outcome?

Technical and professional writing programs seemingly acknowledge the logic of these two questions when they move to incorporate case-based learning, client consulting projects, and other complex, multi-stage work. But when it comes to evaluating this work, the questions above arise.

As a first step towards answering these questions, the author will present visualizations of workplace writing projects meant to be resources for reasoning about the quality of writing practices. The visualizations, produced by a software application currently under development, depict a whole writing project by showing the individual communication events that occurred, retaining the content of written events such as documents, and storing useful event attributes such as who initiated each, which team members were involved, what the purpose for each was, etc. as event metadata. Sorting the events using these attributes allows for different visualizations, each of which can help to reveal useful information about the project, including information about the quality of the outcome and the patterns of activity that may have been responsible for producing a quality outcome.

In order to address the questions about the influence such a view of writing projects can or should have on writing curricula, the author first defines "quality documentation" as something that involves, but is not limited to the quality of the outcome of a writing project, i.e., a well written manual, or a usable help system. Achieving "quality documentation," for example, involves at least four important criteria:

1. Product quality as measured in the end product (e.g., a well written manual; a usable help system);
2. Customer/user satisfaction as measured by end product ratings or satisfaction measures related to the user experience;
3. Team satisfaction as measured by self-evaluation; and
4. Innovation, as measured by a significant increase in any of the three categories without a corresponding dip in the others.

Understanding how writing teams achieve items 1-3, and understanding how they innovate by making significant "leaps" in any of these quality measures clearly requires a view of the whole process. How do we present such a view to students? What should it be composed of?

Using data from three studies of writing projects as examples, the author will argue for the validity of choosing "communication events" as the basic unit for understanding quality writing. This approach changes the way writing projects are typically understood by students and professional practitioners alike. The standard approach to

planning and carrying out a project involves understanding a project as a series of tasks. But tasks, in knowledge work situations, are made up of communication events - sometimes a great many of them distributed across multiple team members. Communication events have both project-related content and organizationally valuable form (genre) in a way that "tasks" do not, such that any one event or a string of events can be meaningfully redeployed in similar situations or repurposed, if need be, for novel situations.

In other words, projects modeled as series of communication events provide the kinds of resources for learning that we frequently champion in technical communication pedagogies, serving as both plans for an overall quality experience, as well as resources for achieving end-product quality in future projects.

Introducing Time Management and Goal Setting Concepts to Technical Communication Students

Lawrence J. Clark, Houston Baptist University

One of the issues that dominates the lives of many technical communicators and technical communication students is time, or the perceived lack thereof. Whether on the job, still in school, or in many cases, both, technical writers are asked to multi-task, keeping several projects going at various stages of revision or completion. This can be overwhelming for many, especially those new to the field. Is time management just a natural talent that we should expect students to possess before choosing this profession, or are there ways that we can help them to practice and prepare for the realities of the workplace through the addition of self-reflection, time management and goal setting concepts to the technical communication curriculum?

In my courses at the University of Texas at Austin and at Houston Baptist University, I have recognized these issues facing two very different types of students who faced a similar problem. At UT-Austin, I taught until very recently a service course entitled Engineering Communication. This was a required course in the College of Engineering, and most of my students were majoring in computer and electrical, mechanical, and civil engineering. These students were extremely busy with the heavy requirements of the highly structured program, which left little room for electives or extra-curricular activities.

At Houston Baptist University, a private liberal arts college, students are required to have two majors, and must also perform a minimum number of community service hours to meet graduation requirements. To compound this already heavy load, the university calendar is set up on a quarter system comprised of four ten-week sessions per year; students typically enroll in 3-4 courses per quarter, and a good percentage hold jobs and are involved in church and community service activities.

As professors, we tend to have an attitude of "stop yer whinin'," and "if I could do it, you can do it, too." Up to a certain point, this is okay, since taking on responsibilities and learning to juggle activities is an essential part of a student's growth and maturation process. On the other hand, if as "successful" products of the education system we have learned techniques to help overcome some of these obstacles, do we not have the responsibility to pass this knowledge on to our students? And would we not be more fulfilled ourselves if our students were more organized and efficient? And unless they read about these subjects on their own, in what other course would this information be offered?

Since we have all been through the process of attending graduate school, often while working and raising children, we have devised strategies for coping with information overload and demanding schedules, so time management and goal setting are skills we have internalized and can share with a minimal amount of research or preparation. At the same time, we often find it difficult to cover even the basic material in one three-hour service course, so the last thing we need is one more thing to cover during the semester. By outlining some basic techniques early in the semester, though, the time spent will be well rewarded, and in my experience, greatly appreciated by the students. Here are a few ways that I have incorporated some of these concepts in the classroom:

- Assigning brief guided freewritings on selected topics or quotations that encourage self-reflection and prioritizing of time and activities, such as "the unexamined life is not worth living" (Socrates);
- Facilitating group discussion and creation of a task schedule for each assignment;
- Writing an "inspirational quote of the day" on the board or on the course website (with tips on goal setting, time management, and

positive thinking);

- Giving handouts or links to websites with info on time management and goal setting;
- Creating assignments that include research on time management and goal setting; and
- Giving 5-10 min. "mini-lectures" on concepts such as Anthony Robbins' RPM (Robbins, 2002) for achieving goals, or Stephen Covey's urgency/importance quadrant for time management (below).

While we could justifiably say, "hey, this isn't our job," or "this is a writing class, not a motivational seminar," the introduction of a few of these basic concepts can make the lives of our students, and consequently our lives, more productive, manageable, and enjoyable. We will be sending students into the workforce with not only the skills to complete the tasks expected of technical communicators, but also the life management skills to perform competently and efficiently in the workplace.

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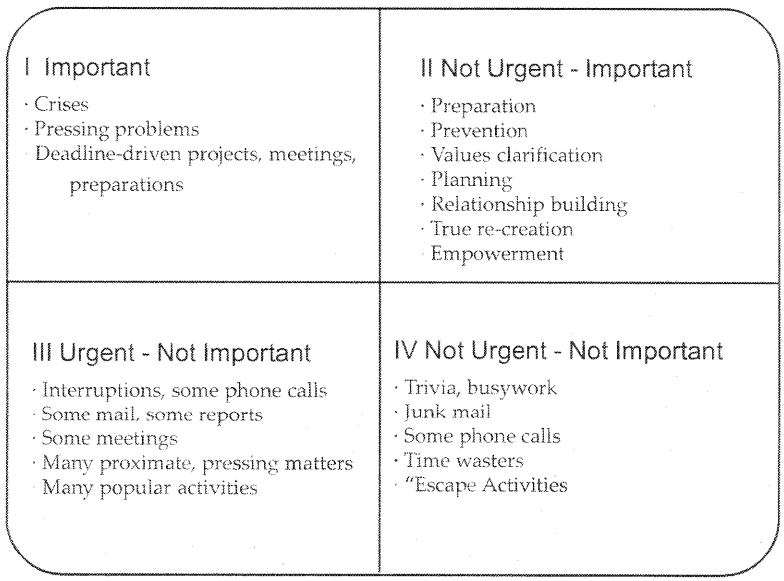

Covey's urgency/importance quadrant for time management

Social Marketing, Visual Communication, and Service Learning

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

Keywords: service learning, undergraduate courses, visual communication

We propose to discuss partnerships between our program and various agencies that serve the health-care needs of people in developing and transitional countries. Like natural, financial, and human resources, information ranks as a particularly critical resource for social and political development among such populations. However, gathering and communicating information in areas of information poverty, especially rural areas in emerging countries, is a complex problem. In particular, adapting medical technology to under-served and low-literate audiences in this setting can be a daunting task, one our students, used to addressing people like themselves, are often unprepared to carry out.

Because the population addressed has little or no formal education, documents designed to reach this audience depend heavily upon visual communication rather than words. Images often carry most of the information value of a message as well as its persuasive component. From an academic perspective, these projects ask students to fine tune their skills at visual communication, students who are generally more comfortable with the written word.

The partnerships we'll discuss offer a variant on service-learning projects, although most projects will require entirely virtual collaboration between the students and staff at the agencies. At this point we're early in the process of establishing specific projects, which often fall under the label of "social marketing" or "somark" as it is known in the profession. We have, however, contacted such agencies as PATH (an non-governmental organization based in Seattle), USAID, and its affiliates, and we're redesigning two of our courses to incorporate strategies for accommodating audiences in this context, a context that is foreign to our students in many ways. Through these partnership projects, however, we hope to teach our students the importance of well-designed information, particularly visual, and to help them better understand their roles as citizens of this world.

Pathways to Difference: Incorporating Disciplinary Diversity in the Technical and Scientific Communication Curriculum Through Extended Service-Learning Projects

Michele Simmons and Jean Lutz, Miami University

Service-learning has become an increasingly popular component of technical and scientific communication classrooms. This popularity is due in part to how such projects can encourage students to be more invested in learning how to communicate effectively, to apply the practical and theoretical concepts from their courses to "real world" situations that address community needs (Bowdon and Scott, 2003), and to be more active citizens (Huckin, 1997). Further, when students write as their service to the community, they are often encouraged to consider multiple stakeholders of a community issue to ensure that alternative voices are heard and considered. As a result, service-learning projects, when chosen to fit the goals of technical and scientific communication courses, can encourage our students to see their role as advocates for users, as well as for social responsibility. Given the opportunities afforded by such projects, faculty in our program not only implement service-learning projects in single classes, but they also deliberately implement service-learning across the undergraduate and graduate curricula.

Most often, service-learning is implemented as a single project in a single course. However, thinking about service-learning projects in curricular terms—what we call extended service-learning projects—opens up additional learning opportunities for students and faculty. For example, at Miami University, we are implementing two types of extended service-learning projects into the curriculum: the first type spans multiple courses and the second type requires multidisciplinary expertise to complete. As we consider these projects, we examine whether the project tasks that will be most helpful for the community partner will also fulfill course goals.

We believe that extended service-learning projects help our students make connections among the projects in each of their courses and help them form a broader understanding of technical communication. Thinking about service-learning in terms of a curriculum may also open up additional learning opportunities for students that help them see connections between the skills and research practices they are learning and the work of other disciplines. For example, service-learning projects that involve students in multiple courses or from different disciplines can encourage students to build relationships with other disciplines to address and solve problems within communities that a single course might not have the expertise to solve. Often the problems community partners face are broad, and cannot be solved by the abilities or goals of one class. In these cases, we argue it benefits both the students and community partners to consider distributing the service-learning project across several courses. Involving more than one course—or even more than one discipline when appropriate—may draw on expertise and goals from multiple courses to better fulfill the needs of the community partner. Further, it may encourage students to better understand how the strategies they learn in each of their courses can be applied when working with others outside their disciplines to solve problems in their workplaces and communities.

Arguing that extended service-learning projects can facilitate an enriched approach to technical problems for students, faculty, and community partners, we will report on steps taken by faculty in our program to integrate service-learning projects more significantly in the curriculum. We will discuss projects that involve multiple technical and scientific communication courses as well as other disciplines. Additionally, we hope to prompt discussion by addressing some of the implications

and challenges of integrating such projects into the curriculum such as the increased time required to choose and orchestrate projects, the required connections among faculty inside and outside the program, and the conditions at universities that might impede interdisciplinary projects.

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Building a Graduate Culture: Connecting Faculty Expectations and Student Attitudes

Molly K. Johnson, University of Houston-Downtown

Demographic data suggests a "relentless swelling tide of Latino students approaching higher education in America" (Haro, 2004), yet few Latinos enter graduate studies and even fewer complete graduate degrees. If we are honestly motivated about greater diversity in CPTSC and the discipline as a whole, we need to actively recruit and retain underrepresented populations by providing an engaging graduate culture in our master's programs. Developing an appropriate graduate culture becomes especially significant for master's programs with Latino, Native American, or African-American applicants, particularly if they are first generation grad students having "limited familiarity with graduate education" (Haro, 2004). This presentation explores the concept of graduate culture and invites discussion about the implications of graduate culture and diversity.

To increase diversity in technical communication, we need to develop a graduate culture that would improve the success rate of underserved minorities. Research suggests that graduate students experience the academic community across three levels:

- *Departmental: i.e.,* faculty expertise, mentoring, research and travel funding;
- *Personal*: seminars, assistantships, employee benefits, career counseling; and
- *Institutional*: faculty workload and research support, library and computing facilities, recruitment and publicity (Colbert, Gleason, and Staton, 2002).

As we prepared to launch our new master's program in technical communication this fall, colleagues from other graduate programs and other universities urged me to actively create a graduate culture; however, when I requested an explanation of "graduate culture," they clearly intended something beyond the list above. These graduate faculty expressed frustration at finding themselves still dealing with undergraduate issues—students coming to class unprepared or missing class altogether, submitting late or incomplete assignments, or failing to participate in seminars or colloquia with visiting scholars—at an unexpectedly frequent rate. They reported that students, especially in professional degrees, did not think of themselves as graduate students, approaching a master's program as a mere extension of their undergraduate degrees. Graduate students with undergraduate attitudes are not unique to an open-admission, minority-serving institution, as these observations have come from faculty at regional universities with well-established traditions of graduate study and even an R-1 flagship institution.

This suggests a fourth aspect of graduate culture: faculty expectations. Although infrequently addressed in publications, it appears that even basic expectations need to be clearly identified to integrate students into the academic community. We can take a sink-or-swim attitude; however, with only two years in a master's program, students can ill afford to spend a year learning how graduate studies differ from undergraduate. This presentation seeks to identify the values we hold as graduate faculty and explore ways to make those expectations explicit for our students

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Finding a Name, Charting a Future: Names, Diversity, and Sustainability in Professional Writing Programs

Michael Knievel, University of Wyoming

At last year's CPTSC conference, Robert Johnson noted in his plenary address that the process of naming requires definition of an identity, a frame of reference. According to Johnson, "...when we make something, we name it—we put a signifier on that making so that we can remember it, describe it, and not always for the best of reasons, own it, co-opt it...." Naming a program structure puts on display the institutional identity and the identity of the host department and has significant impact on the diversity—and the potential for diversity—of the program.

A name is a present signifier at the nexus between past and future. More specifically, the name of a program *reflects* the complex and oftentimes contested process of invention and consensus building that goes into developing a program, as well as the disciplinary, personal, and political interests of those charged with invention (the past). The name then *projects* the diversity of the future; it becomes *the* most important conscious and unconscious element of any recruiting strategy when it joins the institutional lexicon. It is the primary tool faculty around the university used when they advise students. Thus, the name can predetermine the diversity and interdisciplinarity of the program and its students.

The University of Wyoming's professional writing minor is an interesting case study in naming and its role in disciplinary diversity among its member students. Program invention was largely done in-house; while much time was spent researching other similar programs in colleges and universities around the country, key local stakeholders were located almost entirely within the English Department—a traditional, literature-based department. Many departmental stakeholders, then, heard program-building conversations through a literary studies ear where a course in editing, for instance, might replicate the editorial process at a scholarly journal or at least prepare the literary-minded English major for work in publishing. And the minor was seen by some as a space in which we might, at the department level, combat the traditional lament about the marketability of English majors. These interests combined with other forces at the college and university level to shape the naming of the program. For instance, the word "communication" was unavailable because it was seen as overlapping with communication studies. "Rhetoric" was simply problematic to administrators who did recognize value in the term and wanted to see something with more visible application.

One of the results: the majority of our professional writing minors during the first couple of years have been English majors. On one hand, this is terrific; colleagues are creating interest in the minor and pointing their advisees in our direction. The students have been wonderful, the courses lively. But while demographics do seem to be shifting, students in the sciences and elsewhere—those whom many of us envisioned benefiting greatly from the balance the writing minor might provide their program of study—have been slow to fill seats.

This statistical reality points to the importance of a name, its function, and the way in which students "see themselves" in it. Our field has a fairly narrow word bank from which we choose our names; terms like "rhetoric," "communication," "writing," "technical," "discourse," and "professional" show up often and for good reason, yet at some level, the relatively small size of this word bank promotes a perception of interchangeability. Yet "professional" and "writing" will be comfortable terms for some populations and not for others, as will "technical" and "rhetoric." With this in mind, program developers must choose names wisely, as the name becomes the signifier that in part determines the diversity of the program regardless of the demographic diversity the program developers and executors see the program inviting or responding to.

Designing a Program for the Full Spectrum of Workplace Writing Career Goals

Lu Rehling, San Francisco State University

Our undergraduate degree and certificate program at SFSU, which is designed for students intent upon workplace writing careers, is called TPW, standing for Technical & Professional Writing. So, I'm often asked by students and prospective students, "What's the difference between technical writing and professional writing?" My answer to that question, which, I hope, both informs the questioners and fairly represents both our program and workplace realities, also is foundational for the design of our curriculum.

What I explain to students is that writing in the workplace embraces and addresses a wide range of audiences, genres, subject matters, and industries, so it is best to imagine technical and professional writers as working along a spectrum. At one extreme might be work that is unambiguously technical communication (for example, editing Application Programming Interface specifications and developing code samples for a Software Development Kit for engineers). At the other extreme of the spectrum might be work that is unambiguously non-technical and professional (for example, writing consumer-oriented public relations materials for a nonprofit or a traditional retail product). However, most of the spectrum between those extremes includes work that could be qualified as either technical, professional, or hybrid, based on specific features, readers, attributes, conventions, and so on that applied to each project. And, perhaps more importantly, even writers who typically are assigned or hired to work near one extreme on the spectrum often also are expected to develop other types of communications, and so need the skills to do so. As a result, it is easier to define what career technical and professional writing is not (e.g., not creative writing, not literary criticism, not mass media journalism) than to define what's technical and what's professional.

The implications of that answer for our curriculum are that we design all of our courses to reflect the diversity of career writing in the workplace and to unify the technical and professional strands by emphasizing common processes, methods, and ethical concerns. For example, while many university programs expect a service course in technical communication or business communication to function as the gateway to a degree or certificate in our field, our introductory survey course begins the career writing focus and interdisciplinary exposure that characterizes all of our offerings. Even in our more genre-specific entry-level electives that appeal to students from other degree programs, we make sure to introduce writing challenges that span the spectrum described above. For example, our promotional writing course requires researching and developing technical materials, while our documentation course emphasizes rhetorical analysis and project planning skills crucial for all careers.

As a result, all of our students are required to break down stereotypes or assumptions that they might have about what they will or won't be called upon to do as career writers in the workplace, and even about what they are or aren't "good at." Our faculty, our reputation as an effective academic program (i.e., both reflective and pragmatic), and our interdisciplinary relationships all benefit from our broad and diversified, rather than narrowly-defined, curriculum. Over time, we expect the actual practice of writing, in the workplaces where our alums makes their careers, will benefit as well.

The Potential Impact of the Lone Ranger, Or Using Non-Technical Writing Courses and Tutoring as Recruitment Terms to Increase Diversity in Technical Communication

Heather Sehmel, Stockton University

As we discussed last year at the annual meeting and through the diversity committee, efforts to increase diversity in our programs must be careful: it is undesirable to recruit "token" individuals. It is desirable to give all students opportunities to consider degrees or careers in technical writing. It may seem particularly difficult for those of us serving as lone rangers (the only technical communication—TC—faculty in our programs) to have any impact on diversity in the field, since mostly we serve students majoring in other disciplines. Nonetheless, we can play an important role in the long-term effort to ensure diversity in the field.

Why do I say this? For many reasons:

- One problem recruiting students, including those we'd consider diverse, is that they do not enter college knowing what TC is or considering it for a career.
- Our field still has many members who come to us (as I and many of you did) not because of our undergraduate major, but because of our subsequent work experience or graduate level training.
- Minority students are less likely to consider graduate school (Reynolds and Lowery, 1994).

If service courses in programs without TC majors increase student awareness of TC, over time we may raise the likelihood students will enter college considering writing careers. Also, if we plant writing confidence, aptitude, and desire in our students, some from other fields may enter ours through employment or graduate programs—bringing with them desirable interdisciplinary perspectives and training. Finally, while it may seem futile to ask students in other majors to consider additional courses, degrees, or employment in our field, some students may not consider other possibilities until our suggestion. At the least, we increase student confidence in their writing; sometimes, we may be the first to let students know graduate school or writing careers are options for them.

Even larger programs often try to recruit students from service courses: how sensible! However, in my experience (and I know from past CPTSCs that I'm not alone) many students wait to take this class until they are too far along to select a new degree—or because it is required for another discipline, rather than because of interest or aptitude. Therefore, we may wish to recruit from different locations, including several small programs, they can access, as well as offer other writing courses, particularly first year composition courses; other first or second year courses across disciplines that require writing; and writing lab tutors.

One successful recruiting method in my program is for the program to annually, before student pre-registration, ask faculty across disciplines and particularly those teaching lower level writing courses to recommend potential writing tutors. Being recommended to be a tutor flatters students, regardless of their interest in tutoring, and strengthens the impact of a suggestion that they consider more training in writing. Moreover, as my program does, programs can remind faculty to particularly consider recommending students who represent diversity—while recruiting all strong students. When reminded to particularly consider recommending minority or older students, I review the list of students I'm going to recommend, checking for personal bias or any overlooked students.

In my program, initial recruiting into the tutoring class does not necessarily lead to employment, so this "affirmative action" does not seem unfair. The

potential of a job can hook students: entrusting other students to them supports the argument that students are strong writers, and a potential on-campus job (for tutors in my program paying more than the typical work study wage) attracts students, who then are more likely to consider writing careers and degrees writing when taking a class with other strong writers from a strong writing professor. A bonus is that on campus jobs improve minority students' likelihood of success in college (Carriuolo, Rodgers, Stout, 2001).

Ultimately, recruiting through a larger variety of lower level writing classes and using personal recommendations to consider tutoring can increase the number of (and variety of) students in our programs—a nice, inexpensive, and relatively easy thing to do.

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Panel

The Road Rarely Taken: University Technical Writing Programs By Way of Secondary English: How Can and Why Should Technical and Professional Writing Programs Initiate and Respond to Writing Curricula in Middle and High School?

Panelists: Kay Harley, Dave Gaskill, Leah Zuidema, Evelyn Vidal Johnson

This panel reports on the current status of technical communication's relationship with high school writing programs and secondary English Education from diverse institutional and pedagogical standpoints. Four speakers will discuss why and how Technical and Professional Writing programs should respond to a need for technical communication instruction in high schools and in teacher preparation programs. We will analyze the diverse forces currently shaping technical communication at the secondary level. We aim to provide research illustrating the diversity of student preparation relative to post-secondary education and make recommendations for program design.

While understanding these diversities poses significant challenges to program design, it also provides valuable data for developing programmatic guidelines, shaping curriculum, and training teachers.

Because the field of technical communication has a growing need for technical communicators who can negotiate difference, communicate in diverse contexts, and collaborate in a global setting, technical writing programs will need to build some new trails into English Education and secondary school domains.

History and Theory of Technical Communication to Guide Collaboration Between College and Secondary School

Dave Gaskill, *Saginaw Valley State University*

As they say, if you don't care where you're going, any road will get you there. I believe that we on the college program side of the teaching of technical communication do care where our efforts lead, so, as we initiate and respond to calls for collaboration with our secondary school colleagues in the teaching of technical writing, we need to articulate a vision of our joint destination and a rationale of our chosen pathways. This is a particularly important step if, as the theme of this conference suggests, we are thinking of such collaboration as a positive contribution to diversification of the field. Diversity is embattled quite enough without our compounding its problems by meandering into the fray with an insufficient sense of purpose and method.

In this regard, we should begin by deciding on which mix of field history and theory will best serve our goals. History and theory are interdependent, and thus a choice of one substantially influences the other.

Fortunately we have at our disposal several recent histories that provide excellent coverage of the multiple influences that have shaped the present forms of technical communication (Schriver, 1998; Kynell-Hunt, Moran, 1999; Longo, 2000). We are also well provisioned on the theory side with recent monographs (Schriver, 1998; Johnson, 1998; Spinuzzi, 2003). Our problem is to decide upon which combination of history and theory will supply the surest guide to taking our work into new learning communities.

Of course, the optimal mix will no doubt vary across the situations presented at different locations. Still, we need a general heuristic for local decision makers to consult to sort out the mix that will most likely provide solid grounding. For my conference presentation I will conduct a brief survey of potential resources in theories and histories of technical communication and offer a heuristic for choosing among them.

Perceptions and Practices of Technical Communication By Incoming College Students and Their Secondary Teachers

Kay Harley, Saginaw Valley State University

College and university programs in technical and professional writing need a greater understanding of, and connection with, educators in secondary classrooms and the College of Education faculty who train them. On some levels, this need is pragmatic. New and developing programs, in professional and technical communication particularly, need to understand what experiences–if any—incoming students have had with technical communication if they are to successfully recruit students, build enrollment, and develop curriculum. While books such as *Expanding Literacies: English Teaching and the New Workplace* by Mary Sue Garay and Stephan A. Bernhardt argue for the importance and "excitement in opening up the classroom to the range of texts and situations that constitute work and action" (xix) and offer models and approaches for projects involving a wider range of audiences and purposes, greater use of technology, and integration of text and graphics, it is not clear that such approaches are being adopted on a wide scale. Our current sense is that students entering the Professional and Technical Writing (PTW) program at Saginaw Valley State University have very limited understandings of the field, the range of opportunities they might be preparing for, and the diversity of skills they need to succeed. We also question whether prospective teachers in our College of Education programs are gaining the perspectives, skills, and models needed to integrate technical communication effectively into their future work with secondary students.

We will report on surveys and interviews we have developed to explore these issues more fully and present our preliminary data and recommendations. The first set of surveys comes from students currently enrolled in our PTW program. We will explore their understandings of the terms "professional/technical/informational" writing and communication and other terms important to the field. We will also document what experiences these students had in secondary schools with writing technical documents and/or such things as writing for the web, document design, and usability.

Secondly, we are surveying and interviewing local secondary teachers and school administrators about how they currently approach technical communication and their future plans/needs. We will also interview selected SVSU College of Education faculty and English faculty teaching our "The Art of Teaching Writing" course to determine their understandings of technical communication, how they are including technical communication in their current courses, and whether they view this field as important to future teachers.

We believe the data gathered will help us shape future efforts, both to build our own Professional and Technical Writing major and minor and to improve the teaching of technical communication in secondary schools. As a new program, we must increase our visibility and enrollment. To do this, we need to understand the perceptions about professional and technical communication that entering college students (and their teachers) bring with them and know the types of writing opportunities they have had. In addition, we need to build greater outreach efforts, both across the university and with local school districts. It is important that those of us in the university with expertise in technical communication share the principles and guidelines that shape our programs to help ensure that what is going on in secondary classrooms reflects the best that is going on nationally and internationally.

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Knowledge-Making in the Development of High School Technical Communication Programs: Who Has a Role?

Leah Zuidema, Michigan State University

In many high schools, the shape of curriculum and instruction in technical communication has yet to be determined. While there are some secondary schools with formal programs in place, in many others, administrators and faculty are only beginning to learn about, and consider implementing, technical and professional writing instruction. There is (currently) no national mandate to teach technical communication at the secondary level; instead, interest seems to be cropping up at local levels. The motives and assumptions of those who are pushing for and developing new programs in secondary technical and professional writing instruction can significantly affect program location and design, curricular goals, instructional methods, and, ultimately, student learning.

At present, those who have some of the most prominent roles in the push for secondary technical communication curricula include business and industry leaders who serve as board members or make donations to fund particular school programs, superintendents and administrators, and district curriculum developers. While these are people with the influence or authority to require that technical and professional writing be taught in local high schools, some of these decision makers have a relatively limited understanding of the nature of technical communication or of education in this field. My sense—as a former high school English teacher, as a graduate student in English Education, and as a presenter for teacher training workshops on technical writing—is that these decision makers tend to view technical communication as though it were the new home economics or shop class, a type of minimalistic functional literacy for students on a "vocational" track. When such views play out into curricular and instructional decisions, learning suffers, and misperceptions of the work of technical and professional writers are perpetuated.

While the understanding of technical communication that I have described is obviously problematic, the limited knowledge of those who make curricular decisions can present positive opportunities for educators at the college and university level.

Because so few of today's high school teachers have disciplinary and teaching knowledge of technical and professional writing, they and their building and district administrators are willing to solicit the guidance of postsecondary academics who are perceived to be knowledgeable about the discipline and about teaching in this field. Are college and university educators from departments of technical communication, English, composition-rhetoric, and education prepared to engage—in a variety of forums—in cross-talk and collaboration with their secondary colleagues?

As the demand for technical and professional writing at the secondary level increases, it is likely that the demand for knowledgeable teaching recruits will also increase. Are college and university level technical communication specialists and teacher educators prepared for cross-talk and collaboration regarding the education of pre-service and in-service teachers?

Many high school teachers of technical communication are eager to find quality textbooks and teacher resources, but they have a limited selection to choose from. Are postsecondary technical communication specialists prepared to author and design such resources?

College and university educators have a rare opportunity to play a proactive role in the shaping of high school technical communication programs and curricula—to influence the preparation of their own incoming students, but also to inform perceptions and practices of technical

communication in a broader sense. There is a gap in knowledge about how to develop and implement high school curriculum and instruction, but there is also increasing interest in doing so. Are postsecondary educators prepared to take a knowledge-making role in the development of high school technical communication programs?

Technical Writing and Pre-Service Fieldwork

Evelyn Vidal Johnson, Michigan Technological University

How can students enrolled in Michigan Technological University's English Education program gain more practical experience in the teaching of writing? How can the MTU program gain from area teachers' knowledge? As an instructor of technical writing and English Instructional methods, I approached an English teacher in a local high school in order to establish a collaboration. I wanted to enable my pre-service teachers to situate their learning in a local classroom among high school students and experienced teachers. My purpose was (and is) to start filling in the institutional and programmatic gaps common in teacher preparation programs and connect with teachers and students through the teaching of technical writing at the secondary level.

Fall 2004 will be the maiden voyage of a fieldwork experience. Students enrolled in the English Instructional Methods course will receive instruction and practice their learning in a local school. In my presentation, I intend to report on the progress of this collaborative experiment. As an instructor of both technical writing and English instructional methods, I should be equipped to design an experimental technical writing unit for area high school students (with input from pre-service and cooperating teachers). The collaborating high school teacher is widely known as a superb teacher—she brings many years of high school teaching to the project. A secondary feature of this experiment will be a usability study; I hope to enlist a technical writing major to test the usability of a website that will be designed for this experimental writing unit.

This partnership should produce a range of benefits, if the collaboration is successful. In addition to the goals mentioned earlier, some short- and long-term benefits should include

- Informal professional development for teachers through expertise exchanges over the course of the semester as we design and revise our approaches;
- Contextualized pedagogy for pre-service teachers through fieldwork in writing;
- Introduction to technical writing concepts for pre-service teachers, high school teacher and high school students;
- Experience testing usability in an instructional context for the technical writing major;
- Boundary permeation between classrooms which might lead to further enrichment activities; and
- Recruitment of high school students into MTU's Scientific and Technical Communication program.

Collaborations are inherently dangerous, despite their reputed popularity. Initially, it can be difficult to implement a technical writing unit, even as an experiment, in a classroom where the teacher attributes her successful pedagogy to a very different disciplinary source. Ideological differences will need to be negotiated—although we are in agreement at this point, when the fieldwork begins tensions could arise. Naturally, these realities must be part of the conversation, and will produce one more situated learning experience for pre-service teachers: negotiating culture begins with examining assumptions about language and extends to how language arts should be taught.

Agile Product Development Methods and Concurrent Documentation: Preparing Technical Writers to Join the Development Team

Kate Agena, Purdue University

In his 2001 *XP Magazine* article, "Manuals in Extreme Programming," Ron Jeffries, a leader in the agile and eXtreme Programming movement, reveals a programmer's perspective on the impact of agile development methods on the work of technical writers. He states:

> Documenting a feature shouldn't be any more difficult than implementing it. If your programmers can invent the bloody thing from scratch in one iteration, your writers ought to be able to write it up in the same time and stay only one iteration behind. It's just reporting, after all. If the writers can't keep up, hold THEIR feet to the fire - it's their turn. Let them write Extreme Writing - Embrace FrameMaker in a few years if they need to. (http://xprogramming.com/xpmag/manualsInXp.htm).

Three years later, little has been done in technical writing scholarship and curricula to address documentation in agile environments. Yet, technical writers' responses to these shifts will be crucial in the future roles they will take in the development process. As agile processes provide opportunities for writers to join development teams, technical writers must be prepared to change their own work processes to take advantage of the opportunity to become more professionalized rather than allow their theories, processes, and production to fall behind, further shutting them out of the larger development process or even leading to increasing elimination of their positions.

In order to prepare future practitioners and scholars to address shifts to agile development methods, research and curricula must consider the following areas:

Processes and Project Management

- How can our work on processes and project management be updated for agile environments?
- What strategies will assist writers in dealing with the extremely variable nature of the products they are documenting?

Technologies

- Must content management systems, concurrent versions systems, XML, and other technologies that could assist in agile document management be included in technical writing curricula?
- How can similar concepts be taught if the hardware, software, and technical skills required are not available?

Power, Status, and Professionalization

- How can we prepare students to interact as members of a development team?
- In what ways do shifts to agile development methods affect the status and professionalization of technical writers? Does the shift disrupt power relations between managers, engineers, and writers?

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Technical Communication Programs Supply a Diversity of Skills for Those Entering the Workforce, But Are They Diverse Enough?

Ida L. Rodgers, Texas Tech University

At the 2000 CPTSC, Gerald Savage challenged the field of technical communication to consider its relationship to the field of training. Savage pointed out that technical communicators are more and more being tasked with creating training and that professional trainers are more and more being asked to convert their materials for web-based presentation. Citing these as two professions "for which [the practitioners] have not been adequately or appropriately educated," Savage posed the questions "What is training?" and "How does it fit into our picture of technical communication?" The same kind of questions are being asked about visual, multimedia, and other fields which overlap ours in the workplace.

In the years since Savage posed his questions, more training has gone online in response to new technologies which can provide sophisticated web-based presentations and exercises for less cost than classroom training.

These materials can be so complex that one person can no longer be realistically expected to have all the expertise to put them together. Now it takes a team which can include three or more people with one or more skills such as subject matter experts, technology and programming wizards, writers, artists, sound experts, instructional architects (designers), video experts, editors, translators, cultural experts, and evaluation experts. No longer is the situation the same as when Savage posed the question; we are not looking just at how the technical communication and training fields are overlapping. We are looking at many fields converging. Sometimes people have knowledge and appreciation of what others can and cannot do, but more often the only cross-discipline knowledge one has is catch-or-miss from local projects.

In the absence of much research into this wild and wooly on-the-job-site mixture of experts, a question arises. How much does technical communication want or could be pushed out of its recently carved circle of academic matters? How much are we willing to import from other fields? How willing are we to send our students out to other fields to fill in the necessary knowledge gaps? What do we know and, more to the point, what do our graduates want to know about instructional technology, training, advanced web-programming, and evaluation which is a mostly neglected but key factor for ensuring that all the hard work of putting together a web-based training project is not wasted?

Note: By October I will have research results that may shed some light on the extent to which technical communicators are involved with web-based training and specifics about what they do on such projects.

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Enriching Research: Adapting Industry Methods to Meet Our Diverse Programmatic Needs

Jennifer Bowie, Georgia State University

Many technical communicators have argued that we need more research. MacNealy states "the development of research is essential [for technical communication] to grow as a field and a profession" (1992). Pinelli and Barclay further MacNealy's claim by suggesting that technical communication needs research that provides links between the profession and academy. Such research "sustains both [academia and the profession] by providing the bases from which to develop new areas of inquiry and to find solutions to problems" (1992). Pinelli and Barclay suggest the link will help develop new areas of inquiry, but the link can also create common ground between the theory of the discipline and the practice of the profession. Programs in technical communication in particular are often concerned with links between the profession and academy, and thus these programs are the very place where research that links the academic and the professional should exist.

The adaptation of the user-centered design (UCD) methods into legitimate research methods could link the academy and the profession. Research methods evolve to meet the needs of specific types of research, and UCD methods meet the specific needs of closely examining the usability of one product with specific goals, real users, and real tasks. However, as helpful as these methods are to practitioners developing a product, for academic study these methods can go beyond that original purpose and be productively applied to bigger concerns like the usability of general interface design (not a particular product), the usability of various products (comparing three different website navigation structures), how users complete tasks when not limited to certain products, how different purposes behind the use (homework compared to entertainment) impact the use of a product, how users use a variety of products, and how different types of users use specific or general products. These are areas that could provide significant contributions of knowledge to the field. Thus, usability testing, contextual inquiry, and other UCD methods are useful for research focused on design-related concerns like use, the users, and the purpose of use. If both academics and practitioners use these methods, they can create an interactive, intricately woven body of research and scholarship helpful for the discipline and practice. For practitioners, these methods can lead to redesigns, but for academics they can lead to theory development and the investigation of various phenomena.

In this panel presentation I will:

1. Suggest that user-centered design methods can be adapted to be legitimate rigorous research methods. Although these methods, when used in industry, focus on user-centered (re)design, the techniques can be adapted to be used as research methods through the application of technical communication methodologies and broader focuses during the investigation. I will draw on my own application of UCD methods for research as an example.
2. Discuss how the use of adapted UCD methods as research methods will provide the much needed research link between the profession and the academy, while also meeting the needs of technical communication programs. These programs sit on the borders of academia and industry as we prepare students for careers in both. As such, our programs need to prepare students to do research and apply the user-centered design methods. By teaching our students the profession-based UCD methods and showing our students how to adapt these methods into legitimate research methods, we will be responding

to the diverse needs of both the profession and the academy.

3. Present discussion questions including: How do we define research methods? How are research methods different than UCD methods? How are they similar? How can we best meet the diverse academic and professional research needs of our programs? How can we best include UCD methods and research methods into our programs?

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Content Management Systems for Technical Writing Programs: Accounting For Diversity

Karla Saari Kitalong, University of Central Florida

Content management systems (CMSs) are platforms that allow for single sourcing—the storage, retrieval, and manipulation of multiple written, graphical, or numerical texts. A CMS allows users to enter such texts into predetermined fields that are saved in a database. The texts can then be combined in a variety of ways to provide information suitable for diverse audiences. Among the program-level uses for Content Management Systems are data collection and reporting for program assessment, student portfolio compilation, website updating, discussion forums and weblogs, and curriculum material repositories.

Course management systems are another flavor of CMS that can provide a common institutional "place" for online education. Teachers who use CMSs such as WebCT and Blackboard to teach online classes tend to value tools available within these CMSs that encourage interaction among students and between students and teacher, facilitate repurposing and distribution of course materials, and simplify grade reporting, if not grading itself. For students, when the CMS used for online education stays the same over time, their energies can go into learning the course content rather than mastering a new interface. Administrators enjoy cost savings when everyone uses the same system to deliver online learning. However, there are obviously a number of drawbacks to using "one-size-fits-all" CMSs for online education. For instance, online student dropout rates remain high—as high as 50 percent in some cases. Moreover, teaching online can be labor intensive, especially for writing teachers. These persistent issues call into question the usability of CMS systems for the diverse stakeholders involved in online education.

CMS systems deployed for other program tasks, such as student portfolio compilation and assessment data collection, can be plagued by similar usability concerns. Like other complex products with diverse stakeholders, CMSs provide benefits even as they introduce usability challenges. For individual users, a lack of usability can easily negate the CMS's perceived institutional value. Technical communication programs often have idiosyncratic data collection and delivery needs. In addition, their programs' stakeholders—whether students, faculty, staff, or program administrators—may differ significantly from the general institutional population in terms of skills, needs, and preferences.

To account for the skills, needs, and preferences of a diverse stakeholder population, then, technical communication program directors must understand the interplay between utility and usability in CMS systems. They must involve themselves in discussions concerning the adoption of institution-wide CMS systems. In addition, they must carefully consider usability in deliberations concerning the development of home-grown program-level CMS applications.

In my presentation, I will generate discussion by presenting updated information about the evolving CMS market, giving examples of CMS systems implemented in writing programs, and outlining relevant criteria for evaluating such systems so as to account for usability and utility in the context of a diverse stakeholder population.

We've Got Game: Designing an E-Learning Game By a Diverse Audience for a Diverse Audience

Susan Feinberg, Illinois Institute of Technology

We developed a computer game that educates and entertains. CollegePursuit is a CD-ROM based 3-dimensional game intended to teach students and parents the fundamentals of financial aid in a college setting. Both students and parents are considered the target population, and age is the diversity here.

This project was carried out as part of IIT's Interprofessional Projects Program (IPRO). The IPRO program, a hallmark of IIT, brings together students of different disciplines to solve real-world challenges. This diverse team worked on a project that was carried out over three semesters, indicating the critical need for comprehensive and accessible documentation because the project has a high student turnover rate. My presentation describes how, what, and why this multidisciplinary team designed the e-learning game for students and parents.

What We Designed: Organization and Tasks

The organization of our group evolved from utilizing a standard product development lifecycle that includes design, programming, usability testing, and marketing. Each team had focused tasks that included documentation:

- *Design*: Create "look & feel" of game, design functionality, document front end flow of the game, create storyboards and game events, and document scoring for the game.
- *Programming:* Develop beta version of the game; create development documents for easy transition next semester.
- *Usability Testing:* Conduct nine usability tests, analyze test results, and write-up recommendations. Also, research financial aid information and create user manual.
- *Marketing*: Research content for the game and its feasibility, determine distribution of game software, design marketing materials, and create grant proposal for funding of game.

How We Designed

Using Blackboard 5, a flexible e-Learning software platform from Blackboard Inc., we created sections for each team and posted each team's documentation under its section. Blackboard technology permitted every member to access every team's documentation and to archive documentation as it evolved. Because we used iterative prototyping for game design and testing, we had numerous versions of documentation, so we had an historical record of our problems, solutions, and changes.

Why We Designed the Way We Did

Every team was responsible for its own documentation, including maintaining and updating it. Because many of the deliverables were documents/documentation (a proposal, a user manual, marketing materials, CD-ROM's), most of the documentation was significant as an end product. But the internal documentation was equally significant because of the nature of the IPRO program at IIT. Over the lifecycle of the product (three semesters) the project experienced a high turnover rate as students entered and left the teams. For this reason, internal documentation was critical, as was an historical record so that the same mistakes would not be repeated. At the end of each semester, we burned a CD-ROM with all the documentation files from each team, as well as printed a hard copy of the final documentation from each team. The next teams could then examine the documentation from the previous teams and continue the project with a shorter learning curve.

Outcome

The combined outcome of our team's efforts is a beta version of CollegePursuit - an entertaining,

marketable, and educational financial aid game; it is thoroughly user-tested, and is complete with a user manual, marketing materials and a roll-out plan. Our internal documentation provides for easy transition next semester. Of course, it didn't hurt to have an organized project manager, talented leadership, skilled programmers, and overachieving team members.

Exploring Theory as We Diversify the TPC Intellectual Enterprise

Ann Brady, Robert R. Johnson, and Thomas Vosecky; Michigan Technological University

There are many ways we can diversify technical and scientific communication curriculum and program design. The much-needed diversity of class, ethnicity, and gender should be a direct goal for all of our programs, and the profession as a whole. We should also be conscious of subject matter diversity. We have certainly brought ethics, methodology, risk communication, and environmental problems, for instance, to our community table. Although the purpose of bringing such topics to our programs might not have been intentionally to "diversify"; nevertheless, doing so has had such an effect.

This increasing commitment to diversity, combined with an expanding awareness of the work that professional communicators do and stronger relationships between the workplace and the academy, has suggested new programmatic directions in teaching, practice, and research (Bernhardt, Spilka, Shriver, for instance). Often missing from this list of initiatives, however, is a call to consider the role that theory might play as we explore these new territories.

The purpose of this panel is to explore theory as a way to diversify the intellectual enterprise of TC. In a global sense, a theoretical elaboration of the very theme of this conference — diversity — is a prime example of our need to "theorize." A deeper theoretical understanding of class, race, and gender, for example, would be of significant use as we diversify our profession.

On the more localized level of program development, we have neglected the overt teaching of theory in our undergraduate programs. Graduate programs, especially at the doctoral level, have taught theory to some degree. The undergraduate curriculum, however, is another story. It is now time to address this shortcoming in undergraduate programs.

Undergraduate programs can benefit from a commitment to examine diverse theories in several ways. To begin, theory provides a reflective rigor that delves beneath the surface "how-to" of technical communication practices. We should thus not reserve the study of theory for graduate students alone. A theoretical understanding can encourage students - graduate or undergraduate - to take a reflective stance, a stance that can enable them to imagine and re-imagine their future identities on an on-going basis.

In addition, and perhaps most importantly, theoretical work is by definition critical work. That is, an approach that puts theory in a central and guiding positions us to ask probing questions; questions that could easily be displaced or forgotten when we get into the "heat" of program implementation.

Our proposal consists of three panelists who will address different aspects of the "theory question."

Speaker 1 will provide an overall rationale for bringing theory to undergraduate curricula and program development. In addition, I will focus on asking some questions critical to instituting such a programmatic endeavor. Some questions I may pose are:

- How do you theorize a curriculum?
- What theories or sites of theory would we choose?
- What theories are most useful for non-majors?
- Who benefits from this change in programs? Who loses? Anyone?
- How would theorizing be addressed in mission statements?
- How would nonacademic audiences receive such changes to programs?
- What are potential objections to placing theory into programs and curricula?

Speaker 2 will argue that theorizing current programmatic work is crucial to advancing it; indeed, the fact that scientific and technical communication (STC) programs flourish is the single most important reason for doing so.

Specifically, I will first review the increasing complexity of contemporary STC programs, which often offer classes in writing and print text, design, multi-media and new media, and digital technologies. I will next demonstrate how, without the benefit of diverse theoretical perspectives, program administrators and faculty can struggle to find intersecting points for these components or a prudent balance among them. Finally, I will discuss how drawing on a range of theories, from those that are strictly rhetorical, such as techne, to those that are more generally social, such as feminist, can encourage students to engage more fully with questions of "technology and how we live" (Johnson). Such engagement, I maintain, reinforces the gains that the field has made in expanding a general understanding of scientific and technical communication as responsible practice.

Speaker 3 will examine the technical problems faced in bringing the ethical aspects of technology use into a diverse technical communications classroom, then present examples of specific assignments that can be used in "service" courses to help the students adopt a critical, reflective stance without jeopardizing the more practical goals of the course.

My observations of students in a technical communication "service" course with heavy non-major enrollments — such as engineers, science, and business students — indicates many hold the attitude that technology is ethically "neutral." They can thus avoid confronting the possible consequences of their future work as designers, developers and marketers of technology. One role of an instructor should be to provide these students with the theoretical tools that will help them come to terms with the human side of existence, and not delegate everything to the merely instrumental.

In my presentation, I will look at current practice and suggest a strategy incorporating the theoretical frame proposed by Martin Heidegger in *The Question Concerning Technology*. Beginning as an undercurrent to the assignments and progressively becoming more overt, Heidegger's concepts of "standing reserve" and "enframing" will enable students to consider the social ramifications of technology in their everyday practices.

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The Paradox of Focus and Diversity: The Role of Theory in Program Development

Teena Carnegie, Eastern Washington University

As the 2004 ATTW member survey by David Dayton and Stephen A. Bernhardt indicates, technical communication programs face many challenges, including recruiting qualified students and faculty, building curricular coherency, maintaining sufficient course sections, balancing theory and practice, and increasing or maintaining enrollments. Smaller programs (those with limited numbers of faculty and few resources that are usually housed within English departments) must innovatively work within the constraints they face. They, for example, must manage with one or two tenure-track faculty, must use an integrative/ interdisciplinary approach to design a complete major which can complicate issues of program coherency, and must serve a particular population of students. Constrained resources also mean that smaller programs frequently have limited access to the technology needed to cater to industrial and workplace trends. For these programs, program development requires, paradoxically, a sharper focus and a more universally responsive curriculum that is capable of producing diversity in opportunities students can pursue. This tension between focus and diversity means that such programs must pay particular attention to the connections between theory, pedagogy, and program design.

At Eastern Washington University, when we began the process of redesigning our program, we recognized that we would need to create a strongly focused core: one that would enable us to prepare students for diverse jobs and disciplines without requiring more resources than those afforded by an English department at a regional university. For us, program development needed to center on the primary skills students would require to analyze and solve communication problems faced by a wide variety of organizations and individuals in professional contexts.

We believe that one of the factors limiting the effectiveness of our program is the theory shaping our introductory courses. Like many other programs across the nation, our program had embraced genre theory as a core concept. And like most introductory courses, our introduction to technical writing initiates students into our program as well as serves as a writing requirement for numerous majors across campus. It inevitably sets the tone for the rest of our program. Assessment has shown, however, that our students are not developing the level of analytical and problem solving skills they need, and we have come to believe that the early focus on genre is undermining the effectiveness of our program. Our students are learning to describe and duplicate the forms of writing in technical communication, but their understanding of the systems of activities, audience, and situational contexts remain limited. They appear to be working with a top down model in which form dictates the solution rather than the solution determining form. As a result, our students continually fail to understand and enact writing as a problem solving activity, and, from feedback received from other departments, students are unable to effectively integrate what they learn in the introductory technical writing courses into other professional writing contexts. Given some of the other results of the 2004 member survey (only six percent thought problem solving was being taught well), the problem is not unique to our program.

The solution we are enacting shifts the core concept that forms the foundation of our program away from genre to the principles of information design. With this as our core, we believe we can more effectively implement a problem-based

pedagogy, creating a more dynamic, integrative learning environment that engages students in analysis, problem-solving, and decision making, better enabling them to define, plan, and shape information. This paper does not argue for one theory over another, nor does it seek to argue against the usefulness of genre theory. It does, however, ask us to examine the role of theory in the shaping of programs. How do the theories of our field shape our programs for better or worse? Do certain theories as core concepts require more resources than others? Should the diversity of our programs be related to the theories upon which they build?

Panel

Recruitment Strategies for Professional and Technical Communication Programs: Approaches for Addressing Potential Students from Diverse Backgrounds and Institutional Affiliations

Panelists: **Julie Dyke Ford, Richard K. Mott, Richard Johnson-Sheehan**

As a recent ATTW listserv discussion indicated, program recruitment, particularly for undergraduate programs, is a topic that concerns many of us. As noted by Brad Butler in his presentation at the 2000 CPTSC conference, we may have problems recruiting undergraduates because many of us lack "systematic and informed recruitment strategies." Promoting our programs and developing strategies for attracting undergraduate students to major or minor in professional and technical communication is a difficult and time consuming task, and it is not something we receive training for in graduate school. Nevertheless, if we want to sustain and/or grow our programs, promotion and recruitment is a very important issue.

While members of the CPTSC audience may offer recruitment strategies that are effective for targeting all audiences, we would like to emphasize more specific strategies for recruiting students from the diverse institutional affiliations to whom we try to promote our programs. Methods for informing high school students about a major in technical communication may look very different from methods for informing community college students. Likewise, methods for informing current students about an institution's own technical and professional writing program may look very different from methods used to attract those outside an institution. Moreover, potential students from these diverse institutional settings inevitably represent a wider variety of cultural and socioeconomic backgrounds than traditional college students.

Thus, our panel of three speakers will focus on the challenges, opportunities, and possible techniques for recruiting high school students, community college students, and students already at our universities. Each speaker will spend five minutes sharing recruitment issues and approaches for one of these particular institutional settings.

Strategies for Attracting High School Students to Technical Communication Programs

Julie Dyke Ford, New Mexico Institute of Mining and Technology

I will focus on the ways in which we may go about reaching high school students who are in the process of considering different universities, choosing majors, and thinking about career paths. Many students at the high school level have not been exposed to technical writing classes, and they may be unaware that career opportunities exist for individuals who have strengths in written and oral communication and interests in scientific and technical subjects.

At my institution, New Mexico Tech, we have several existing recruitment strategies for targeting high school students including a Consulting Scientist program and a summer Mini Course in technical communication.

The Consulting Scientist program puts technical communication faculty in touch with high school students by providing high schools across the state the opportunity to invite technical communication faculty to speak to their students about career opportunities and degree options in technical communication. This program gives technical communication faculty the chance to introduce students from a variety of backgrounds to the technical communication field and present high school students with information about our institution's B.S. degree.

The Mini Course targets high school students who have already expressed an interest in technical communication. Through the week-long Mini Course, students earn one hour of college credit and sample college life by staying in a dormitory on campus and taking an introductory course. Through this course, students hear first-hand accounts of the technical communication field through guest speakers, participate in hands-on assignments, and travel on field trips to relevant sites.

Yet, even with these strategies in place, we are still in a position where we would like to see our program increase enrollment. Other ideas which we plan to implement include:

- Organizing a formal departmental tour and program introduction during Exploration Day, the day when prospective students and their families visit campus;
- Educating our admissions office about the TC curriculum, providing them with sample class projects, and listing for them the wide variety of technical communication career options so that they can share this information through their recruiting activities and identify potential technical communication majors;
- Visiting local high schools to share information about our major; and
- Weaving assignments that generate promotional materials into our classes.

During the discussion that follows my brief talk, I look forward to generating a conversation that includes ideas other programs have tried and had success with, as well as brainstorming for new approaches to recruiting high school students.

Strategies for Attracting Community College Transfer Students to Technical Communication Programs

Richard K. Mott, New Mexico Institute of Mining and Technology

Because their role in the educational community has changed significantly over the last several decades, local and regional community colleges now serve as first-class targets for TC programs interested in recruiting students. While our parents' generation may have stereotyped community colleges as "blue-collar, second-chance institutions," informed students and academic professionals now see community colleges as "affordable alternatives with small classes and accessible teachers that provide a good foundation for four-year degrees."

Because many students attend two-year community colleges (many of which originated as vocational and technical schools) in order to prepare for a bachelor's program, those who possess communication skills (or potential) and an interest in a scientific or technical major nicely fit the target demographic for TC recruiters. Consequently, TC recruiters must learn how to promote their four-year programs to community college students who come from a wide variety of cultural and socioeconomic backgrounds and who have the interest and the ability to succeed as technical communicators.

TC recruiters must address two fundamental issues when trying to communicate with community college students: the medium and the message. In terms of medium, TC recruiters should consider the following two questions: 1) in what context do you address the students? (in person, in class? on the campus via flyers? in the auditorium by video tape? on the computer monitor via the web?); and 2) what institutional mechanisms are in place that allow you to implement these connections? (e.g., how do you schedule and staff on-campus visits and the production of marketing material?)

In terms of message, TC recruiters might emphasize these three significant similarities between the community college setting and their own program's resources and institutional identity: First, community college students prefer small class sizes, which most TC programs can offer. Second, community college students want access to their teachers; they want to continue to develop professional relationships with their professors and mentors, which is another hallmark of well-run TC programs. And third, community college students often pay their own way through school and are thus more inclined to need financial assistance of some sort. TC recruiters can outline potential work-study opportunities and scholarships, as well as other financial aid opportunities that are available.

For my part of this panel presentation, I will highlight some aspects of my institution's chosen media and messages, touch on what has worked and what hasn't in terms of community college recruitment, and encourage audience members to share their own successes and failures.

Strategies for Attracting First Generation College Students to Professional Writing Programs

Richard Johnson-Sheehan, Purdue University

The problem with many efforts to recruit students into Professional Writing programs—especially minority and non-traditional students—is that these efforts often assume students already know what college can offer them. First generation students, however, tend to arrive on campus with little knowledge of what paths they can follow. After all, these students do not usually have family or friends to help them make strategic decisions about majors, areas of study, and coursework.

As a result, one of the best sources of students for Professional Writing programs goes untapped. In our experience, first generation students, including minority and non-traditional students, are often attracted to Professional Writing programs for pragmatic reasons. These students tend to be more career-minded than students whose parents graduated from college, because they see college primarily as a means to finding a good job. For them (and their families), the university is viewed as a way to step up in economic status, allowing them make the transition from blue collar and service sector jobs into the professional workplace.

programs until late in their degree programs. The problem, though, is that first generation students are often unaware of Professional WritingAdvisors, after all, may point them toward the English Department or the Communications Department, but advisors often don't suggest Professional Writing as a degree program.

As a result, first generation students who tell advisors they like to write and communicate often end up studying literature or creative writing instead of pursuing the career-oriented paths they desire like Professional Writing

In my part of the panel, I will offer strategies for attracting first generation students to a Professional Writing program. I will also discuss diversity issues, showing how first generation students are often minorities and non-traditional students who will be attracted to the pragmatism and career-oriented nature of Professional Writing programs. Moreover, I will demonstrate how Professional Writing programs can become a pipeline through which diverse students can connect with companies—especially high tech companies—that very much want to recruit them.

Diversifying Your Student Body: How to Assess Chinese Applicants' Credentials and Potentials

Baotong Gu, Georgia State University

While programs in technical and scientific communication are becoming a norm at most universities in this country and while we recognize the globalization of technical communication and the need to culturally diversify the field, there's only a small handful of foreign students in the graduate programs in this field. While such a phenomenon may be attributed to such possible factors as foreign students' apprehension about writing, their lack of financial means, and most programs' lack of venues for advertising in foreign countries, this scarcity of international graduate students in technical and scientific communication programs is also due, at least in part, to our inability to correctly assess a foreign applicant's academic credentials. As a result, programs often pass up on some well-qualified international applicants in favor of less-qualified native speakers, just to be on the safe side.

Based on my experience of teaching English at a Chinese university for eight years and directing a technical writing program at an American university for three years, my presentation will address the issue of assessment with regards to the following areas of academic credentials of Chinese applicants:

- The Chinese BA curriculum—what courses are important, what possible course contents they imply, how one curriculum compares with another;
- The GPA—what methods do Chinese universities use in calculating GPAs, what are the usual elements that count toward a final course grade, whether professors curve the grades, what grades qualify as good grades;
- Test Scores—what TOEFL, GRE, TSE, and TWE scores are good, what scores are real, and what scores might be inflated;
- Recommendation letters—who are the more appropriate people to write the applicant recommendation letters, what recommendation letters might be overstating the case, how we should read those polite but "empty" letters;
- Writing ability—how much you should trust the TWE scores, how much you should rely on writing samples, what writing errors to catch, and what writing errors to overlook; and
- Speaking ability—when you should trust a TSE score, when you should do a phone interview.

Research and training in technical and scientific communication in China is still a virgin land, and it's a great potential market for technical and scientific communication programs in this country. Therefore, I expect my topic to draw the interest of many program administrators.

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Yeah, But Can You Actually Do It? Applying Grad School Knowledge on the Job

Dennis Walikainen, Michigan Technological University

Keywords: professional goals, communication practices, institutional identity

How can the content of graduate programs in the curriculum help bring knowledge to the workplace? I have spent the last couple of years analyzing university websites for the purpose of better understanding technical communication and website development for universities. In particular, I have researched how universities use campus maps and virtual tours on the web, and I have been amazed at the varying degrees of complexity and usefulness of these sites. I analyze them also from a web-marketing context, as that is my job here at Michigan Tech. As I work toward my PhD, I attempt to bring, as much as possible, some of this knowledge, literally, from the classroom and laboratory to the administration building. This begs several additional questions: how much of what I learn can I actually apply in my job as director of marketing communications? How important is it that I can apply theories learned in graduate study in the workplace? Is learning to better oneself good enough, or do graduate programs need to prove to employers, in this case the University itself, that graduate students are prepared? Can theory or theories be made applicable, practical, and/or useful? And, does knowledge of technological advances in software equate to better communications for universities? Is technological knowledge empowered over, and at the sake of, empirical knowledge?

Who's to bless? Who's to blame?

Universities nationwide are moving from simple, static campus maps on the web to more interactive tours that run the spectrum from click and zoom to video, audio, Flash-incorporating, etc. multimedia experiences. While this is happening, the emphasis has also been toward showing more faces and attempting to get personal (with all this impersonal technology). The ramifications are many: technically, these more-complicated interfaces assume faster Internet connections. Politically, these highly involved tours routinely show the best of campus facilities, the successful students, and the cleanest parts of the college towns. We should not be surprised, as these are "marketing vehicles." What is also of interest, however, is the way the web user is *led* through these tours. Len Manovich might analyze this use of the human computer interface within the ability to meander vs. the clear paths created for us (2001). That begs the question: "What can we get away with?" not only from a user-interface scenario, but within the political frameworks of a university. Mark Meadows said an interactive narrative is "a context and an environment in which the narrative can be discovered or built by readers of that story" (2002). Again, is this possible?

As we redesign the campus map for our university, we are asking these questions, and one solution we have come up with is a series of clickable photos with no instructions other than the word, "Wander" in the official university web banner at the top of the page. We shall see.

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Digital Studio as Method: Bridging the Digital Divide in Technologies, Cultures, and Institutions

Kristine Blair, Jude Edminster, and Andrew Mara; Bowling Green State University

Scientific and Technical Writing Programs have been forming digital partnerships to create or maintain technical ethos and relevancy, and to share the market with other departments, programs, and institutions offering similar training and certification.

While these strategies may keep such programs current, going digital has other, more crucial impacts-one of which is foregrounding diversity. The hybrid spaces created through non site-specific interfaces, and asynchronous and nongeographical connections challenge notions of institution, discipline, and culture. Our presentation will report on the efforts of a co-authored grant between Rhetoric and Writing and Scientific and Technical Communication faculty to develop The Digital Literacy and Communication Studio. This project is an effort to design, develop, and test content produced by (1) faculty charged with developing new online course content, (2) graduate students engaged in developing E-portfolios and ETDs to enhance their scholarly productivity, and (3) writing students and instructors from Rhetoric and Writing and Scientific/Technical Communication who collaborate in two online graduate certificate programs: International Scientific and Technical Communication and Digital Language and Literacy.

Because digital media are rapidly transforming the ways in which teachers and graduate students learn, research, and produce scholarship, our studio attempts to frame the traditional scholarly activities of inquiry and publication in ways that span cultural, institutional, and geographic specificity. The studio, in particular, embodies a range of strategies to serve and address diversity: enhancing the diversity of our student population through online courses that redefine writing and communication within the context of English studies, expanding the definition of where Scientific and Technical Communication programs are housed and their connections with other disciplines, acknowledging and serving multiple intelligences/learning styles through the multimedia literacy of ETDs and e-portfolios, and diversifying our range of multiple student learners through the production of online certificate programs.

At the CPTSC, we hope to investigate the ways in which intra-departmental training can help both Rhetoric and Scientific/Technical Writing Programs start to challenge and bridge the traditional cultural, geographical, institutional, and chronological assumptions about knowledge creation and delivery. Finally, we hope to discuss how our curricular reform addresses the greater needs to reach an increasingly diverse audience.

Wireless Technical Communication Classroom as Intersection: Designing at the Nexus of Competing Stakeholder Desires

Meredith W. Zoetewey, Purdue University

Gail Hawisher and Michael Pemberton (1993) predicted over ten years ago that as less stationary and more var ied technological options became available, the design of the computer writing classroom would become less and less significant. As Hawisher and Pemberton foresaw, the range of educational technologies has increased considerably with the advent of wireless technologies. These technologies, however, have not resulted in the end of classroom design. Rather, portable technologies form fields of presence that "fundamentally alter patterns of resource availability and space use" in wireless environments (Mitchell, 2003). The design dilemmas may have changed, but they haven't disappeared.

One method of grappling with these new dilemmas is to conceptualize the wireless technical communication classroom as an overlapping domain where administrators', instructors', and students' desires are often at odds. This construction builds on a more plastic sense of place that thrives on mobility and defies simple enclosures without denying place's importance or specificity (see Massey, 1993; Escobar, 2001; Cresswell; 2002). Construing the wireless technical communication classroom as nexus of diverse programmatic and individual needs opens the door to several questions:

- If stakeholders provide different descriptions of the "perfect" wireless design, can administrators accommodate competing discourses without displacing any? What are the ethical implications of (not) doing so?
- What role, if any, should industrial design conventions play in configuring academic sites? In other words, is industry another stakeholder in the design equation? Should the material conditions of wireless technical communication classrooms replicate professional environments in an attempt to simulate "real-world" situations or depart from these conventions?
- What do we name these places? Are they classrooms? Computer labs? Something else altogether? How do names for these places potentially enhance or detract from a technical communication program's institutional status?

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Functional Literacy, Program Diversity, and Power User Collaboration

William Jabusch, Oklahoma State University

Anyone's degree of functional literacy for a communication event or process follows from their degree of habituated practice with the tools and genres necessary to perform that particular kind of task. The repeated use of communication hardware and discourse conventions by individuals is thus a literate practice. The sheer repetition involved in the literate practice required by courses of instruction in the communication arts, thus increasing rhetorical competency. For example, grammar schoolers often find that habituating a proper grip on their pencil increases competency at forming cursive letters that are also readable.

Especially regarding the personal computer as a personal communication system, both at home and in facilities sponsored by college programs, more task specific literate practice leads to greater task specific competency. If someone spends hours per day playing "personal shooter" PC games, for example, then that person's eye, hand, cursor, and mouse coordination becomes acute. If someone spends hours per day writing substantive e-mail messages to a variety of audiences, then that person's facility for quickly translating their cognitive work into coherent prose while at the keyboard likewise increases in competency. Even though both addicted gamer and discussion list devotee might be "computer literate," their precise functional literacy is conditioned by the kind of communication tasks and events that they perform most repeatedly.

Fundamental issues for diversity in technical communication, including physical disability, ethnicity, age, gender, and social class, relate directly to the functional literacy some enrollees might bring to programs on basis of their literate practice from life experience. For example, returning adult students may refuse to do their banking solely online, because they have little reason from experience to trust the security of 128-bit web encryption, let alone online password protection. Similarly, college age children of migrant workers may not have routinely engaged in instant messaging as teenagers, simply because no "family computer" existed at home. Even though the "access to technology" provided by programs in technical communication may be rigorous and equal, low functional literates may not command equivalent quality of instruction, because they do not recognize the same number of "whistles and bells."

Programs may be diverse with regard to access, but have little recourse to insure commonly shared working knowledge of the software and hardware necessary to develop rhetorical competency in technical communication. Courses in technical rhetoric that presume competence with computer systems and networks typically do not include a remedial component that also works to confer such competency.

Technical communication programs provide students with computing platforms and Internet access as a matter of course. For that matter, since the mid-1990s, changes in the information design of even traditional workplaces imply the need for periodic, corresponding refinements, as funding permits, in the model apparatus used by students. Operational facility with computing hardware and software by faculty and students alike can thus become the procedural backbone for degree programs as a whole.

Those students who bring broad and sophisticated functional literacy to a technical writing program can have disproportionate influence on its hardware and software apparatus by dint of their enthusiasm. For example, a department might opt to acquire digital camcorders and movie editing software, as the basis for a club or special interest group, because such

"power users" promoted such a move by soliciting faculty and other students. Power users may also come forward with specific suggestions, such as wireless networking or automated backup routines, for improving system effectiveness or user access. In general, thanks to their preoccupation with up-to-date technologies, high functional literates are valuable resources as student personnel, even though they sometimes assume program instrumentation that suits their elite objectives.

Since good pedagogy for *technic*al writing often involves a classroom practicum that calls for social discourse among students, collaboration among low and high functional literates can support program diversity. High literates refine and articulate their own working knowledge in the course of exposing it to others, while low literates benefit from opportunities to observe and model the literate practice of power users. However, the degree and style of collaboration in the classroom should be instructor optional. Policies that provide high literates to engage natural mentoring situations, therefore, must be necessarily indirect.

Programs that involve a hardware and software facility with the teaching of technical writing can readily develop intake measures that register the functional literacy being brought to the program by individual students. However, a questionnaire that asks for total computers in the home, or number of information system courses completed, would not do the trick.

Since functional literacy with the instrumentation for technical communication can be segmented by task, a more useful profile might follow from examining new students on a set of basic tasks involving operating systems, software applications, and the Internet. Of course, there should be a time limit for each type of task. Including a written outcome, such as a protocol in bulleted list format or a technical description, would also allow enrollees to register their linguistic experience. Such functional literacy profiles readily could be coded as numeric strings and made available on class rosters. The notion that students can radically upgrade their pre-enrollment functional literacy over the course of a fourteen week semester is somewhat specious. Programs that penalize those with less literacy by holding elite literacy synonymous with achievement, rather than evaluate progress relative to individual literate practice, neglect the spirit of academic diversity. Profiling the functional literacy of program enrollees, by what amounts to placement testing, would also obviate the de facto assessment of competency, by virtue of those same identity markers that academic diversity counteracts as a matter of ethics.

Conference Schedule

Thursday, October 7

Registration - 6:00 – 8:00 in MSEE Atrium

Keynote Address - 8:00 MSEE B12

Welcome
Bruce Maylath, CPTSC President
Dan Hirleman, School of Mechanical Engineering, Purdue University
Irvin Weiser, Department of English, Purdue University

Introduction
Michael Salvo, Purdue University

Keynote Presentation
"Which Came First?: On Minority Recruitment and Retention in the Academy"
Samantha Blackmon, Purdue University

Friday, October 8

Registration and Continental Breakfast - 8:00 - 9:00 am [Stewart 302-306]

Plenary Panel - 9:00 – 10:15 am [Stewart 302-306]

Alternative Pathways to Professionalism
Moderator: Bruce Maylath, University of Wisconsin Stout

"Advocacy and Accountability without Anality in Internship Programming, Including Some Tips on Law, Ethics, and Places Not to Go"
Gerald J. Savage, Illinois State University

"3 Es in England: Education, Experience and Entrepreneurship"
Jacqui Bleetman, Coventry University

"Exporting Students, Importing Content: Global and Political Diversity in Homogenous Universities and Technical Communication Programs."
David Sapp, Fairfield University

Concurrent Session I- 10:30-11:30

1A. CPTSC-Sponsored Programmatic Research

Moderator: Kelli Cargile-Cook, Utah State University "Exporting Students, Importing Content: Global and Political Diversity in Homogenous Universities and Technical Communication Programs"

Doreen Starke-Meyerring, McGill University

"Report of a Survey of Managers about Core Competencies"

Kenneth T. Rainey, Roy K. Turner, and David Dayton, Southern Polytechnic State University

"Trends in Undergraduate Curriculum in Technical and Scientific Communication Programs"

Sandi Harner, Cedarville University

1B. TPC and Good Citizenship

Moderator: Karla Saari Kitalong, University of Central Florida

"Knowledge, Policy, and Practice: A PhD Program for the Future"

Carolyn Rude and Jim Dubinsky, Virginia Tech

"Are Professional Writing and the Liberal Arts Mutually Enriching?"

W.J. Williamson, University of Northern Iowa

"Technical Communication as Civic Activity: Content Development for a Youth-Services Information System for a Local Community"

James P. Zappen, Rensselaer Polytechnic Institute

1C. Programmatic Recognition of Diverse Cultures

Moderator: Jan Tovey, East Carolina University

"The Role of Gender in the Curriculum of Technical Communication Programs"

Lee Brasseur, Illinois State University

"Queer Eye for Straight Communication"

Thomas L. Long, Thomas Nelson Community College

"From Users to Writers: Training Technical Communication Students with Disabilities"

Suzanne Black, Purdue University

"Towards Formative Assessment: Valuing Different Voices"

Nancy W. Coppola and Norbert Elliot
New Jersey Institute of Technology

1D. Diversifying Program Structure
Moderator: Stephany Filimon, Illinois Institute of Technology

"Will an English Studies Ph.D. Be a Viable Option?"
Dale L. Sullivan, North Dakota State University

"Technical Marketing Communication: Shall We Welcome it In or Leave it Out?"
Russell Willerton, Texas Tech University

"The Negotiated Boundaries of Certificate Programs"
Tracy Bridgeford, University of Nebraska at Omaha

"Different Campuses, Different Programs: Diversity or Fragmentation?"
Kevin LaGrandeur, New York Institute of Technology

"Online PhD Program at TTU"
Locke Carter, Texas Tech University

Concurrent Session 2 — 11:45 - 12:45

2A. TPC and Engineering Programs
Moderator: Dianne Atkinson, Purdue University

"Transforming the Program in Engineering Communication Through Genre Analysis and Professional Workplace Contexts"
Richard House, Anneliese Watt, and Julia Williams
Rose-Hulman Institute of Technology

"International Virtual Team-Projects for Engineering Programs"
Charlotte Kaempf, Universitaet Karlsruhe
Frank Molkenthin, Technische Universitaet Berlin

2B. TPC and Politics- or Not
Moderator: Nancy Allen, Eastern Michigan University

"Dr. StrangeFish or: How I Learned to Stop Worrying about Diversity and Love The Academic Bill of Rights"
Kelli Cargile Cook, Utah State University

"'College Club': Using Service-Learning in a TC Program to Encourage Awareness of Diversity"
Thomas Barker, Texas Tech University

"The Problem of Diversity & Reinscribing Power Structures in Course and Program Development"
Steven T. Benninghoff, Eastern Michigan University

2C. Technical Communication in International Settings
Moderator: Meg Morgan, University of North Carolina Charlotte

"Enhancing Technical Documentation in Ghana: Modest Suggestions for Adaptation in Training Programs"
Michael Jarvis K. Bokor, Illinois State University

"Reform Without Reformers: The Plight of English Education in Japanese Schools of Science and Technology"
Thomas Orr, University of Aizu

"Internationalizing the Technical Communication Curriculum"
Victoria M. Mikelonis, University of Minnesota

"Positioning Intercultural and International Approaches in the Professional Communication Curriculum"
Barry Thatcher, New Mexico State University

2D. Finding a Niche: Diverse Strategies in Program Development
Moderator: Maria D. Lombard, Purdue University

"The Problem-Based Curriculum: Diversifying Our Construction of Diversity"
Anthony Flinn, Eastern Washington University

"The Ethical Dimension of Diversity: Extolling Our Unique Roles through Similar Outcomes"
Carroll Ferguson Nardone, Sam Houston State University

"Technical and Scientific Communication Program Diversity and Complex Systems Theory"
Ed Nagelhout and Miriam Barr
Indiana University-Purdue University Indianapolis

Lunch — 12:45 - 2:15 [Stewart 302-306]
Informal Table Discussions
Tours
The Professional Writing Technology and Pedagogy Showcase is an annual event for instructors and students within Purdue's professional writing program to share lesson plans, activities/ projects, web based materials, or other teaching resources.

Concurrent Session 3 — 2:15 - 3:15

3A. Learning Core Competencies
Moderator: Huiling Ding, Purdue University

"When the Writer Becomes the Boss: What Practitioners Can Teach Us About Developing Curricula in Writing Project Management"
Stevens Amidon, Indiana University-Purdue University Fort Wayne

"Mapping Diverse Approaches to Project Management in the Technical and Professional Communication Curriculum"
Stuart Blythe, Indiana University-Purdue University Fort Wayne

"Reconsidering the Basics of Technical Writing: What Are the Basic Units of a Quality Writing Project?"
Bill Hart-Davidson, Michigan State University

"Introducing Time Management and Goal Setting Concepts to Technical Communication Students"
Lawrence J. Clark, Houston Baptist University

3B. Social, Visual, and Service Learning
Moderator: Divya Singhal, Illinois Institute of Technology

"Social Marketing, Visual Communication, and Service Learning"
Deborah C. Andrews and Rebecca B. Worley, University of Delaware

"Pathways to Difference: Incorporating Disciplinary Diversity in the Technical and Scientific Communication Curriculum through Extended Service-Learning Projects"
Michele Simmons and Jean Lutz, Miami University

3C. What's in a Name? Building a Program, Developing a Culture
Moderator: Pat D. Johnson-Winston, Illinois Institute of Technology

"Building a Graduate Culture: Connecting Faculty Expectations and Student Attitudes"
Molly K. Johnson, University of Houston-Downtown

"Finding a Name, Charting a Future: Names, Diversity, and Sustainability in Professional Writing Programs"
Michael Knievel, University of Wyoming

"Designing a Program for the Full Spectrum of Workplace Writing Career Goals"
Lu Rehling, San Francisco State University

"The Potential Impact of the Lone Ranger, OR Using Non-Technical Writing Courses and Tutoring as Recruitment Terms to Increase Diversity in Technical Communication"
Heather Sehmel, Stockton

3D. The Road Rarely Taken: University TPC Programs by Way of Secondary English
Moderator: Marjorie Rush Hovde, Indiana Univ.-Purdue Univ. Indianapolis

"What Forces Drive Need for Secondary-Level Tech. Comm.?"
Dave Gaskill, Saginaw Valley State University — cancelled

"Perceptions and Practices of Technical Communication by Incoming College Students and their Secondary Teachers"
Kay Harley, Saginaw Valley State University

4C. Recruitment Strategies for Students from Diverse Backgrounds and Affiliations
Moderator: James Dubinsky, Virginia Tech

"Strategies for Attracting High School Students to Technical Communication Programs"
Julie Dyke Ford, New Mexico Institute of Mining and Technology

"Strategies for Attracting Community College Transfer Students to Technical Communication Programs"
Richard K. Mott, New Mexico Institute of Mining and Technology

"Strategies for Attracting First Generation College Students to Professional Writing Programs"
Richard Johnson-Sheehan, Purdue University

"Diversifying Your Student Body: How to Assess Chinese Applicants' Credentials and Potentials"
Baotong Gu, Georgia State University

"Yeah, But Can You Actually Do It? Applying Grad School Knowledge on the Job"
Dennis K. Walikainen, Michigan Technological University

4D. Intradepartmental Training as a Bridge Over the Digital Divide
Moderator: Rebecca Burnett, Iowa State University

"Digital Studio as Method: Bridging the Digital Divide in Technologies, Cultures, and Institutions"
Kristine Blair, Jude Edminster, and Andrew Mara, Bowling Green State University

"Wireless Technical Communication Classroom as Intersection: Designing at the Nexus of Competing Stakeholder Desires"
Meredith W. Zoetewey, Purdue University

"Functional Literacy, Program Diversity, and Power User Collaboration"
William Jabusch, Oklahoma State University

Open Discussions — 4:45 - 5:45

Programmatic Research Forum
Moderators:
Carolyn Rude, Virginia Tech

Forum on Building Diversity
Moderators:
Jan Tovey, Eastern Carolina University; Meg Morgan University of North Carolina Charlotte

Reception & Annual Banquet - 7:00-10:00 [East and West Faculty Lounges of the Union]
Service Award
Moderator: Bruce Maylath, CPTSC President

Saturday, October 9

Annual Business Meeting - 9:00-12:00 noon [Stewart 318]

Group Activity Options - 12:15-5:30
[hikes, etc. and meeting points]

Business Meeting Minutes

1. **Meeting called to order at 9:00 a.m. with 55 members in attendance.**
2. **Announcements**
   a. **Saturday excursion—Marj Rush Hovde**
   b. **New officer introductions—Bruce Maylath**
      1. President—Jeff Grabill
      2. Vice President—Jim Dubinsky
      3. Secretary—Kelli Cargile Cook
      4. Treasurer—Karen Schnakenberg
      5. Members at Large—Nancy Coppola, Linda Driskell, and Gerald Savage
3. **Minutes from 2003 business meeting.** The minutes were distributed and reviewed. Ken Rainey made the motion to approve the minutes; Michael Salvo seconded the motion. The motion passed unanimously, approving the minutes without revisions.
4. **Standing reports**
   a. **Treasurer's Report—Karen Schnakenberg.**
   Karen reported a balance on-hand of $22,478.20 with 161 individual memberships (90 from the October 2003 conference and 71 paid as dues only) and one institutional membership.
   b. **Secretary's Report—Kelli Cargile Cook**
   No report.
   c. **Publications-Bruce Maylath, reporting for Ann Blakeslee**
   Bruce reported that the 2002 proceedings have been electronically published.
   d. **Program reviews—Bruce Maylath, reporting for Kirk St. Amant**
   Report: Bruce reported that Carole Yee resigned as the program review chair after serving for many years in the position. In her place, Bruce appointed Kirk St. Amant to serve as Program Review Coordinator. Bruce distributed a report from Kirk that explained the transition of the program review coordinator, reported on the University of Arkansas—Little Rock program review, and suggested that a committee be appointed to examine the program review Self-Study guidelines and update them, as necessary. In response to this last request, Bruce appointed Cindy Narhwold, University of Arkansas—Little Rock, and Nancy Coppola, New Jersey Institute of Technology, as task-force members.
   Action: Vickie Mikelonis, University of Minnesota, noted that her program was interested in conducting a self-study and program review, and Bruce asked her to contact Kirk to begin the process.
   e. **Website—Bill Williamson**
   Report: Bill reported that he has consolidated all CPTSC media at the University of Northern Iowa, including the program website and listservs. He noted that the new website is on hold because of administrative and technical issues, which he is working with the executive committee to solve.
   Action: Bill asked members to contact him if they would like to be added to the organizational listserv. Bill suggested that anyone who wanted new material on the website contact him. He also stated that he was particularly interested in adding materials that would better serve the needs of our international members.

f. **Distinguished Service Award—Bruce Maylath, reporting for Stuart Selber**

Report. Ken Rainey and Debby Andrews were awarded the DSA in 2004, and testimonials will be collected at the website.

Action. Outgoing president Bruce Maylath will work with this year's DSA recipients to choose next year's honorees.

g. **CPTSC Research Grants—Kelli Cargile Cook**

Report. Kelli recognized this year's research grant recipients and announced that the CFP for the next round of funding would be distributed soon. The deadline for applying for the grants will be in January 2005.

Action. Kelli will send out CFP in the fall to announce the grant opportunity and solicit proposals.

5. **Other Reports**

a. **Concept for proposal for constitutional amendment to allow auxiliary unit or chapter in Europe—Jacqui Bleetman and Debby Andrews**

Report. Jacqui and Debby reported on several issues related to the proposal. Jacqui suggested that the concept will have a more broadly international focus, rather than a European focus. She will work with others, who met to discuss the proposal at the lunch roundtable session, to contact program outside the U.S. to discuss the organizational ideas. She will also investigate the possibility of EU funding. As connections are made and formalized, she expects they will need to establish a web presence.

Action. Debby noted that CPTSC should continue its concerted efforts to invite international members to CPTSC and that next year CPTSC members will have the opportunity to meet additional international members at the IPCC meeting in Limerick. To submit a proposal for this meeting, CPTSC members should select the Education and Training Strand and put an asterisk by the presentation title to indicate that the person proposing is a member of CPTSC.

b. **ATTW—Dan Riordan**

Dan briefly described the March 2004 conference in San Antonio and invited CPTSC members to come to the 2005 meeting in San Francisco. He also reported that the recent changeover to Lawrence Erlbaum now allows members to pay their dues with credit cards.

c. **STC—Bruce Maylath, reporting for Sandi Harner**

Bruce distributed Sandi Harner's STC report, which discussed student membership issues and outlined the new Research Grants Program. He said that Sandi would be in touch though the listserv as the student membership changes were clarified.

d. **ACM SigDoc—no report**

e. **CCCC Committee on Technical Communication—no report**

f. **Consortium for the Study of Engineering Communication—Linda Driskill**

Linda noted that the consortium continues to work on identifying best practices and technologies. She said the consortium hoped to make contacts with foundations to improve its members' research funding.

g. **Technical Communication Summit—no report**

6. **Old Business**

a. **CPTSC/tekom cooperative effort: training in teaching tech writing—Ken Rainey**

Ken reported on a book chapter he co-authored with Karla Kitalong, Bruce Maylath, Charlotte Kaempf, Margaret Hundleby, Judy Ramey, and Michael Hughes. The

chapter will be printed in book that describes technical writing across nations. The book will be published in Spring 2005, and the authors of the chapter have agreed to present any funds they receive from the article to CPTSC.

b. **CPTSC's mission—Bruce Maylath**

In response to questions last year about CPTSC's mission, Bruce included it in the agenda this year.

c. **Tech Comm as official profession and academic degree—Bruce Maylath**

Bruce reported that the IRS and the Census Bureau have now officially recognized technical communication as an official profession and academic degree.

d. **Synchronous online conference—Bruce Maylath**

Bruce noted that last year's conference at Clarkson had a moderately successful synchronous online component. He suggested that this component might be added to future conferences, depending on the host site's preferences and capabilities.

e. **Committee on Diversity Report—Bruce Maylath**

Bruce shared with CPTSC Committee for Diversity's Report with members. The report described the committee's recommendations and identified recommendations that were in the process of being implemented. Other items, such as the conference scholarship for a student from an underrepresented group will be implemented in time for next year's conference. CPTSC members also recommended other opportunities for increasing diversity in the field:

1. Jude Edminster discussed the Ph.D. Project and suggested that a similar project might work in technical communication.
2. Vickie Mikelonis suggested that CPTSC might seek corporate sponsorship to promote technical communication as a career to high school students.
3. Mary Coney suggested that we research efforts in other disciplines that have helped to increase diversity.

Jan Tovey concluded the discussion by thanking the Committee for Diversity for its efforts. She also noted that this year's conference program included a Forum on Diversity that identified four additional actions CTPSC might take to increase diversity:

1. Create a more formal network to identify and recruit individuals from underrepresented groups into the field.
2. Develop a faculty/alumni mentoring system
3. Improve funding and scholarship opportunities for individuals from underrepresented groups
4. Add information on the CPTSC website that explains how to become a graduate student in this area and makes means of entering into the field more visible

Action: Continue to implement recommendations from the Committee on Diversity as outlined in the report, and consider additional recommendations from this year's Forum on Diversity.

7. **New Business**

a. **Proposal to make CPTSC the designated leader in sponsoring regional and national panels of undergraduate directors of technical communication programs to review available data and make recommendations about technical communication curricula—Ken Rainey**

Report. Ken Rainey discussed Amy Whiteside's article in JBTC and described her recommendations that regional and national panels of undergraduate program directors review

curricula in an effort to standardize it. He asked members if CPTSC might want to move in that direction, and if so, how to do so.

Action. The discussion that followed suggested that this topic might be integrated into next year's conference them to begin this conversation, which will likely extend over a number of years.

b. **Moving technical and scientific communication from "Social Sciences" to "STEM": Sciences, Technology, Engineering, and Mathematics—Linda Driskell**

Report. Linda Driskill proposed that CPTSC members work to change technical and scientific communication's designation with NSF from "social science" to "STEM." She outlined the potential benefits of this change and asked the membership's permission to investigate how to make this change.

Action. The membership agreed that this idea was worthy of investigation, and Bruce asked Linda to report on her findings.

c. **Imprimatur on Intecom Language Project—Bruce Maylath**

Bruce reported on Intecom's Language Project, which includes a style guide for international correspondence. The style guide is available online at the following URL: *www.intecom.org* . Bruce asked that CPTSC support this project through the following imprimatur: "Whereas the Intecom Language Project provides clear recommendations for the use of English terms and spellings in international contexts, the Council for Programs in Technical and Scientific Communication recommends programs consider its use in their international correspondence and point to it as a resource in courses in which technical and scientific communication is taught." Kaye Atkins moved the imprimatur be accepted; Rebecca Burnett seconded the motion. Motion passed.

d. **Proposal to support David Hailey's right to research documents used in the U.S. presidential election and report his analysis—Sam Dragga**

Report. The membership composed a statement of support for David Hailey: "The Council for Programs in Technical and Scientific Communication (CPTSC) voices its support for the academic freedom of Professor David Hailey of Utah State University. Typographic analysis is a legitimate field of study in the field of technical communication. CPTSC also compliments the administration of Utah State for its vigorous defense of Professor Hailey's academic freedom." Mary Coney moved that statement be approved; Carolyn Rude seconded. The motion was unanimously passed. Incoming president

Action. Jeff will distribute the statement in the form of a press release following the meeting.

e. **Redesigning CPTSC's Logo—Dave Yeats**

Report: Dave proposed that the CPTSC logo be redesigned. The membership suggested that a student competition be develop a new logo for both electronic and print distribution.

Action. Jeff will send out a message announcing the contest, and the executive committee will decide on competition prizes.

f. **2006 meeting site—Lu Rehling**

Report. Lu Rehling presented San Francisco State University's proposal for the upcoming 2006 conference and solicited membership feedback on the conference location and accommodations. Dan Riordan moved that the conference be held at San Francisco State University in 2006; Jan Tovey seconded the motion. Motion passed.

Action. Lu will work on local arrangements for the conference and report decisions to the executive committee and general membership at next year's conference.

8. **Upcoming CPTSC meetings**
   Two other institutions also expressed interest in future conferences:
   a. 2007: McGill University in Montreal will develop a proposal for the 2007 conference
   b. 2008: The University of Minnesota will develop a proposal for the 2008 conference. The 2008 conference will mark UMN's Rhetoric Department's 100th anniversary as well as CPTSC's 35th anniversary. The first CPTSC meeting was held at UMN.
9. **Invitation to Lubbock—Tommy Barker, Texas Tech University**

Meeting adjourned at 12:00.

Treasurer's Report

	Subtotal	Total	Balance
BALANCE FORWARD from 2003			**$19,469.72**
INCOME			
2003 Milan Conference	50.00		
2003 Clarkson Conference	4029.52		
2003-04 Dues (21 members + UMN)	520.00		
2004-05 Dues (9)	180.00		
TCQ Mailing list	125.00		
TCQ Mailing list	150.00		
Total Income		**$ 5054.52**	
EXPENSES			
Research Grants – 3 @ $500	1500.00		
Executive Board			
San Antonio Ex Bd Meeting	198.33		
Newsletter print & postage	157.71		
Purdue Oct Board Meeting	90.49		
Total Expenses		(1946.53)	
BALANCE on HAND as of 12-31-04			**$22, 577.71**

Total Membership and Dues to date for 2003-04

161 individual members. 156 @ $20 each + 6 @ $40 +I @ $100 (U of MN) = $ 3,460

Includes 90 from October Conference + 73paid as dues only.

Total Membership and Dues to date for 2004-05

9 individual member @ $20 each = $ 180

Includes 0 from October Conference + 9 paid as dues only.

CPTSC Executive Board 2003-2004

President
Bruce Maylath

Vice-President
Ann Blakslee

Treasurer
Karen Rossi Schnakenberg

Secretary
Kelli Cargile-Cook

Technology Officer
W.J. Williamson

Members at Large
Nancy Allen
Jim Dubinsky
Karla Saari Kitalong

Past President
Stuart Selber

2004

Membership List

Adams, David
Adkins, Kaye
Agena, Kate
Allen, Nancy
Allen, Jo
Allison, Elizabeth
Andrews, Deborah C
Atkinson, Dianne
Balkema, Sandra
Ball, Cheryl
Barker, Thomas
Beasley, Amy
Benninghoff, Steve
Berncik, Philip
Black, Suzanne
Blair, Kristine
Blakesley, David
Blankert, Jennifer
Bleetman, Jacqui
Blythe, Stuart
Bokor, Michael
Bowie, Jennifer
Brasseur, Lee
Bridgeford, Tracy
Burnett, Rebecca
Carnegie, Teena
Carter, Locke
Clark, Lawrence
Coney, Mary B.
Cook, Kelli Cargile
Coppola, Nancy
Coulson, Heath
Dautermann, Jennie
Ding, Huiling
Dragga, Sam
Driskill, Linda
Dubinsky, James
Edminster, Jude
Feinberg, Susan
Filimon, Stephany
Flinn, Tony
Franke, David
Gehrs, Scott
Griggs, Karen
Harley, Kay
Harner, Sandi
Hart Davidson, Lillian
Hovde, Majorie
Jabusch, William
Jennings, Ann
Jindal, Divya
Johnson, Evelyn
Johnson, Molly
Johnson, Robert
Johnson-Winston, Pat
Kaempf, Charlotte
Karis, Bill
Kastberg, Peter
Kemble, Jennifer
Kimball, Miles
Kitalong, Karla
Knievel, Michael
LaGrandeur, Kevin
Lax, Joanne
Linsky, Elisa
Loane, Kevin
Lutz, Jean
Maid, Barry
Mara, Andrew
Maylath, Bruce
McGovern, Heather
McNair, Lisa
Mikelonis, Victoria
Morgan, David H.
Morgan, Margaret
Mott, Richard
Nagelhout, Ed
Nardone, Carroll
Northcut, Kathryn
Orr, Thomas
Oswal, Sushil
Platten, Tricia
Rainey, Kenneth
Rehling, Louise
Riordan, Dan
Rodgers, Ida
Rude, Carolyn
Salvo, Michael
Sapp, David Alan
Sauer, Geoffrey
Savage, Gerald
Schnakenberg, Karen
Seible, Marcea
Sharpe, Victoria
Simmons, Michelle
St. Amant, Kirk
Staggers, Julie
Starke-Meyerring, Doreen
Stevens, Amidon
Stolley, Karl
Sullivan, Dale
Thatcher, Barry
Tovey, Janice
Vande Brake, Katherine
Vosecky, Tom
Walikainen, Dennis
Warren, Thomas
Watt, Anneliese
Wickliff, Gregory
Willerton, Russell
Williams, Sean
Williamson, William
Worley, Wanda
Worley, Rebecca
Yeats, Dave
Zappen, James
Zeleznik, Julie
Zoeteway, Meredith
Zuidema, Leah