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Information Development in a Flat World

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Keywords: collaboration, global organizations, information developers

Global collaboration among information developers was the theme of our 8th annual Best Practices conference of The Center for Information-Development Management (CIDM) in September 2006. The senior managers presenting at the conference discussed the increasing global reach of their organizations. They have worldwide customers requiring information in multiple languages. They have global organizations with information developers in many countries and whose first language is often not English. They find themselves collaborating with colleagues in product development, marketing, customer support, and training to produce and disseminate information. They are continually challenged to reduce costs and time to market while increasing the value of their contributions to the corporate bottom line.

In this address, I paint a picture of the pressures under which information-development managers work and how they are transforming their organizations to be better aligned with corporate objectives. The transformations require significant new skills and competencies among staff members. The rather free-wheeling creativity fostered by an over-emphasis on desktop publishing is rapidly being replaced by a manufacturing discipline. New information developers must be versed in topic-based authoring, writing for use in more than one context. They must be familiar with international standards such as DITA, DocBook, XML, XLIFF, and others. They are most valuable if they are knowledgeable about the disciplines of information architecture, information design, content management, translation coordination, and customer and usability studies. They need the discipline required to function well in a structured-authoring, controlled-language environment. They must have the technical education and experience to understand the technologies about which they write without trivializing the content. And, they must recognize that unless they can continually prove their worth to management inside and outside their departments, their positions will be outsourced to lower-cost economies.

Location, Dislocation, Relocation: Positioning Programs in Professional and Technical Communication for the 21st Century

Programs in technical and professional communication must continuously evaluate academic propriety and administrative efficacy of their location within colleges and universities: as separate departments, as (more or less autonomous) divisions within departments, allied with English, allied with Communication, allied with science and engineering disciplines. The history of programs in technical and professional communication has been filled with discussions of location, dislocation, and relocation.

This panel presentation will bring together stories and insights representatives of four programs that have been newly negotiating/navigating issues of location:

Sam Dragga, Texas Tech University: A proposal to separate composition and rhetoric and technical communication from the Department of English and join the writing program to the Department of Communication Studies, thereby integrating oral and written communication and creating synergies and efficiencies in teaching and research, has been supported by the writing and communication faculty but opposed by the English faculty, especially regarding issues of resources, power, and the administration of the first-year composition program.

Laura Gurak, University of Minnesota: The Department of Rhetoric, originally established in 1908 in the College of Agriculture, will be newly integrated in 2007 with the first-year composition program of the Department of English and all writing instruction across the university in one central academic unit to be located inside the College of Liberal Arts. The new administrative unit is the result of months of intensive study and wide consultation and is intended to be "a national model for the study and teaching of writing across disciplines."

Carolyn Miller, North Carolina State University: While undergraduate and master's programs in technical communication are housed in the Department of English, a new doctoral program (titled Communication, Rhetoric, and Digital Media) is located separately in the College of Humanities and Social Sciences, with faculty from the departments of Communication and English. An interdisciplinary institutional arrangement offered exceptional potential in terms of faculty capability, student interest, market for graduates, and intellectual synergy across multiple fields on issues related to new communication technologies. This arrangement seemed the best way to get the program started; whether it remains so is still to be determined.

James P. Zappen, Rensselaer Polytechnic Institute: RPI's Department of Language, Literature, and Communication supports a broad curriculum of language studies, with emphasis upon technologically mediated communication. Recent developments include a BS in Electronic Media, Arts, and Communication, an MS in Human-Computer Interaction, and PhD emphases in HCI; Rhetoric, Culture, and Technology; and Media Studies. Our

location within a technological university presents both opportunities and continuously changing administrative challenges, including coordination with other departments (Arts, Cognitive Psychology, and Computer Science) and recruitment and support of graduate students.

Dislocating Technical Communication Programs

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Keywords: program location, program administration, interdisciplinary programs

In 2004 I started thinking about program location—always a dangerous thing to do. I was in my third year as chair of the Department of English and I noticed growing divisions—philosophical, pedagogical, methodological—separating the Technical Communication and Rhetoric (TCR) faculty from the faculty in Literature, Creative Writing, and Linguistics (LCWL).

Teaching Orientation

In the TCR program, faculty were innovative in their uses of instructional technologies, instituting a hybrid first-year composition program that incorporated online and onsite learning as well as online submission and distributed online evaluation of all writing assignments. Faculty in the LCWL program raised objections to this program, voicing their abiding faith in the traditional onsite classroom with one instructor teaching and evaluating the writing of his or her students.

TCR faculty also adopted online education at both the M.A. and Ph.D. levels, but LCWL faculty again voiced their faith in the superior merits of the traditional onsite classroom and declined the opportunity and available technical support to offer graduate courses online. LCWL faculty said their subjects were taught better if the instructor and students were together in the same physical environment.

Program Mission and Reputation

The TCR program could claim a national reputation: its M.A. graduates were getting positions at leading companies and its Ph.D.s at major research institutions (e.g., Auburn, Georgia Tech, Purdue). It was one of approximately 50 M.A. programs in Technical Communication and one of only a score with online offerings. It was one of approximately 25 Ph.D. programs in Technical Communication and Rhetoric, and the only program offering the Ph.D. in TCR online.

Given its much greater national competition, the LCWL program could claim a regional reputation: its Ph.D. graduates were going almost exclusively to teaching institutions, usually in Texas and neighboring states. More and more of its M.A. graduates, however, were finding admission to Ph.D. programs at major research institutions.

Graduate Teaching Opportunities for Faculty

> The TCR program's 14 faculty were teaching roughly 95 graduate students in onsite and online courses. The only limit to the size of the program was the number of available faculty. More students could be admitted if more faculty were available to teach the courses. The LCWL program's 34 faculty were teaching approximately 85 graduate students in onsite courses only. TCR faculty, as a consequence, were getting greater opportunities to teach graduate courses and direct dissertations relative to their colleagues in the LCWL program.

Greater differences would later be evident, such as TCR's inclination to generate conclusions from representative evidence versus LCWL's affection for the salient anecdote or TCR's effort to communicate unambiguous messages versus LCWL's effort to uncover multiple meanings.

So I started thinking the unthinkable for a department chair—and here's my initial mistake—that TCR and LCWL might do better if separated. I believed that the job of the chair was to find (or to create, if necessary) the environment in which faculty could be as productive as possible in their teaching and research.

Over the following academic year, this thinking would periodically occupy my mind, but the ideas were altogether inchoate. I thought about separate departments of TCR and LCWL, but TCR didn't have a separate bachelor's degree. It offered graduate degrees in TCR, but the B.A. was in English, with a specialization in TCR.

I also thought about putting TCR together with Communication Studies (a faculty of 10 at TTU): this affiliation would avoid the danger of marginalization and the administrative costs of having two small departments and offer the opportunity to put oral and written communication together again. The two programs offered a lot of complementary courses at both the graduate and undergraduate levels: intercultural communication, medical communication, legal communication, theories of rhetoric, history of rhetoric, quantitative and qualitative research methods. And everything I'd been reading in books and journals indicated that the oral and the written (and the visual) would be more and more integrated in the coming years. A department that brought together oral and written communication would be in a better position to serve its students and generate pioneering research.

I also thought that LCWL would thrive as a separate department, giving the Department of English, a clear and undiluted identity—the creation and interpretation of literature. I believed that writing and reading poetry, fiction, drama, and nonfiction were important subjects that deserved a separate department with a single focus and mission, important subjects that could be better served by a clarity and unity of purpose.

Nevertheless, I was still thinking. And three things delayed the progress in my thinking:

1) Institutional Inertia: separating the two programs would be a big change, involving division of offices, classrooms, administrative assistants, budgets, etc.

2) Disciplinary Inertia: TCR is ordinarily housed in Departments of English and shifting it to Communication Studies would be a pioneering effort.

3) Personal Inertia: I enjoyed being chair, at least from time to time. I liked to think I was usually good at it, that I'd contributed to both the TCR and LCWL programs, supporting both equally, promoting reading and writing, and bringing attention to the teaching and research of the faculty. If the TCR and LCWL programs separated, I would go with the TCR program and the Department of English would have to find a new chair.

Given the rising and divisive tensions among the TCR and LCWL faculty—especially regarding the first-year composition program—I decided it was time to break through the inertia in my thinking and address the issue of separation, starting with the Dean of the College of Arts & Sciences. (This would be my second mistake.) If the Dean of A&S didn't like the idea of putting TCR in Communication Studies, it would be pointless to keep thinking about it. I mentioned the idea in a brief e-mail message, and she thought the idea merited conversation: it was innovative and she liked innovation. She invited to that conversation the Chair of the Department of Communication Studies: if he didn't like the idea, we would stop thinking about it. He also thought the idea deserved a continuing conversation. The Dean of A&S put us in a meeting with the Provost: if he didn't like the idea, we would stop thinking about it. He thought the idea deserved a continuing conversation. So did the TCR faculty, so did the Communication Studies faculty.

The LCWL faculty, however, were insulted that I didn't come initially to the Department of English itself with this idea. The LCWL faculty, it was said, were being given no voice in this important decision. The Dean and the Provost and I, it was said, were going to decide this. This "divorce" (the metaphor of choice) would be imposed, it was said. In spite of my assurances that no decision was being made at this time, that conversations were continuing, that the LCWL faculty would be included in the conversations, it was said that I was supporting this change to the detriment of LCWL.

I would have thought the LCWL faculty would know better. (This was my third mistake.) I would have thought that my years as associate chair and my years as chair, supporting all faculty and all programs, initiating book recommendations and book discussions as well as film screenings and film discussions, recruiting new faculty in both LCWL and TCR, going to every poetry and fiction reading, increasing the number of majors and minors, increasing the number of graduate students, and raising the profile of the Department of English, I would have thought that I was building a reservoir of trust, that faculty would know that I would never do anything injurious to the Department of English or the LCWL program. I was wrong: I was engaged in magical thinking. I didn't realize how disturbing the proposal of change would be. And in spite of everything I'd been doing for the Department of English, I guess I was still perceived as this alien administrator—a usurper—my actions and decisions were perceived as

motivated by a higher and ulterior allegiance to my field instead of to my faculty.

The LCWL and TCR faculty, nevertheless, did come together to create a five-person committee (three LCWL and two TCR) that would discuss the issue of the ongoing relationship of LCWL and TCR. The conversations focused on the disposition of the composition program: the LCWL faculty said it was theirs, the TCR faculty said it was theirs. The Chronicle of Higher Education, meanwhile, published a detailed and illustrated exposition of TTU's first-year composition program, putting it on the cover and giving us national visibility. And the WPA (Council of Writing Program Administrators) did a comprehensive review, praising the program's innovations and advising that it be given the time, space, and resources to demonstrate its expected impact.

The conversations of this committee concluded with a proposal to create two self-determining units within the Department of English—essentially separate LCWL and TCR faculties and programs on issues relating to curriculum, recruitment, and tenure and promotion. The full faculty voted on this proposal and it was accepted. Ideally, good fences will make good neighbors.

The lessons of this experience are clear: avoid magical thinking. Given the possibility of change, people will adopt either of two narratives: 1) a narrative of loss in which there are villains and victims and the emotions elicited are anger, regret, anxiety, and grief, or 2) a narrative of opportunity in which there are explorers and pioneers and entrepreneurs and the emotions elicited are courage, fortitude, curiosity, and enthusiasm.

Both narratives create a misconception that is as addictive as it is unproductive. Both are a consequence of magical thinking—one apocalyptic and the other utopian—both disrupt rational thought about the costs and benefits of all locations.

So, let's be clear: no location is ideal. Every TCR program is circumscribed by its academic location—the way we perceive the discipline, the teaching and research we do, the priorities we establish, the projects we tackle, the associations we join—all of it is influenced—and quite possibly determined—by the location of the program. And if we imagine that it isn't, if we imagine that we are impervious to material and geographical influences, that's also magical thinking.

It is the process of questioning and challenging all locations—the process of dislocating—that allows us to note the tacit assumptions we make about who we are as scholars and teachers as well as the self-censorship in which we might be engaged. The process of dislocating exposes the unrealized diversity of this relatively uniform field. Almost all of us, for example, are housed (or institutionalized) in a "Department of English" and this defining condition directs us almost exclusively to textual studies. As a field, we ought to investigate the impact of such locative biases and develop vehicles and strategies for building agile and mobile academic and administrative relationships. In the age of wireless communication, it's time to put aside the nostalgic and isolating notion of the "academic home" and think

creatively about positioning programs to do pioneering and cross-disciplinary teaching and research.

The Academic Job Market in Technical Communication, 2005-2006

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Keywords: college teachers/supply and demand, job market, program development, faculty

Over the past decade, the development of new academic programs in technical and scientific communication and the expansion of existing programs have increased the demand for credentialed faculty. However, the number of graduates emerging from doctoral degree programs has thus far been inadequate to meet demand. Failed searches are not unusual, opportunities for lateral or upward academic movement create retention problems, and a limited number of applicants for any position further complicate the job market.

An imbalance between faculty supply and demand creates multiple problems and can compromise the development of the field overall. Programs cannot develop as planned, positions may be filled by people with little preparation and interest in the field, and research may suffer if faculty positions are held by people unfamiliar with the methods of research and research questions in this field. One way to enhance the ability to predict and plan for growth in the field is to develop data on the academic job market. "The Academic Job Market in Technical Communication 2005-2006" is the second part of a longitudinal study of the academic job market in technical communication. This research, conducted by Kelli Cargile Cook at Utah State University and Carolyn Rude at Virginia Tech, is designed to develop this data over a ten-year period.

The study originally developed from a series of questions the researchers had about the academic market in technical and scientific communication:

1) Are new doctoral programs needed to increase capacity without moving to oversupply?
2) Have newly established doctoral programs increased the number of graduates on the market?
3) Do the graduates of doctoral programs match expectations of employing institutions?
4) Is it feasible to begin new undergraduate programs given the shortage of faculty?

Results from the first study were published in "The Academic Job Market in Technical Communication, 2002-2003" (Rude and Cargile Cook). The second phase of this research project revisits these questions and the academic market in 2005-2006 to identify possible trends and changes. What follows are preliminary findings based on the initial survey of postings in the MLA Job Information List (print and online), the ATTW website, and the CPTSC website in 2005-2006. The researchers anticipate conducting follow-up interviews with search committee chairs during the current academic school year to expand and deepen their understanding of job market trends.

Positions Available

Preliminary findings show a stable market: **118 (2002-2003)** compared to **117 (2005-2006***).* These numbers are interesting when compared to the most recent survey of graduates in the doctoral pipeline. In a November 22, 2005, email to the CPTSC listserv, Kenneth Rainey reported his survey of 16 of 22 doctoral programs and their anticipated graduation rates for 2005-2006. He found that these sixteen programs will graduate 24-27 doctorates in the 2005-2006 hiring year. He also reported data concerning anticipated enrollments and future graduation rates, projecting that the number of graduates will increase by to 70-80 graduates per year in approximately 4 years. If his projections are accurate and the market remains stable, then positions in technical and scientific communication will continue to outnumber actual graduates for the foreseeable future.

Geographic Distribution

Preliminary findings also suggest that positions for technical and scientific communication specialists are available nationwide. Institutions in thirty-seven states advertised positions in 2002-2003. Eight states had five or more positions available: Pennsylvania (11); Ohio (10), Texas (10), Georgia (9), Illinois (6), Indiana (6), Virginia (5), and Washington (5). In 2005-2006, institutions in thirty-five states advertised positions. The states with the highest numbers of advertised positions were Pennsylvania (13), Texas (10), Virginia (7), North Carolina (7), Georgia (6), West Virginia (5), Massachusetts (5), and Illinois (5).

Hiring Department

English departments were, by far, the most common hiring departments listed in the position announcements. Table 1 lists hiring departments from most to least prevalent.

Department	**2002-2003**		**2005-2006**	
	Number	***Percentage***	***Number***	***Percentage***
English	84	71%	86	74%
Humanities	8	7%	8	7%
General Studies	6	5%	0	0%
Languages	5	4%	4	3%
Writing	5	4%	4	3%
Misc.	3	3%	4	3%
Rhetoric	2	2%	2	2%
Technical Communication	2	2%	3	3%
Communication	2	2%	4	3%
Composition	1	1%	2	2%
Totals	**118**	**100%**	**117**	**100%**

Table 1: Comparison of 2002-2003 and 2004-2005 hiring departments

Technical Communication Emphasis

All of the position announcements in this sample were analyzed to determine whether technical and scientific communication was listed as a primary or secondary specialization. If the position identified technical, scientific, professional, or business writing/communication as the required specialization, it was coded as a primary emphasis. If the position mentioned technical, scientific, professional, or business writing/communication, but not as the primary focus on the position, it was categorized as a secondary emphasis. Preliminary findings show a nearly equal interest hiring in individuals with primary and secondary emphases. Table 2 summarizes the numbers of primary and secondary emphases.

Emphasis	2002-2003		2005-2006	
	Number	*Percentage*	*Number*	*Percentage*
Primary	60	51%	62	53%
Secondary	58	49%	55	47%
Totals	**118**	**100%**	**117**	**100%**

Table 2: Comparison of 2002-2003 and 2004-2005 positions by technical communication emphasis

Positions by Rank

Position announcements were also analyzed to identify the ranks advertised, with assistant professor being the most commonly posted rank. Table 3 summarizes findings by rank.

Rank	2002-2003		2005-2006	
	Number	*Percentage*	*Number*	*Percentage*
Assistant	79	67%	81	69%
Assistant/Associate	9	8%	15	13%
Associate	0	0%	1	1%
Associate/Full	4	3%	2	2%
Full	0	0%	2	2%
Lecturer/Instructor/Fellow	21	18%	9	8%
Rank Open/Undeclared	5	4%	7	6%
Totals	**118**	**100%**	**117**	**100%**

Table 3: Comparison of 2002-2003 and 2004-2005 positions by rank

Figure 1 provides a comparison of the 2002-2003 positions by rank with the 2005-2006 positions by rank. Both Table 3 and Figure 1 suggest that the number of lecturer positions has decreased while the number of assistant professor listings has increased.

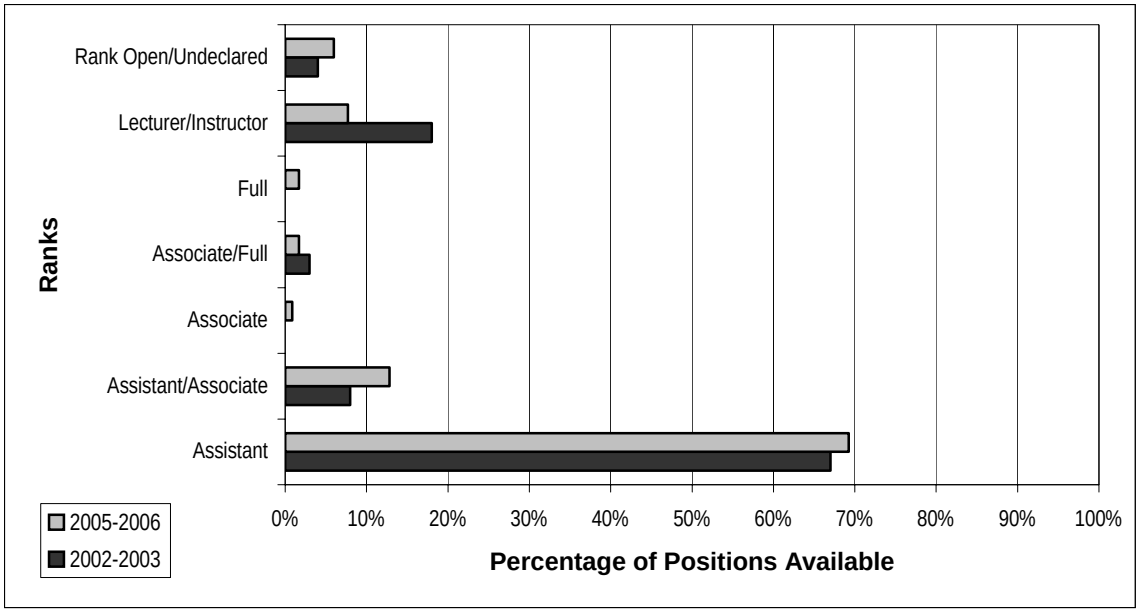

Figure 1: Comparison of 2002-2003 and 2004-2005 positions by rank

Positions by Tenure Status

Finally, announcements were analyzed to identify the advertised tenure status. Figure 2 compares the 2002-2003 tenure status results with the 2005-2006 results. Here again, preliminary analysis suggests an increase in tenure-track position announcements with an accompanying decrease in non-tenure track positions, similar to the changes found in the positions by rank.

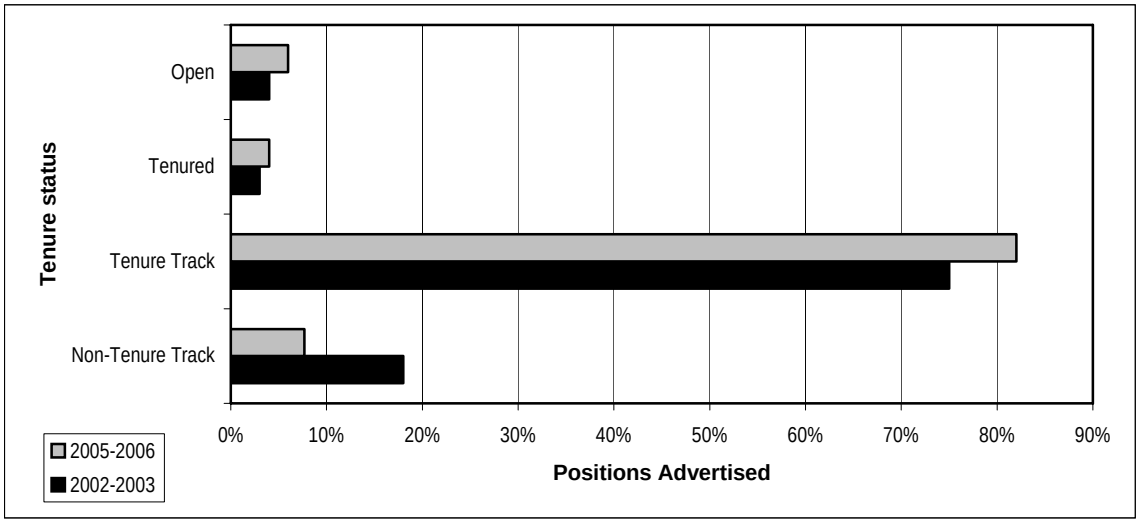

Figure 2: Comparison of 2002-2003 and 2004-2005 positions by tenure status

Conclusions

Follow-up interviews will be conducted later this fall to confirm these preliminary findings and to provide additional information about the 2005-2006 job market. As soon as interviews are completed, final results will be submitted as a formal research article.

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CPTSC Assessment: A Community Research Model

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Keywords: program assessment, core competencies

It is time for a new model of program assessment. Commonly considered an unwelcome process of auditing, program assessment is, at best, a burden that consumes valuable faculty time and, at worst, a regimented system that fails to recognize instructional complexity. As Jo Allen has observed, CPTSC is in a unique position to assume a leadership role within and beyond the field of technical and scientific writing. The CPSTS 2004 task force for program review has maintained an ideal emphasis on self-study (which allows diversity and individual program excellence), rather than accreditation (which promotes unwarranted uniformity). The present research proposes a model of program assessment in support of the CPTSC vision of self-study. The model we will present is based upon a robust construct of community, combined with an informed attitude toward outcomes assessment and an acknowledgement of the potential of asynchronous communication.

The new model begins with the development of core competencies. During our presentation, we will offer the NJIT MSPTC Assessment Model for discussion and debate. (The NJIT MSPTC Assessment Model was presented at CPTSC 2003, 2004; at CCCC 2005, 2006; and is forthcoming in Assessment in Technical Communication, eds. Margaret Hundleby and Jo Allen [New York: State University of New York Press, 2006].) This model is based on the variables of technical and scientific communication that we have thus far identified at NJIT: writing and editing; document design; rhetoric; problem solving, personal traits, and work skills; collaboration and team work; interpersonal communication; specialized expertise; and technology. The NJIT model is offered to prompt—not to define—the development of universal, non-context specific programmatic elements that can be field tested, modified, and validated by other graduate programs in the CPTSC community.

Eventual validation will be promoted by the CPTSC Community Assessment Blog (CAB). Currently under development, the CAB is designed to allow a web-based forum for assessment research at multiple institutions. Such a forum will include objectives of assessment practices, new assessment techniques used at various institutions, samples of student E-portfolios as they relate to the assessment techniques being used, and data sets of assessment findings that may be used to foster collaborative studies.

Based on an emerging model, we will present the outcomes of one cross-institutional assessment in which outcomes will be generated, analyzed, and reported. E-portfolios, the basic assessment vehicle for outcomes assessment in the model, will allow geographic boundaries to be asynchronously overcome. This field test will, we hope, allow eventual emergence of CPTSC Core Competencies, and thus promote an assessment view that will

emphasize the diversity and individual program excellence associated with self-study.

In reporting the results of model formation and field-test, we hope to promote what political scientist Glenn Tinder once called a substantial, though not necessarily systematic, community. In offering a new model for program assessment, we hope to continue the CPTSC goal of community inquiry through a valid, empirically-based outcomes assessment method that yields both accountability and individuality.

Certificate Programs in Technical Communication

Jim Nugent
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Keywords: certificate programs, CPTSC research award

Background

Between 1985 and 2003, the number of degree programs in technical communication approximately doubled (Little 274). During the same time, the number of *certificate programs* in technical communication increased approximately fivefold, growing from 16 to 84 programs (Nugent). Certificate programs are an increasingly popular means of meeting the demand for skilled technical communicators.

Despite their growing prominence, however, there is a surprising lack of information and discussion regarding certificate programs in the professional literature. One of the few—and best—surveys of technical communication certificate programs is a 1997 curricular survey by Sherry Burgus Little. In addition, I have offered my own detailed survey of curricula in a chapter in a forthcoming book on professional and technical writing programs. Beyond these works, however, there is a surprising informational and conversational void in our scholarship surrounding certificate programs.

This void is unusual, I believe, since certificate programs are currently situated in the middle of a number of interrelated conversations in the field. As Little notes, with their vocational emphasis, certificate programs are potentially the site of conflict "on the issue of *training* opposed to *education*, or in other words, the conflict between theory and practice" (278). With their role in meeting the needs of local industry, and with their potential as the locations for academy-industry cooperation, certificate programs speak to the conversation about who shapes technical communication programs—academy or industry. With certificate programs' gatekeeping function—that is, the role of "certifying" implicit in their very name—they are central in shaping the professional identity of technical communicators, and they present a number of significant implications to the project of professionalization.

Previous Research

In a study from 2003, I performed a detailed analysis of the curricula for some 84 certificate programs in technical communication, both graduate and undergraduate (see Nugent). My findings confirm Little's 1997 conclusions that these programs are incredibly diverse in their makeup and curricula. In order to meaningfully categorize program courses, I had to develop a heuristic with over 60 different course types. Of these course types, I was unable to identify a single one common to all certificate program curricula, whether as a requirement or as an elective. In addition, I found only one broad course type required by a majority of certificates: the introductory technical communication service course—a staggeringly diverse

course in and of itself. With such a disparate makeup of programs, I found, there is no such thing as a "standard" or "core" technical communication certificate curriculum.

In addition to looking at program curricula, I sent an email survey to program directors asking them questions about the status of their certificate programs and program instructors. I found that:

- in 2003, the average reported age of certificate programs was 10.5 years, with programs ranging in age from 1 to 22 years;
- over half of respondents indicated that their programs make use of an industry advisory board, while two in five indicated that they did not;
- almost 3 in 5 of respondents indicated that their program actively recruits from local industry;
- almost 2 in 5 respondents indicated that their program requires work in industry as a part of courses required for program completion; and
- the certificate programs I examined require on average 7.5 courses for completion, but they range in number from 3 to 14 courses.

Proposed Research

The research I have proposed—and have received generous support for from CPTSC—seeks in part to answer a call that was made during the 15th annual meeting of CPTSC in 1988. Then, the workshop group on certificate programs recommended that the council perform a nationwide survey to "gather information on the context of existing Certificate programs." The group also recommended a "survey [of] the number of full-time to part-time to adjunct faculty teaching in Certificate Programs in Technical Communication to establish a standard for an appropriate ratio." The research I propose seeks to more thoroughly survey certificate program administrators in order to answer these longstanding calls from CPTSC.

In addition, I hope to collect further data regarding instructors' qualifications, specializations, and work experience. I also hope to gather more in-depth programmatic data, including information related to the diversity of certificate program students and instructors, the size of programs, the age of programs, the length of program completion, and the relationship of programs to local industry. Ultimately, I hope to offer a fuller picture of certificate programs, one that will begin to address the informational and conversational void surrounding them in our literature. I aim to complete this research over the course of the following year.

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Preparing Students Across the Technical Communication Program for a Global Economy

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Keywords: curriculum global economy, international and intercultural issues

Technical documentation in a global economy is no longer novel; it's a given. Yet many technical communication programs in the US have yet to catch up fully with this fact and adapt to it. This paper poses the following questions: How might programs bring attention to international, intercultural, and global-marketplace issues? How can program designers infuse every aspect of their programs with such attention?

The University of Wisconsin–Stout may perhaps serve as a model. It has been attempting to achieve the goal of full infusion, particularly in its recently updated curriculum. Students in its bachelor of science in technical communication program have the following opportunities:

- Instruction and practice in preparing texts for translation in their Technical Writing course.
- Collaboration on the above texts with students studying translation in Austria, Belgium, Denmark, France, or Italy, as the texts are translated and localized for overseas audiences. Collaboration occurs through email, video sessions, and/or websites, most notably the newly designed, multilingual Trans-Atlantic Project website.
- Learning the elements of editing for global contexts in their Editing Practices & Processes course, including becoming familiar with British English.
- Editing technical texts in their senior capstone Technical Communication & Consulting course to render the texts in idiomatic American English, in collaboration with European students who have already translated the texts from their native language into (more or less) British English. Again, the collaboration occurs through email, video sessions, and/or websites.
- Designing wordless or minimal-word instructions for international use in their Document Design course.
- Full courses in Intercultural Communication and International Tech Communication.
- Study-abroad opportunities, with the fall semester of the junior year blocked out in the suggested course sequence. Also, a new initiative has begun with the four-week University of Limerick's Irish Summer School course in Communication & Culture: International Technical Writing.

Teaching Professional Writing to American Students in a Study Abroad Program

Brent Henze
East Carolina University
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University of Delaware

Keywords: international communication, study abroad programs

Studying abroad has become increasingly attractive for American undergraduates, including those pursuing degrees in professional fields. Such students may not be able to spend a full year or even a semester abroad, a traditional approach for liberal arts and foreign language students. For these students, including those in professional and technical writing programs, faculty are developing new courses and programs that are innovative in their time-frame, administration, and content.

Promoting intercultural and international communication has long been a goal in our field, as has the incorporation of experiential learning and client-based projects. But accomplishing that goal through those strategies in a study-abroad setting both increases opportunities and introduces problems. In our brief presentation we will overview trends in study abroad and, based on our study of three cases, offer strategies for developing successful study-abroad programs in our discipline.

Enabling Student Exchanges between the USA and France

Lucy Veisblat

Université Paris 7

Keywords: cooperative education, industry-academe relationships, intercultural communication, internship

The Department of Intercultural Applied Languages Studies at the University of Paris 7, Paris, France, offers a Masters degree in Technical Communication (CDMM—Conception de Documentation Multilingue Multimedia).

Twenty students are admitted to the program each year. Students find an internship in a company that will hire them for 12 months, and from October through June, alternate three weeks of classes at the university and three weeks in their company. From June through September, they work full time for their company.

All students are required to be fluent in French and in English. Some write in French for their company, others write in English. There is a strong demand from our partner companies for students with English as their native language and EILA is keen to encourage applications from such students. However, their admission to the program is likely to be hindered by various difficulties, the two major being command of the French language, and French labor laws that will require a work permit (as opposed to a student permit) for internships.

Problems encountered by CDMM in hiring non-European students are shared by other programs in our field as well as in other fields. Similar problems will also occur for French (or European) students applying for programs at US universities which are based around internships. I propose to take CDMM as a case study, and, during the discussion, explore the potential difficulties in taking on foreign students—US students in Europe and European students in the US—and the creative ways we can think of to work around those difficulties.

Some suggestions to start the discussion:

- EILA provides a seminar in intensive French for foreign students which could be attended by US students admitted to CDMM.
- Some of the classes at CDMM are conducted in English. We could consider extending the number of classes in English.
- US students could write their papers/applied exercises in English.
- US students who qualify for the program apply for an internship with a US company that will hire them as a US employee/intern who works remotely for that company from France.

- US students who qualify for the program apply for an internship with a US company that will hire them as a US employee/intern and send them to work a subsidiary in France.
- French company that wishes to take on a US intern from the program gets one of their US subsidiaries to hire the student in the US who will come and work at the head office in France.

Professional and Technical Communication as Part of Engineering Curriculum at Tomsk Polytechnic University, Russia

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Language and Communication Institute, Tomsk Polytechnic University

Keywords: engineering curriculum, interdisciplinary studies, international communication

Background

The recognition of communication skills as a vital tool in today's engineering world is reflected in the latest accreditation criteria. Thus, specialists in different professions should prepare themselves for work in this increasingly international and multicultural world.

Tomsk Polytechnic University (TPU) was one of the first technical universities in Russia to recognize the urgency for the development of courses in technical and professional communication that help engineering students in their education and professional development.

This task was entrusted to the Language and Communication Institute (LCI) at TPU, which has been working on the development of such courses as part of its foreign language curriculum since 1998. Currently, the Institute offers two pilot courses included in a Communicative Module: Technical and Professional Communication in English and Technical and Professional Communication in Russian.

Course Description

The courses in Technical and Professional Communication (in English and Russian) are aimed at achieving the following overall goal: to introduce students to the main issues in the field of professional and technical communication with a special emphasis on practical application, thus helping students grow as competent professionals through practicing the kinds of writing they will be doing in the work world and through gaining a better understanding of the reasons for the rhetorical decisions they make.
The courses are designed in close collaboration between LCI and TPU engineering departments, which actively support this innovation.

The courses in Technical and Professional Communication attain the following objectives:

- define technical and professional communication as a process of managing information in ways that allow people to take action;
- explain the importance of international, cross-cultural ethical, legal and political factors in technical and professional communication, thus teaching students to think globally and suggest a clear idea of international communication in engineering profession;
- introduce current concepts, principles, practices and strategies in the field of technical and professional communication;

- teach students to think constantly about the people they address in professional communication: clients, colleagues, bosses, etc;
- engage critical thinking and develop skills of information retrieval;
- maintain students' command of style, vocabulary and grammar in English and Russian for effective professional communication.

Refresher courses

Within the bounds of LCI and technical departments' cooperation are refresher courses for LCI instructors are carried out; usually they last longer than one term. After a refresher course completion, an LCI instructor sits for a complex examination and defends a qualification paper on non-linguistic issues, which later turns into a reference book or a hand-book for teaching Technical and Professional Communication.

A German Curriculum of Advanced Training in Multimedia-based Technical Communication

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University of applied science Giessen-Friedberg, Germany

Keywords: collaboration, multimedia, pedagogy, technology

In comparing the curricula of the University of Giessen-Friedberg (Germany) with various universities in the United States, such as San Francisco State University, it appears that the education and training of technical writers develops in similar fashion. Hence, it is logical to provide some insights into the work done at the University of Giessen-Friedberg.

In my presentation today, I will focus on the advantages of working and researching at the University of Giessen-Friedberg by introducing the department's cooperation with Germany's public television and public broadcast networks such as the Zweites Deutsches Fernsehen (ZDF – independent nonprofit corporation), Hessischer Rundfunk (HR - Hessian Broadcasting), Südwestdeutscher Rundfunk (SWR - Southwestern German Broadcasting Station), the newspaper networks such as Frankfurter Allgemeine Zeitung (the equivalent to the New York Times in Germany), and the technical writing network of the German University.

As an integral part of studying multimedia-based technical communication, students work with Germany's public television and public broadcast networks. Students practice the design of television magazines and PodCasts in small groups. As a result students learn a variety of functions such as writing, editing, publishing, and broadcasting news with additional emphasis on multi-lingual presentation. This type of education has proven to be very efficient, because of it's practical orientation and cost effectiveness. Being able to integrate their skills throughout new and traditional media as well as find innovative communications tools, students gain an edge in the competitive marketplace.

I will introduce and discuss proven pedagogical concepts used in our introductory courses such as audio-visual cut, camera technique, and working in the television studio. In addition, I discuss several advanced modules, in which students produce media related word contributions, films, animations and broadcast moderation. As a result of the cooperation with Germany's public television, the University of Giessen-Friedberg now researches and seeks to adapt for programmatic purposes the new track of what has been called "Dramaturgy of Filmi."

Did I say That?: Fostering Critical Self-Reflection Skills in Cyberspace

William Ritke-Jones
Texas A&M University—Corpus Christi

Keywords: critical discourse, critical self-reflection, transformative learning, perspective transformation

Arguably, the workplace becomes more productive, happier and healthier when it becomes more democratic and collaborative. In order for that to happen, however, employees at all stations need to become more democratically minded, and that means that most will have to transform the way they see themselves and others, especially those who are of a different race, culture or gender. To effect these transformations, corporate training practices should include spaces where transformative learning can be fostered and technical communications classrooms in higher education should, as well.

Explanation of Transformative Learning

Argyris and Schon, (1974) posit that two models of individual and corporate behavior exist: Model I and Model II. In corporations where Model I behavior prevails, voices are stifled because the ideas of the most powerful dominate. In corporations where Model II behavior prevails, people remain open to other ideas, even from people who are of less station. In this type of atmosphere, ideas get challenged and creativity deepens.

To achieve Model II behavior, people must undergo "double loop" learning which resembles Mezirow's (2001) Transformative Learning, defined as "the process by which we transform our taken-for-granted frames of reference (meaning perspectives, habits of mind, mind-sets) to make them more inclusive, discriminating, open, emotionally capable of change, and reflective so that they may generate beliefs and opinions that will prove more true or justified to guide action" (p.8).

Transformative learning can occur when a person engages in a critical reflection of previously held assumptions, values and beliefs that seem to no longer be valid. Sometimes happening as an epoch event but more often incrementally, Mezirow as paraphrased by Cranton (2001) describes the critical reflection necessary for "precipitating transformation" as a process by which "uncritically assimilated assumptions about oneself and one's world" are "surfaced and challenged" (p. 231). This process may lead to more democratic habits of mind: "respect for others, self-respect, willingness to accept responsibility for the common good, willingness to welcome diversity and to approach others with openness" (Mezirow, 2000, p. 14). The development of these characteristics through critical reflection on our "frames of reference" (Mezirow, 2000) may also result in more emotionally intelligent and socially skillful student/employees who welcome perspectives that may fall outside of those held by the dominant culture. Thus, students/employees more creatively complete projects and solve problems.

Transformative Learning in Cyberspace

Although cyberspace poses some unique challenges to the social cohesion of collaborators, it also offers the distance individuals need to critically reflect on their communications with others. Employees can critically reflect on archived communications in what Scion (1983) referred to as "reflection on action." In less than successful communications, an employee in dialogue with someone else, a colleague engaged in the same collaboration, for instance, may see how her/his frame of reference caused the collaboration to be less successful than it could have been. This unsuccessful collaborative event may become a "disorienting dilemma" that begins the process of transformation that Escrow (2000, p. 22) outlines. Employees can also reflect on what went well, particularly on how all perspectives were shared, how conflict was kept constructive rather than destructive, etc.

This paper examined three online collaborative groups in which social cohesion failed and how that failure could have been seized as an opportunity for transformative learning because in one group, social cohesion disintegrated because of cultural differences and, in the other two, gender and racial differences caused social cohesion to not form. The paper also discussed how in the first group the person from a non-American culture could have presented some of the values and background of her culture as could the two Americans in the group. In the other groups, the African-American could have presented what it is like to be black in American culture, and the white Americans in the group could have presented what it is like for them to be termed the "oppressor." In the third group, the man and women in the group could have done something similar regarding what it is like to be female and male in America.

Continuing their efforts to understand what it is like to be one another, the group members could have written narratives about the others, adopting the voice and identity of the "Other," and since the online environment is especially suited for it, group members could have adopted the identity of the "Other" online, presenting ideas as the "Other" would and participating in discussions as the "Other." In this way, a critical reflection of previous could have ensued, developing into greater empathy and understanding of the "Other." Anticipating resistance, the paper proposed solutions to problems that may occur during this process, the chief one being "buy-in" of the group members of transformative learning and of upper management of transformative learning in a corporate environment.

The paper considered strategies that educators and trainers can use to promote this kind of critical reflection in their employees who collaborate in cyberspace by reviewing in detail literature surrounding online group dynamics. One section discussed how an online collaborative group can evolve to a place where the collaborators trust one another enough to engage in the critical reflection discussed in the previous paragraph. Educators and trainers were exposed to theory and suggested applications that they can use in fostering the collaboration skills of their students/employees, particularly those related to social cohesion and the development of trust. Strategies were discussed for distance education platforms such as Blackboard© and also for wikis, blogs and Virtual Meeting

Software. A discussion of how Second Life, a virtual environment being populated more and more by corporations, could be used for transformative learning practices.

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Joining the Virtual Conversation: How Content Management is Changing the Way TC Professors Teach

Rick Mott
New Mexico Tech

Keywords: content management, digital communication, information architecture, virtual communication

Content Management Systems (CMSs) have begun and will continue to change profoundly our responsibilities as Technical Communication (TC) educators. As we move from a world of documents to a sea of objects, our ideas about content become more fractured, and dynamic. In order to deal most effectively with information tools over the course of the next generation, technical communicators know they must break out of the genre-motivated concept of communication. Instead of focusing on end-products – the traditional deliverables of brochure, annual report, user manual, or website – technical communication professionals must now manage, create, and present pliant chunks of information that will be integrated into a wide variety of communication products. In order to facilitate such flexibility, TC professionals would do well to follow the advice of Lars Johnsen in his well-argued 2001 article in Technical Communication; in the article he exhorts technical communication professionals to adopt an object-oriented approach to "document analysis, design, and construction since XML takes an object-oriented view of information" (p. 60).

By treating units of information as dynamic objects rather than static end-products, information architects exploit the flexibility inherent in single-source information structures. When information architects combine the flexibility of single-sourcing with the properties of networked environments, they can "say goodbye to documents, and hello to objects, [and] give web visitors the ability to interact with even the smallest chunk of material" (Price 2004).

So how will these changes affect our students and the skills we teach them? First, revision must become a way of life. Our students can no longer write for a few months, publish, and forget. Instead, they will necessarily become subject matter experts, constantly updating a database. Second, students must learn that they will be part of an ongoing conversation with their users, and their mission as technical communicators should be to encourage those relationships, by providing up to date, relevant content just in time.

As educators, how can we best prepare our students for these profound changes in the profession? As we experience a sea change in our ideas of what TC professionals work on (content), how they work (facilitating, rather than dictating expertise; updating rather than publishing), and who they are (participants in a conversation rather than authors), we must revise our curriculum to emphasize these skills. For my five-minute presentation, I intend to briefly summarize the changes to our profession and offer

suggestions of how we can best encourage and instruct our students to join the newly emerging virtual conversation.

Session 1C

Globalization and Online Teamwork

Kevin LaGrandeur
New York Institute of Technology

Keywords: globalization, online communication, web-based courseware, virtual teamwork

Because of increases in globalization and telecommuting, the new economy is ever more reliant on virtual interaction between team members. Rather than working in a single geographic location, coworkers are now more often spread across wide areas of the country, or even of the globe. Because face-to-face interaction is increasingly rare, our Technical Communications Program is exploring ways to acclimate students to virtual teamwork. One strategy we have come up with has three parts: first, we try to move more classes to online environments; second, we use a tool for those environments (Blackboard) that makes online group work easier; and third, we require more teamwork in our assignments.

The upside of this strategy is that students must learn and practice cooperative goal setting, organization, editing, deliverable production, and diplomacy. The downsides are that it can sometimes be harder for the instructor to do individual evaluations, and he or she is sometimes caught in the middle of group tensions (it can be especially difficult to deal with a student whom other members of the group complain of not because of bad work, but because of bad manners: brusquely written emails, comments to others that are perceived as nasty, etc., because expression and perception in online environments are fraught with difficulties). One way to resolve these issues is perhaps to rely more heavily on student peer evaluations of group members in grading. I am interested in hearing from others in CPTSC about this: have others used similar strategies to prepare students for the more virtual, globalized office? How have they coped with problems? Have the problems been similar to ours?

Blogging the Program: Steps Toward Organizational Memory, Community, & Identity

Jennifer Bowie
Georgia State University

Keywords: blogs, collaboration, engineering communication, online communication,

The blogosphere doubles in size every six months. Currently Technorati tracks over 37.3 Million blogs and states that "75,000 new weblogs [are] created every day" with 50,000 blog posts an hour. These numbers illustrate the increasing use and the growing popularity of blogs.

Blogs have gotten people fired, hired, sued, and arrested. In May of 2005, IBM started a new institutional policy that encouraged their employees to blog, citing reasons like responsible engagement, open dialogue and the exchange of ideas, added value, and communication with clients, customers, and other employees.

The significance of blogs is seen by our students, our news media, our colleagues, and even our companies. However, blogs can also be a valuable tool for our programs. In this position paper I will discuss the value we can add to our programs by setting up and maintaining a programmatic blog. With a programmatic blog we can communicate with the faculty, staff, and students in our program, along with alumni, prospective students, potential student employers, administration, and the public. In particular, the programmatic blog could be used to develop three important components of any program:

- Organizational Memory: A programmatic blog can developed as a resource for the organizational memory by keeping track of ideas and changes within the program and other information. The blog could help maintain the organization memory by acting as a place to record and retrieve knowledge, and as a resource to find the knowledgeable individuals.
- Community: A strong programmatic blog, in which everyone is encouraged to participate, with help to develop the community of the program. Students, faculty, and staff (along with others) will have a place to post ideas, ask questions, and give and receive answers.
- Identity: The blog can help develop the identity of the program, not only by being a resource and memory of the program, but also by clearly connecting and emphasizing the heart of the program—the people.

In this position paper, I discuss these advantages and offer an example of a programmatic blog. Then, I hope we can discuss the advantages and disadvantages for programmatic blogs, for our programs, faculty, staff, and especially our students.

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Session 2A: MA/MS Students as TA's: Current Practice & Challenges

MA/MS Students as TA's: Current Practice and Challenges

Molly Johnson, University of Houston-Downtown

Donna Niday,Iowa State University

Dan Payne,Iowa State University

Keywords: assessment, instructional design, graduate curriculum, pedagogy,

This panel explores the multiple institutional challenges associated with establishing, maintaining, and renewing programs for training and supervising MA/MS students as Teaching Assistants. This panel explores these challenges through three statements designed to provide both a broad overview and some very specific examples of current practice to stimulate discussion.

Challenges of Starting a TA Program Where None Exists – Molly Johnson

Although few program directors face the challenge of developing their institution's first-ever graduate TA program, most need to propose and get administrative support for program funding, changes, and renewal. Such proposals must anticipate and address the complex conflicts involving stakeholders, resources, and resistance to change that will be the focus of this presentation.

As Nagelhout & Barr's 2004 CPTSC position paper clarifies, programs to train and support TAs cannot be established arbitrarily, or in isolation. Even a relatively small master's program such as ours at The University of Houston Downtown is a fairly complex system, functioning amid the other complex systems of the department, the humanities college, the university and UH system, and even the state legislature. Action (and change) in any one of these systems, however small, disrupts the equilibrium, triggering various actions and reactions.

In this presentation, I use complex systems theory to provide a focused overview of the challenges we're facing in establishing a new program as a starting point for a broader discussion. In particular, I examine which of the complex reactions might be expected and which are so complex and evolving as to be unpredictable. The challenges examined will invite participants to use our collective histories to explore points of resistance at all institutional levels as well as strategies for gaining stakeholder support, and official/unofficial alternatives.

Preparing Teaching Assistants for a Technological World – Donna Niday

This presentation provides a broad overview of the TA induction process for MA students at Iowa State with a specific focus on integrating technology

into the classroom. Teaching assistants usually arrive eager to learn about best teaching practices while simultaneously being scared to step into the classroom. This TA program uses a one-week TA Orientation and a semester's pedagogical course—taught or assisted by the program director, faculty mentors, and peer mentors—to help TAs gain an understanding of theoretical underpinnings, curricular goals, instructional strategies, and teacher-student relationships.

Practices and Challenges: The presentation also provides brief overviews of the two major components of our TA induction process: the orientation week in which TA's are introduced to integrating written, oral, visual, and electronic communication (WOVE) into their classes; and the semester-long pedagogical course and its emphasis on specific learner outcomes including participation in small group work, effective oral presentations, critical thinking, and the creation of visual and electronic communication, including advertisements, documentaries, slide presentations, websites, and portfolios. It concludes by highlighting commonly encountered issues such as establishing a teacher presence, motivating students, and balancing graduate classes and TA requirements. Handouts providing specifics about the program will be provided.

Integrating TA Expertise in a 21st Century Communication Curriculum – Don Payne

This presentation will describe how a university-wide communication-across-the-curriculum program integrates its TA training into a comprehensive plan of professional development for adjunct and tenure-line faculty in communication as well as those in technical and scientific disciplines. Rather than emphasize specialized training, the program encourages TAs to see themselves as part of a broader initiative to develop professional literacies for a technology and information-based economy and personal literacies for civic responsibility and lifelong learning.

The program focuses on a communication pentad (context-substance-organization-style-delivery) translated into four integrated communication modes (WOVE: written, oral, visual, and electronic), and distributed over six competency levels (exemplary, mature, competent, developing, beginning, and basic). This theoretical core anchors the program for students and instructors at both foundational and advanced levels. Technology is integrated practically and rhetorically through an extensive computer classroom network, multimodal resources for focused civic and cultural themes, and communication eportfolios.

Designing a New Track for an Established Master's Program: Boiling Down and Sprucing up the Technical Writing Brand

David Dayton
Towson University

Keywords: graduate curriculum, pedagogy, information design, web design

Towson University's English Department has run a successful graduate-level professional writing program since the early 1990s, one of only two in the Baltimore-Washington area. The program's mainstays have been tracks in creative writing and teaching composition, plus a catchall concentration offering an eclectic collection of courses in writing and rhetoric. When I started teaching at Towson in Fall 2005, the Professional Writing Program (PRWR) offered just one course in technical writing, an elective introductory course also covering scientific writing.

Towson hired me to develop a new track that would prepare master's students for jobs as technical writers. In my position statement, I will first describe the programmatic constraints I have to work within and then summarize my plan for the new track. My goal is to prompt a discussion that will provide multiple ways of thinking about this curriculum design problem. Whatever solution seems best to you will say much about your take on the new economy and where you see the future of technical and scientific communication. I would welcome a discussion of alternatives to the approach I have tentatively decided on.

Six required courses form the core of Towson's Professional Writing program. Four of them provide a theory-heavy foundation for the academic study of writing: courses in the history of rhetoric, rhetorical grammar, the history and development of prose style, and the theory of exposition. The two other core courses are more practical: Editing and a required internship. Tracks in the concentration called "Writing in the Professions" must have a thesis option; thus, my new track can have only four required courses for now. Once the track has gotten some traction, I can think about proposing changes to the core.

For starters, then, I plan to revamp an existing elective called Technical and Scientific Writing, making it a foundations course that emphasizes the rhetorical tradition and evolving practice of plain language, information design, and usability. New title: Technical Writing and Information Design. In the other three required courses, I will continue to emphasize the principles and techniques of rhetorically aware, contextually sensitive, user-centered information design. Web Content Design and Development will focus on information architecture and writing and editing for on-screen readers. In Online Help and Documentation students will research, write, design, and create hypertexts to deliver conceptual, reference, and procedural information. Finally, Research Techniques for Information Design will teach the basics of user research and usability testing.

Students electing the non-thesis option can round out the track with two electives selected from half a dozen regularly offered real-world writing courses, including new courses that will be coming soon in science and medical writing.

In sum, I have condensed my concept of what technical writing has become into a suite of four required courses for a new track in Towson's Professional Writing program. Now: what should I call this new track? Currently, I am leaning toward Technical Writing and Information Design. But it's not too late to change my plan. I welcome your questions, comments, and suggestions.

Re-thinking Discussion in TPC Programs

Sherry Southard
East Carolina University

Keywords: discussion, distance education, electronic communication, pedagogyonline communication

My presentation at the annual conference for the Council for Programs in Technical and Scientific Communication advocated technical and professional communication faculty re-thinking the discourse genre of discussion … a reflective approach to the subject adapting reflective writing practices to oral interactions, as well as abandoning the assumption that students know how to discuss, be they in f2f or online environments, therefore teaching that classroom activity. Most teachers include some type of discussion whether teaching f2f, hybrid/ blended, or online classes. We have long ago agreed upon the value of discussion, for example, as a heuristic for "teaching" critical thinking abilities and possibly creativity. Discussion can also teach the graduates of technical and professional communication programs to contribute to collaborative efforts within work spaces.

Having taught e-learning classes since Fall 2000, I've focused on how to achieve the goals that discussion served in my f2f classes in a distance education environment. As faculty integrate emerging technologies (*Blackboard* discussion sites, wikis, twikis, and blogs, for instance) as a part of their classes, those electronic resources can supply additional avenues for discussion, for education distributed totally online and for that taking place primarily in a f2f environment.

The theme of the fall CPTSC conference called for presentations demonstrating the value-added of our programs and measurable results for our investments in teaching technologies, faculty hires, professional developments, and other costs for items intended to support learning. To address those themes, I considered arguing whether we should include discussion in our classes and whether discussion does help prepare students for their career paths, but quickly decided, "no — it is not whether we have discussion, but how discussion can contribute to our class activities to achieve class and program goals. Maybe we in professional communication need to rejuvenate our approach to discussion. Speakers at the CPTSC conference called for tpc faculty "to engage more in creative, innovative and discovery activities and practices," "to involve right-brained conceptual resources such as knowledge and information references," "to relate learning theory and community of practice," and "to encourage sharing, critiquing, practicing and producing tangibles (print and electronic documents) with others and for others."

Background

When re-thinking pedagogy for discussion, I first consider the types of community that exist in classes:

- Community of person (as individual student and as class members) involves sharing of personal information relevant to academic matters plus learning appropriate course policies and procedures. This sharing occurs between students and instructor as well as among students.
- Community of support (among individual students and between students and faculty) supports procedural aspects of the online community, but, in addition, furthers learning.
- Community of learning (the totality existing among individual students and between students and faculty) focuses on students as scholars and knowledge-makers; students advance course content by synthesizing content, completing creative problem-solving and sharing ideas, as they apply principles and theories learned.

Discussion, an essential and often integral part of the community of learning, can accomplish the following purposes:

- Discussion can teach students to learn and complete work activities in f2f environments, but also in electronic, virtual environments, such as the work environments that our students will encounter.
- Discussion can teach collaborative endeavors or team efforts. The social context of discussion contributes to students' learning appropriate soft skills for corporate environments. Most of our students will not work in isolation.
- Discussion can instill accountability and professionalism—additional soft skills
- Discussion can enable students to think critically as they learn
    - To develop creative approaches to problem solving.
    - To explore possibilities as they problem solve.
    - To analyze, synthesize, and evaluate concepts.
    - To be innovative.

Students come to us having participated in discussion from the time they were in elementary school, but rarely do we "teach" students directly how to discuss. This teaching may be more essential in online learning environments than in traditional classroom environments where we can monitor and guide discussion. Digression: We value students completing group projects so they can learn to collaborate. I often have students complete group projects. In a moment of "duh" insight, I realized that having students complete group projects didn't necessarily "teach" them how to collaborate if I didn't build that learning into my class activities. I needed to teach them how to collaborate and I began incorporating activities that had students reading about collaboration and reflecting upon that content as they completed the team or group projects.

I had a similar insight about using discussion in classes, especially discussion in online classes. More recently, I've thought through ways to incorporate electronic discussion, particularly in online environments and in preparation for discussion in f2f classes—a practice already practiced especially by faculty in rhetoric and composition at my university. I realize

that reflective writing as a critical thinking and response practice is not new. My approach moves that type of writing to oral articulation, sharing with and disseminating to others.

Faculty and programs in professional communication should articulate a critical pedagogy for teaching discussion as an interactive, but also reflective process appropriate for academic environments while students are earning their degrees and then later for work environments they will enter when they graduate. This critical pedagogy should articulate how to include discussion as part of learning environments (f2f, hybrid or blended, or online). In this paper, I do not interpret or ground my thoughts in theory and research; I simply present my thoughts.

Some Specifics

Now to begin at the beginning … What activities do you include in your classes that you would consider "discussion"? Are some "discussion" activities static and others non-static? And what "teaching" is needed for students to be able to complete those discussion activities?

- Students complete exercises and then present answers in class, exercises such as what students might complete in a copyediting or grammar class.
    - For these exercises, students can explain why the answer is correct, as a check for whether the student correctly understands content. Just because a student's answer is correct does not mean the student understands the content involved. Having students provide reasons is a way of having them reflect upon the information.
- Students post biographies to share personal information to be building "relationships" underlying the class.
    - In class, but especially if those biographies are posted using an electronic medium such as a blog or threaded discussion, class members can "discuss" those biographies.
    - Students' biographies can take the form of literacy narratives, narratives in which students describe how they learned to read and write, indicating persons who played an important part in how they perceive that experience as positive or negative. Narratives can also be focused on other subjects relevant to the class, such as having students describe their experiences with learning grammar or technology.
- Students research topics and convey the information to students during class time, often involving not much more than simply reporting the information.
    - In a class about teaching introductory professional communication (foundation or service courses), for example, graduate students might gather information about the communication abilities students may need for their intended careers (as an accountants, insurance investigators, financial managers, and so on). Students can post that information on a web space (a portal) to be built upon by future graduate students taking the course and used when they teach introductory business communication or technical writing courses.

    - Should faculty want to adapt this static "discussion" activity, they might have students discuss research strategies, as well as resources, used to gather the information posted. Students might also reflect upon assignments appropriate for teaching specific communication abilities needed in specific careers.
- Students work in groups brainstorming, for instance, topics for a proposal for civic action which they will prepare as a team effort. Or they analyze the design or navigation of a website for a corporate entity. They then report back to class.
- Students discuss course content, for example about audience, in order to be able to apply that content as they complete projects or assignments. This discussion of content in preparation for application can take a variety of forms.
    - Students read textbook information about targeting an audience and then discuss (maybe better labeled "brainstorm") their planning thoughts for a brochure or website or feasibility report for a designated audience.
    - In addition, students might use the content read about targeting an audience to verbalize their critical analysis of how a NASA website targets a various audiences before students complete their document.
    - Students might discuss (that is, reflect upon) how the content read about audience relates to personal experiences within personal, academic, and work environments.
    - After having created a brochure or website, students can also discuss their reflections upon the specifics of how their brochure or website targets the intended audience to demonstrate that they understand the application of content.
- Students role play to enable them to internalize course readings by experiencing activities informed by the readings.
- Students discuss to generate new knowledge, by articulating connections, synthesizing knowledge, and experiencing insights and ah-ha moments.

To truly be a multifaceted learning activity, discussion must have the following characteristics:

- The activity is a student-centered activity, not one in which students are receptacles for receiving teacher knowledge.
- The activity is interactive, rather than passive.
- The activity engages students with content by requiring students to interact with each other or with the teacher as long as the teacher doesn't dominate the interaction. In fact, an interesting question involves whether instructors have to have input for the activity to be considered discussion.

In spite of fact that discussion is part of learning environments from early on, it is an activity that may require teachers "teaching" students the process, particularly students not majoring or minoring in "verbal" subjects such as English and communication. We find that our business majors, even graduate-level MBAs enrolled in an online communication course, sometimes are not proficient at discussion. Often providing examples of good "discussion" responses is all the "teaching" needed, although sometimes

adding commentary about why the responses are good ones should be included.

With use of emerging technologies, what can be incorporated into f2f learning environments in terms of discussion?[1] Teachers can choose an electronic environment from a variety of asynchronous methods: for example, emails (and respond-to-all responses), listservs, distributions lists, blogs, threaded discussion sites, or maybe even a wiki. Discussion in those electronic environments can be used in a variety of ways:

- Students can begin thinking about and synthesizing content in readings assigned to be discussed in a subsequent f2f class—a reflective exercise for students to better understand those readings.
  - During the 24 hours preceding a f2f class, students post responses to assigned readings to allow for additional responses by teacher and other class members.
  - Postings can include a series of questions that will forward understanding of content. For instance, does the author mean [one possible meaning presented]? Or does the author mean [another possible meaning presented]?
  - In addition, students can synthesize readings (i.e., various approaches to targeting audience, various ways of testing the usability of a document prepared, and so on).
  - Students can relate their primary reactions to readings focusing on how the readings agree or not with their experiences and values. They might also express thoughts about how the readings have modified their outlooks and perspectives.
  - Students can respond to a prompt provided by the teacher. How does the information relate to [teacher provides the information]? A variety of prompts can be used to stimulate students' engaging with assigned readings.

Some of the potential negatives of incorporating this reflective approach using electronic venues for discussion in environments where learning occurs primarily as a f2f include

- Deviating from the traditional approach for a f2f class where all "discussion" occurs in the time period allotted for class. Students may feel that teacher is requiring too much work … more work, that is, than what a f2f class, by definition, requires, unless the teacher substitutes a f2f class for the electronic reflection. In a Monday, Wednesday, Friday class, for example, discussion is over when the 50-minute class ends.
- Increasing the time required of teachers who may already be overworked.
- Necessitating some "teaching" (explanation) to avoid initial balking of students. Teachers need to talk about the activity and the purposes it

[1] Some faculty may not want to employ electronic resources; however, they may have no choice should some natural event such as a hurricane or even a pandemic occur. Beginning Fall 2007, faculty at East Carolina University will no longer need to request Blackboard course sites, because the University is creating such sites for all classes in order to ensure continuation of instruction and learning should face-to-face instruction need to be suspended.

serves, particularly relating it to benefits for students' careers. This potential negative can become a positive as student learn about and discuss communication abilities and technologies used as tools in communicating in terms of their intended careers.

Positives of incorporating this reflective approach include

- Preparing students to become comfortable with the technologies they probably will encounter in their careers after graduation.
- Allowing quieter students to participate more than they might in a f2f class.
- Preventing students from using personality (interpersonal abilities) to carry them through the activity.
- Encouraging students to submit substantive, as opposed to superficial responses, and to read what has been assigned. Students cannot bluff their way through discussion as easily. To participate satisfactorily, they need to read assignments.
- Enabling and requiring students to critically relate content to personal experiences, but more important, to other readings.
    - Especially for graduate-level classes, students can reference appropriate theory and research, references that may be difficult to articulate in a real time f2f discussion.
    - This approach can foster more in-depth in-class discussion.
    - While this approach may not eliminate student digressions and "rants," it allows both teacher and other students to ignore them should they choose to do so.

So you decide to include e-discussion as part of a f2f class (thus becoming a hybrid or blended learning class) or you decide to go for it and teach an online class. You've heard a bit about how discussion is a multifaceted learning activity. What can you expect to happen?

1. Students who are new to the activity may experience difficulties in using an electronic medium for discussion because they must synthesize or address the topic of discussion, but negotiate a technology that may be new to them as well as respond in writing.

- Some students may need to learn to use whatever technology is chosen for discussion. Even though students may be more into digital environments than previous generations, many may need to be taught how to use the technology facilitating discussion.
    - I've heard faculty talk about how students are visually oriented and not text-based; however, even if students are visually oriented, they may have absolutely no competence in formatting a document according to the rules of good design or able to design an effective website.
    - Some students will not have a lot of experience with electronic communication environments and may be intimidated by technology.
    - Students may benefit from having a practice discussion to enable them to focus on using the technology. Such a practice discussion should involve a fairly well-known subject that requires little thinking or synthesizing on their part. Sharing

biographical information might be a good basis for this practice discussion; that type of discussion allows them to focus on using the technology as well as to begin building relationships or class community. Students will have to become accustom to learning in this new space. This is an activity that should be evaluated, but not graded.

- Students discuss by writing their discussion. This aspect can be very intimidating for some students, possibly more than learning the technology. Aside: faculty must decide whether the discussion will be writing-to-learn (for which emphasis is on conveying ideas and thoughts and not on producing perfect prose) or writing-to-communicate (perfect prose required).

2. In f2f classes, students have learned proper generic procedures for discussion, although they may need to learn the specifics for the teacher. For instance, students understand that a procedure exists for determining when they can speak; their teacher may have them raise their hand or let them respond as if part of a conversation with friends, as long as they don't talk when another is speaking.

For electronic discussion, students will want to know the answers to questions such as how many times they need to participate and how long their discussion responses need to be. They may not think to ask about the nature of their discussion responses. And faculty normally need to indicate that responses need to be "substantive" and not just "I agree."

3. Students need help in learning what constitutes a substantive response. If faculty teach a class a second time, they can provide examples of what is considered a satisfactory substantive response. After having a practice discussion as suggested above, teachers can use the first graded discussion to ensure that students participate the required amount and that their responses are an appropriate length, as well as comment on the quality of the content of their discussion. Normally, some students will submit very good responses during the discussion. Those responses can be shared with the class (after permission is granted, of course), pointing out those responses individually (such as in an email) to students whose responses are not quite on target.

4. If the discussion is asynchronous and not conducted in a real time environment, students have some time to think before they address the topic. This approach benefits some students who are more reflective and not ones who can respond quickly. Such students will react well to this type of discussion.

To conclude, these thoughts call for a programmatic re-thinking of discussion as used in technical and professional communication classes, in f2f, hybrid/ blended, and e-learning environments. Discussion should be an interactive, but also a reflective process. Articulating the reflection about discussion (either orally or in writing) provides a foundation for "discussion" exchanges and collaborative team efforts in work environments that students will enter or already inhabit.

Some Beginning Resources:
Re-thinking Discussion as a Reflective Multifaceted Learning Activity

Henze, Brent and Sherry G. Southard. 2005. "Electronic Discussion as Genre in Distance Learning." *Professional Studies Review: An Interdisciplinary Journal*. Spec Issue: Distance Learning & Online Teaching. 1.2 (2005): 28-49.

Distance learning instructors use asynchronous electronic discussion to promote student knowledge-building and knowledge-sharing. Students often struggle with electronic discussion because this form of interaction combines aspects of several more familiar academic genres. Genre theory is used to diagnose these problems and to propose effective techniques for implementing electronic discussion in distance learning courses.

Jasper, Melanie A. "Using Reflective Writing Within Research." *Journal of Research in Nursing* 10.3 (2005): 247-60.

Reflective writing has become established as a key component of reflective practice, and central to the notion of learning from experience. Claims are made in the reflective practice literature of the capacity for reflective writing to develop the writer's critical thinking and analytical abilities, contribute to their cognitive development, enable creativity and unique connections to be made between disparate sets of information, and contribute to new perspectives being taken on issues. All of these are attributes to be expected in competent researchers. Thus, this paper considers the features of reflective writing and its use within qualitative research as a method in its own right, as a data source and within the analytical processes. It is argued that, although reflective writing is increasingly becoming visible within qualitative research reports, it needs to be further acknowledged as central to the methodological processes within research studies and recognized as an essential part of their methodology.

Moon, Jennifer A. *A Handbook of Reflective and Experiential Learning: Theory and Practice.* New York: Routledge, 2004.

Moon adopts a methodical, integrated approach to reflective and experiential learning. The book features a rigorous analysis of the theory behind the techniques to establish exactly what is meant by reflective and experiential learning and how they relate to the process of learning. The final section of the book provides useful ideas for applying the models of learning, providing practical advice, tools, activities, and photocopiable resources that can be incorporated into teaching practice.

Smith, Sue. "Sue Smith's Rhetorical Analysis Tools." Accessed May 2007. http://www.ic.arizona.edu/ic/snsmith/rhetanal/index.html

This website provides a variety of rhetorical analysis tools, including one about Cooper's critical thinking system presented as a general method of analysis based on questions that students can use (Adapted from Lee Odell's "Assessing Thinking: Glimpsing a Mind at Work," in Cooper, Charles R. and Lee Odell. *Evaluating Writing: The Role of Teachers' Knowledge about Text, Learning, and Culture*. Urbana, IL: NCTE, 1999. 20-21.) The one-page

"Assessing Thought" can be found at
http://www.ic.arizona.edu/ic/snsmith/rhetanal/CritThinkCooper.pdf

Sullivan, Patrick. "Reimagining Class Discussion in the Age of the Internet." *Teaching English in the Two-Year College* 29.4 (2002): 393-410.

Sullivan discusses how a networked classroom environment—either to supplement or to replace traditional face-to-face class discussion—offers English teachers opportunities that can help make class discussion more engaging, more worthwhile, and significantly more effective as a teaching tool. He considers how to use new technology in the classroom to enhance class discussion.

"Structuring to Win": The Multiple Degree Option in the Technical Communication Program

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Keywords: graduate curriculum, pedagogy, undergraduate curriculum,

To meet the changing needs of students, academia, and industry, programs in technical communication seek strategizing methods, not unlike William Ricker's *heresthetic*, that will assist them in "structuring their programs to win." In her report for the Carnegie Foundation, Carol M. Barker states that "to prepare all students for effective participation in today's society, we need a contemporary curriculum bridging the arts and sciences and the professional disciplines" (2000). The growth in the number of technical communication programs that offer multiple degree options—both the Bachelor of Arts and the Bachelor of Science—is evidence of one strategizing method used by programs to span the gap between the arts and sciences, affording our students more options and greater opportunity to win in the new economy.

Sandi Harner and Anne Rich (2005) recall a comparison of keeping current with program and curriculum changes in the profession of technical communication to "the difficulty of changing a tire on an 18-wheeler traveling at 70 miles per hour on an interstate highway." As more and more programs in technical communication reevaluate their mission, goals, and location in the university, studies have been undertaken to provide needed information on the current state of technical communication programs in the United States. Nancy Allen and Steven T. Benninghoff (2004) surveyed forty-two technical and professional communication undergraduate programs and provide "snapshot views" of current technical and professional communication programs and the core concepts, courses, skills, and tools that are taught within them; in addition, they provide a detailed look at four programs that are developing or expanding. Harner and Rich—gathering data accessed through the Society for Technical Communication (STC) academic programs database—compare program requirements, identify the top five courses as required or as elective, document existence of internship and portfolio requirements, map program location within the university, and note the number of programs offering BA and/or BS degrees. From online data gathered in 2003, Harner and Rich studied 80 programs from 75 institutions, of which 46 offered BA degrees, 34 offered BS programs, and five offered both BA and BS degrees.

Tracing the methodological footsteps of Harner and Rich (employing the STC academic program database), this presentation provides a recent snapshot of the growing number of programs in technical communication that offer both BA and BS degree options and predicts that the number of programs in technical communication that offer multiple degree options will

continue to increase in order to address the changing needs of students, academia, and industry.

Session 2B

Growth Through Diversity—Or Settling for What We've Got?

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Keywords: collaboration, graduate curriculum, interdisciplinary programs, undergraduate curriculum

Throughout the last 30 years, the field of technical communication has continually broadened its scope—moving from its initial focus on editing the text in scientific and technical contexts to broader concerns with audience analysis, document design, and composing and publication processes. In some programs, the technical communication curriculum now includes instructional design, and many programs have incorporated web design and management as part of the technical communicator's area of competence.

At Illinois Institute of Technology (IIT), this trend has been encouraged for the last seven years by developing a variety of degree programs:

- a doctoral degree in technical communication
- master of science degrees in (1) techcomm and information design and (2) information architecture
- certificates in techcomm, instructional design, and international techcomm
- bachelor of science degrees in (1) professional and technical communication and (2) internet communication

Last year, we introduced a new course in video documentation, and this Fall semester will see the introduction of a new undergraduate degree in Journalism of Technology and Science. Spring 2007 will usher in new courses in (1) assessment and conferencing and (2) event and exhibit design. With any luck at all, the coming year will also see approval of a new graduate certificate in science writing and a new masters degree that links our certificate in instructional design with a certificate in instructional technology offered by another department. Working with history teachers in our Humanities department, we also hope to augment the journalism and science writing programs with a new course and eventually a certificate in public discourse—that is, writing for a wide variety of specialized but non-technical public and private institutions, organizations that form the clientele for experts in public history (i.e., converting the specialized shop talk of academic historians into documents (and websites and videos) that instruct and entertain a lay audience).

Are we nuts? Possibly not. If there are jobs to be had in a particular area, then it may be possible to build a new program on the cheap by exploiting underutilized competencies of existing faculty and by incorporating courses

and resources of existing programs. We can do this because communication is a broad field, and because the specialized skills of technical communicators can be applied to tasks in workplaces that some people might not ordinarily think of as relevant to technical communication.

So, just to frame the issue as dispassionately as possible, should we expand our curricula into exciting, relevant new areas, or should we just consolidate what we've got, and for the fourth consecutive decade sit around arguing whether technical communication is really a discipline?

A Creative Program for a Creative Workplace

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Keywords: industry-academe relationships, pedagogy, workplace literacy

Workplace characteristics and practices have always been a part of our programmatic and curricular discussions (Johnson Eilola, 1996, among many others, for example). Each fad, theory, or economic shift seems to affect how we think we need to prepare students for a constantly changing workplace. Traditionally, this preparation has involved providing students with a toolbox of skills that seemed to fit the conservative, cubicle-designed, work practices of routine data processing, high-volume product manufacturing, and standardized production and distribution.

Today, as I think Robert Reich (1991) predicated and Richard Florida (2002) describes, the workplace has become focused less on high volume production and more on "high value" enterprises. These enterprises are what should concern us here. Although knowing how-to do something will always be a part of knowledge, workers in these high-value enterprises engage more in creative, innovative, and discovery activities and practices. The tools for these practices, while always including how-to aspects, involve more right-brained, conceptual resources, such as knowledge and information. It's no wonder that Daniel Pink (2005) refers to this time as the Conceptual Age or that Richard Florida calls it the Creative Class.

I suggest that we use what Etienne Wenger calls a learning theory: communities of practice. Because communities of practice emphasize exploration and discovery, designing programs that encourage students to share, critique, practice, and produce with and for others will help them prepare for a workplace that emphasizes creativity and conceptual thinking. Programs developed with communities of practice in mind can help us help students strive for the kind of sustained creativity that leads to success and value added practices in the global work order. I hope to discuss the possibilities of designing a creative curriculum and program for a creative economy.

Wikis in the Technical Communication Program: A Means to an End

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Keywords: collaboration, ommunity engagement, industry-academe relationships, workplace literacy

Reflective of the evolving field of technical communication, the graduate program in Technical Communication at the University of Washington (UWTC) constantly seeks to use emerging technologies in achieving its programmatic goals and helping students master core competencies. By default, our students are becoming the developers of technologies as well as the communicators who make technology accessible and understandable to end users. And our programmatic approaches must help students successfully meet the ever increasing demands they face in the workplace. Thus, it is particularly beneficial if academic departments can use emerging workplace technologies to support program goals and provide students with the opportunity to become proficient with the use, modification, and refinement of these technologies.

One such tool that UWTC is employing to support programmatic goals is the wiki. Wikis are online, web-based workspaces that support collaborative, distributed work and encourage team members to actively participate in multiple roles, dynamically generating content that can be shared remotely with other users by simply using their web browsers. Fortunately, wiki users do not need to be overly familiar with html or traditional file transfer protocols—learning a few basic formatting guidelines is all it takes. Wikis do, however, require thoughtful consideration of the way in which they are implemented and some initial leadership in building the mindset of the participants.

Wikis are being used at UWTC in directed research groups, where they greatly facilitate collaborative writing, and creation and storage of articles, calendars, data files, presentation files, agendas, and minutes. One particularly effective application that is currently in use by one research group is the real-time review and analysis of experimental data in group working sessions.

Wikis are also wonderful tools for supporting cohort interaction and helping students master core competencies. UWTC faculty and students are currently strategizing how best to use a wiki to help PhD students share general exam reading lists and literature reviews, brainstorm about theory and research, participate in a discussion of best practices, describe works in progress, maintain teaching portfolios, and provide peer feedback.

Wikis are effective in supporting curricular and programmatic goals for both faculty and students. As a component in the graduate program at UWTC, wikis serve as an efficient means to an end, supporting the

achievement of programmatic goals, and they also serve as an end in themselves, familiarizing students with an emergent workplace technology.

Establishing Technical Writer's Readiness for Technological Change

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Keywords: information architecture, information design, pedagogy, technology

The increased use of electronic documents for communication is forcing technical writers to adopt information communication technology (ICT) for both information retrieval and for publication purposes. The continuous change and flexibility imposed by ICT can be challenging when moving from one software application to another or from one ICT device to another. A technical writer's role entails moving from one assignment to another, increasing the writer's need for ICT device and application flexibility. The proficiency of the technical writer needs to continuously be enhanced to adapt to the next writing assignment whether text-based or include multimedia components. Students in technical communication courses, much like technical writers, have a varied skill set, both in their use of software applications and ICT devices usage that are associated with the course curriculum. They also move from course-to-course and assignment-to-assignment, encountering different ICT readiness needs. The ability to identify a student's technology readiness at the start of a course is becoming increasingly important.

This position paper focuses on the need to establish technology readiness, also referred to as electronic readiness (e-readiness). E-Readiness can be achieved by combining several dimensions (i.e. technology and task materials) encompassing both technology and communication protocols. Establishing e-readiness is important as a baseline in a course to assist with external resources and other barriers that are presented to the student who ultimately becomes a technical writer. Additionally, supplemental resources increase a student's readiness in the work force by introducing them to new forms of media.

In Summer 2005, I introduced the use of a self-assessment questionnaire and crossword puzzle as a way to identify a student's level of e-readiness within the WebCT discussion board. WebCT has been used to complement the technical writing face-to-face classroom. Hybrid learning and supplemental materials are a few of the aids that have helped those students lacking in proficiency, while providing challenging resources and examples for those students that are already proficient. The self-assessment now includes the software that will be used as part of the technical writing course. The benefits I have realized in the undergraduate course I teach, is how to tailor the introduction of new software applications while giving the proficient students the opportunity for challenge. A benefit to a technical communications program is having a portion of a self-assessment questionnaire across the curriculum with a section that is specific to each individual course. The standardized section would allow for longitudinal

assessment of students as they advance through their degree program and allow for program and course modifications.

The need for discussion continues to exist as the instructor works with each semester's students. The questions that have since surfaced include: How can students individually prepare for these ongoing technology challenges? What techniques can we provide to students to assist them in transitioning to new contexts of both ICT usage and terminology (both the context and ICT terminology)? How can we teach students to leverage the context of both the task and technology?

Why We Should Teach XML: An Argument for Technical Acuity

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Keywords: content management; single sourcing; technology; XML

Many scholars have discussed the changes that content management, single sourcing, and Extensible Markup Language (XML) will require teachers of technical communication to make to their curriculum. Clark & Andersen argue that we need to train technical communicators to critically analyze technology from an organizational perspective so that they can sell ideas to management (295). I believe that these changes include re-thinking our approach to technology and tools not traditionally taught in English and communication departments—technology such as content management and tools such as XML.

In 2006 we added two new courses to our minor, "Document Design" and "Content Management," which eliminated the interdisciplinary requirement. I argued for the content management course by explaining that the concept of managing content, whatever technology is in favor, will never go away. Really, this is a concept we've been teaching for a long time, though perhaps the terminology is different now. Professional and technical writers create content, then they edit, track, format, and assemble that content before they deliver it to the customer. The entire process between creation and delivery is "content management." It's just that word-processing programs have given individual authors the ability to jump from creation to delivery, sometimes without a lot of content verification along the way. Because our students will be expected to author, manage, and deliver content in a variety of outputs, they must learn the core concepts of content management.

Currently, the content management course teaches the theory and application of content management and includes a section on XML. Students learn how to divide content into smaller chunks and re-configure those chunks into usable structures. Using the principles of single sourcing, modular writing, and structured authoring, each team of students creates an information model, reuse map and small-scale content management project. Along the way each student evaluates and practices using various tools, such as XML and other open-source software. Because of XML's text-appeal I believe that this tool is a logical place for technical communicators to locate themselves as experts. But we must teach XML with the theory (single sourcing), the methodology (modular writing), and the technology (content management) to support, apply, and guide it.

XML *will* produce changes in technical communication programs. Rather than waiting to see what other programs did we decided to incorporate the tool into a required course. Other programs may opt to teach an entire course in XML, to teach it in an elective course, or to send students to other departments to learn XML. Still others may decide that it's not worth teaching at all. The curricular configurations are seemingly endless.

Nevertheless, I claim that our students would be best served by learning XML from us.

Works Cited

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Technological Readiness: How to Make It

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Keywords: instructional technology, pedagogy, technology

In the information era, more technologies are needed to create, design, and communicate technical information. This may present a challenge to technical communicators who, because of their conventional structure of knowledge and skills, still assume a traditional role. So, to meet the new challenges, we need to expand the traditional role of technical communicators. In fact, scholars like Lori Anschutz and Stephanie Rosenbaum advocate that technical communicators should advance out of traditional roles so as to "ensure the growth and influence that our field deserves." Specifically speaking, the traditional role of writers and editors should be expanded into roles of usability managers, project managers and web content designers. However, this means technical communicators need more technologies to meet this trend. But looking at the current curricula of most of technical communication programs listed at www.attw.org, I found the course designs are still more balanced toward linguistic, rhetoric, and document design theories. The emphasis on application of relevant software, multimedia technology and programming languages has not yet caught the attention of TC programs. In this case, how could technical communicators trained by such programs keep pace with the trend and expand their traditional roles? Small wonder that Bert Esselink disappointingly complains, "Until recently, finding language graduates with computer skills and localization skills was virtually impossible." Definitely, achieving technological readiness in TC programs needs to be stressed.

In light of the current situation, I propose to study the problem of how to effectively achieve technological readiness in the curricula of TC programs. My focus will be on the following aspects: First, we need to decide on what are the technologies that have more general use in all aspects of technical communication profession. We understand that application software, multi-media technology, and programming languages are too many so that it is impossible for students to learn all of them. In this case, we need to pick out the most commonly used technologies and include them in the program so that students, by commanding these technology are able to cope with most of designing, authoring, and testing situations and are able to learn other computer technologies by following the learning principles of the chosen technologies. Naturally, this is a problem worth discussing. Second, we need to have ideas of how to include the learning of technology in the program. Should we include them in the relevant courses, or specially open such courses for students. Some software skills do not take too much time to command, but others, like programming languages, may need a year to grasp. So, how to design courses in light of this problem is worth our discussion.

Finally, who will teach such courses? As we understand, some computer technologies are difficult, and most of TC faculty members do not possess the necessary expertise. Naturally to solve this problem is also of importance. My conference paper will try to provide some useful discussions on all these aspects and offer some questions for discussion. I hope through the discussion, TC teachers may have an idea about how to solve the problem of achieving technological readiness in TC programs.

Using Technological Invention to Promote Interdisciplinary Collaboration

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Keywords: collaboration, multidisciplinary discourse, pedagogy, technology

At California Polytechnic State University, the university has created an innovation zone called "The Learning Commons," located in the university library and dedicated to fostering collaborative, interdisciplinary curriculum and technology development projects. In collaboration with the Technical Communication Program, the New Media Arts program, the English department and the College of Architecture, the Learning Commons' first university-wide collaboration is with the Lumiere Ghosting Project: a cross-disciplinary media instruction and new media development project that ties together students and faculty from disciplines as diverse as architecture, English literature, technical communications, computer science, fine arts, knowledge management, human computer interaction, and business entrepreneurship.

My paper examines how this collaboration project can provide a practical method for helping to unite an English department, a Technical Communication program, and a number of other divergent university programs and faculties in an innovative pedagogical and commercial development process. The technology we are inventing is called the Lumiere Ghosting Device which is a new form of fully-immersive, interactive cinema. The Lumiere Ghosting device essentially creates a cinema-like environment in which participants can easily interact with participants from all over the globe. This system is an innovative integration of live 3-D digital imaging/display with non-invasive motion tracking technology, connected through a high speed Internet connection that allows for a seamless exchange of audio, video, and tracking data from one device to the next. Developing the Lumiere Ghosting device requires continual collaboration and the development skills of faculty and students from many different disciplines working together with a wide range of commercial partners (software and hardware developers, funding agencies, theatrical system designers, filmmakers, and so on). By combining the praxis of technological invention with the reflective analysis of theory and history, students become effective participants in the process of modern, electronically-mediated discourse and along the way develop practical experience working with interdisciplinary commercial partners, allowing students to gain valuable professional skills they can use in and out of the "formal" education system. Additionally, due to the focus on aesthetics, narrative, and metaphor, the Lumiere Ghosting project serves as an ideal "bridge project" to unite the practical, commercial and professional interests of the Technical Communication program with the poetic, social and humanistic ideals of the English department. The integration of this technology development project into a humanities-

centered curriculum can serve as an effective model for fostering better intra-departmental collaboration and understanding, and can strengthen the organizational and intellectual relationships between Technical Communication programs and the English departments that often coexist and /or work directly with them.

Incentives for Innovation: Is There Strength in Numbers?

Linda Driskill
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Keywords: assessment, collaboration, institutional review boards

Anson, Carter, Dannels, and Rust argue for collaborations and partnerships within a single university where WAC programs and other units share commonalities of mission (2003. "Mutual Support." LLAD 6.3: 26-38). These are flexible relationships of varying lengths, suited to specific programs' situations. However, if short-term collaborations make sense within an institution, what are the incentives for inter-field collaborations intended to affect the long-term status of technical and scientific communication programs?

At present, technical and scientific communication programs face significant problems in achieving the status that will ensure funding for both research and programs. For example, PhDs in rhetoric and technical and professional communication are not counted as science and engineering advanced degrees in the National Center for Education Statistics surveys because their codes for the classification of instructional programs (2000) place communication under Basic Skills, 32.0108. So long as technical and scientific communication does not separate itself from the "basic skills" needed for participation in the workforce, NSF funding opportunities for research and recognition remain limited. Further, universities reporting advanced degrees awarded are encouraged to see graduate programs in technical and scientific communication through the lens of the NCES CIP codes.

Although technical communication could work in isolation toward a revision of the code system and seek recognition from the National Academies and the National Research Council, any such efforts could be bolstered with collaborations with disciplines that already have won recognition as scientific fields, such as information science (whose code is 11.04). The code defines "Information science/studies" as "the theory, organization, and process of information collection, transmission, and utilization in traditional and electronic forms . . . and related aspects of hardware, software, economics, social factors, and capacity." Information science, like technical communication, studies engineering communication. Its members include librarians, computer scientists, organizational theorists, and communication scientists. The field has created an impressive history of scholarship that runs parallel to rhetorical work in technical and scientific communication reviewed in Tenopir, C. & King, D. 2004. Communication Patterns of Engineers. However, its definition of communication as inputs (seeking and using information) plus outputs (information in written or spoken form) limits the comprehensiveness of its studies by neglecting rhetorical aspects. Technical communication students and practitioners, not engineers, scientists, and librarians alone, are often engaged in the practices that information science analyzes.

A case can be made for CPTSC's initiation of a long-term inter-field collaboration with the American Society for Information Science and Technology that could supplement institution-level collaborations. Articulating a shared vision that would benefit both information sciences and technical and scientific communication could motivate long-term participation despite disciplinary self-interests.

Peer-learning and Professional Development at UWTC: From Self-Presentation to Communities of Practice

Kathleen Gygi
University of Washington

Keywords: curriculum, graduate; peer-learning; interdisciplinary discourse; communities of practice

A major issue confronting doctoral education is the lack of opportunity for students to participate in career-focused activities. Peer-learning can facilitate professional socialization and skill building while maximizing the resources of small and emerging programs.

Peer-led activities can promote important learning and professional development outcomes, providing the opportunity for students to:

- Reflect on their own teaching/research practices with feedback from their peers
- Address issues of professional identity and self-presentation
- Learn important facilitation and networking skills
- Explore a variety of roles found in the professional practice of academics, and
- Negotiate shared meaning across disciplinary boundaries and research domains.

In the University of Washington's doctoral program in Technical Communication (UWTC), which is in its fourth year, professional development opportunities are initiated by both the department and by students. Teaching assistants in the department's service writing courses meet weekly in an ongoing for-credit seminar led by a master teacher. This format affords mentoring, peer support, and community building. Last year a reading seminar initiated and led by doctoral students explored potential research topics, as well as the boundaries of Technical Communication as a field and research domain. Participants facilitated sessions relating to their own research interests; selected readings allowed them to collaboratively trace out a possible professional community of practice centered on shared enterprise, tools, and professional identity.

The Center for the Advancement of Engineering Education (CAEE) at UW offers non-credit, peer-led teaching portfolio workshops for doctoral students and post-docs in engineering-related fields, including Technical Communication. These professional development workshops consist of working sessions during which participants design and review teaching portfolio elements. A curriculum and co-facilitators (student + staff member) provide scaffolding; reciprocal peer review is an important part of each session. Building on a familiar communication process—peer review—the sessions focus on writing, editing, and the creation of artifacts. Participants synthesize theory, experience, and values and make them concrete. Storytelling plays a major role in this process.

CAEE researchers' analysis of session transcripts surfaced themes regarding professional identity and self-presentation. Participants discussed questions relating to intended audience, purpose, and context of use. Related themes covered affective dimensions, such as stage fright and reassurance. Peer review appeared to serve as an audition, or rehearsal, because of the nature of the product and its potential use, primarily for job applications. CAEE is exploring a number of learning and organizational theories—including communities of practice theory—to explain why peer review and peer learning are so effective in this context and how these findings can lead to improved teaching practice for a broader audience of practitioners.

Once Is Not Enough: The Need for Sustained, Varied Teamwork

Elizabeth Pass
James Madison University

Keywords: assessment, collaboration, cooperative education, instructional design,

How do you provide students sustained opportunities to gain experience working in teams and learning responsibility for their teamwork, as well as individual work? The occasional group project just won't stay with students as they graduate and enter the challenging world of work.

At the Institute of Technical and Scientific Communication (ITSC) at James Madison University (JMU), we have also faced this challenge. We believe that students need to learn to work in teams and in different roles (i.e., leader, group member) throughout their years and courses in the major. Sustained experience is important for carrying knowledge into the work world.

This position paper will argue the importance of sustained experience of team/group work in a variety of settings. Also, I will provide some examples as jumping points for discussion. For example, our JMU chapter of STC has an award-winning Newsletter, due in part to the structure of the Newsletter team: the STC officers act as consultants on the themes of the upcoming issues; the PR officer oversees the running of the Newsletter and coordinates the Newsletter Issue Heads; each Issue Heads coordinates each Issue Committee. This team structure provides many opportunities for students to take important responsibilities for the creation of the Newsletter, and the Newsletter has received many commendations for the hard work the students have put in on it.

In another example, we teach an Advanced Web Theory and Design course where the students in the class evaluate themselves, determine their strengths and what roles they each would be qualified for on a Web Team in a company. Then, the class decides on a commercial e-commerce website to revise. The class decides who will be the Project Manager, and at that point the teacher then turns the project over to the Project Manager and assigns the students their respective roles based on their strengths. That student is now in charge of coordinating the revision of the chosen website, and the teacher now becomes the client. The students now have to listen to the Project Manager, meet deadlines, revise the website, meet periodically with the client (during designated class time) to show the progress on the revision, and complete the revision by the deadline agreed upon by the Project Manager and the client. This project lasts half a semester (running parallel to the regular course content and projects) and teaches the students to work as a team independently of the teacher but still meet the teacher's needs now as a client. The students are now working in roles based on their strengths, which helps give them confidence in their working team.

These two examples are just two of many examples of teamwork that we create for the students in our major, and are also two in-house examples. Many of the teams we create are external/client-based (e.g., internships). We believe the variety of these team experiences, as well as the experience over the duration of their major will allow them to retain the positive team roles and responsibilities needed to be an asset in their chosen careers.

The Growth of Gray Literature and Its Implications for Teaching Writing in the Sciences

Neil Lindeman
San Francisco State University

Keywords: gray literature, pedagogy, science communication

As the number of research scientists in the non-profit sector grows, science is increasingly being published as "gray literature," meaning reports, books, and other texts produced and distributed outside the channels of the academic and commercial publishing industries. Our approach to teaching writing in the sciences should account for this trend better.

The growth of gray literature represents a break from the dominant "information chain" model of scientific communication, according to which the functions of knowledge creation, publication, and distribution are assigned to distinct agents: respectively, authors (research scientists), commercial publishing companies, and libraries. This model has evolved to serve the needs of a predominantly academic scientific community. Yet, in fields like conservation science, a growing number of scientists are joining non-profit advocacy organizations where they can do research that focuses less on contributing to a growing body of disciplinary knowledge and more on supplying the knowledge advocacy organizations need to achieve their particular aims "on-the-ground." Scientists in such settings often remain active in academic forums while also publishing increasingly in the forums of advocacy (gray literature).

Current approaches to teaching writing in the sciences generally do not account for gray literature. A typical writing-in-the-sciences class likely focuses on the highly specialized discourses of academic forums for science and/or the discourse of popularized science published in the forums of mass media. The forums of advocacy are typically overlooked, perhaps because until recently most advocacy organizations have not been engaged in producing their own science. Scientists at advocacy organizations thus are often ill-prepared for the writing tasks they face, often finding themselves functioning not just as knowledge creators but also doing work typically assigned to communications professionals.

A course expanded to include gray literature would be useful to prospective scientists and technical communication students both. Drawing on theories of audience analysis and information design, this course could focus on (1) analyzing the rhetorical situations that typically give rise to gray literature and examining its generic features, especially in relation to more familiar genres of scientific communication; (2) comparing samples from academic, advocacy, and popular forums to see how the same research is presented differently in each case; (3) drawing on principles of technical communication not typically covered in science writing courses (e.g.,

document design) to give prospective scientists, in particular, skills they can draw on in the forums of advocacy; and (4) discussing the ethics of practicing and communicating science beyond the ostensibly disinterested walls of the academy, in service of an advocacy organization's mission. Because the intersection of science and advocacy will continue to grow as the career trajectories of scientists in the new economy take them outside the academy, we should begin adapting our science-writing curricula to better accommodate this trend.

A New Vision for Technical Communication in Academia

Marian Stone
Arizona State University Polytechnic

Keywords: interdisciplinary programs, interdisciplinary discourse, addressing hate

Technical communicators often address intercultural communication in business and industry. Yet, research and courses in intercultural communication can even have a greater impact in our changing world. In a growing diverse society, we are seeing a worldwide increase in anti-Semitism and terrorism, as well as other ideologies and theologies of hate [4]. According to the Southern Poverty Law Center, there had been a 5% annual increase in hate groups in 2005 which caps a rise of 33% over the five-year period that began in 2000 [1]. The number of hate groups operating in the United States rose from 762 in 2004 to 803 last year [1]. Moreover, the real number of hate crimes in the United States is more than 15 times higher than FBI statistics reflect, according to a recent government report [3].

Hate crime statistics published by the FBI since 1992, based on voluntary reports from law enforcement agencies around the country have shown annual totals of about 6,000 to 10,000, depending on the year [3][7]. The new report, "Hate Crimes Reported by Victims and Police," found an average annual total of 191,000 hate crimes [6] [8]. That means the real level of hate crime runs between 19 and 31 times higher than the numbers that have been officially reported for almost 15 years [3]. In April, 2005, Kenneth Stern, a leading hate expert with the Anti-Defamation League (ADL) gave a keynote speech at Gonzaga University [6]. Stern outlined the need for an interdisciplinary field of Hate Studies given the growing concern about hate.

Stern defines Hate Studies as "inquiries in the human capacity to define and then dehumanize or demonize an "other" and the processes that inform and give expression to, or curtail, control or combat that capacity" [5]. While most people recognize their various identities (country, religion, profession, cultural/ethnic background, gender, political orientation, etc.), people who hate focus on one aspect of their identity. They are also linked with conspiracy theories and display a need for power and symbols. Hate experts turn to history, evolutionary psychology, social psychology, sociology, anthropology, economics, and philosophy as well as education, religious studies, political science, law, biology, and journalism to understand hate.

In a Hate Studies program, faculty from these disciplines could offer courses that address hate issues and questions. They could define areas of research and collaborate to solve the varied and complex issues involving hate. Academics in Hate Studies could have a real impact on making the world a safer place, locally, nationally, and internationally.

This paper proposes that technical communication programs should educate students about hate in our classes, and scholars should research

hate issues that pertain to our field. This means we would pose new questions about what we do in our field, and open up doors for collaborative opportunities with an emerging field of Hate Studies.

Some possible questions we could pose could include the following:

- How can we teach technical communicators to use rhetorical analysis to identify verbal and visual messages of bias and hate, in online and paper-based documents? How can we teach technical communicators to identify bias and hate in the expression of oral messages?
- How can we help technical communicators to understand the role that ethics plays in those who express bias and hate?
- What information models can we design to prevent the introduction and dissemination of bias and hate in technical and business documents?
- How can we understand power and control issues and their expression and impact on a variety of end users?
- What kinds of usability testing could we conduct to assess not only individual but collective expressions of intergroup attitudes?
- In what ways could information design be used to communicate data about hate so that individuals and organizations could access this information more easily?
- In what ways could we improve report writing for criminal justice professionals to improve interviewing and documentation skills when they address those impacted by bias and hate?

Given our expertise in rhetoric, ethics, visual communication, psychology, technology, usability, education and intercultural issues we could see the impact of applied communication in yielding positive results to combat hate.

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Bringing Medical Writing into an Existing Professional Writing Program, or, Being Haunted by Ghostwriters

Lili Fox Velez
Towson University

Keywords: ethics, industry-academe relationships, medical writing, science,

Medical writing is a demanding specialty — the mix of medical knowledge, business experience, writing skills and knowledge of appropriate procedures/genres has typically developed outside the academy. However, because there is great demand for people with medical writing skills, and the pharmaceutical industry holds a position in our culture similar to that held by "high tech" in the 1990s, professional writing program directors might be interested in exploring this area further. Another reason might be the research opportunities for students who wish to investigate issues of authorship, the basis of authority, and how the highly prized "objectivity" of medical science inter-acts with the sources of funding necessary to undertake clinical trials.

In the nine years since the first MS program in Biomedical Writing was started at the University of the Sciences in Philadelphia, pharmaceutical industry scandals have been front-page news, and the work of medical writers has received much more attention than before. Not all of that attention has been favorable: in the Wall Street Journal, one medical writer discussed what might have been considered inappropriate pressure to assist the goals of the pharmaceutical corporation for whom she had been writing, and at least one influential journal has said it will no longer accept manuscripts which have been written or created with the assistance of medical writers. Medical writers now find themselves represented not merely as ghostwriters, but as lobbyists — well-paid by industry for their anonymity and skills of working behind the scenes, yet scorned by their intended audiences for exactly the knowledge, skill, and influence which keep them employed. Educating medical writers provides all the typical challenges of balancing skills for lifelong learning, effective writing, and effective uses of changing technologies, compounded by questions of who is allowed to do what, who can be paid to do what, who can put their name on the resulting documents, and constant re-examinations of what constitutes acceptable practice in order to keep up with federal regulations, medical ethics, and public opinion.

When designing the USP program, I had not yet worked full time in the field, and tried to create courses where students could explore the range of medical writing. After several years of being a practitioner, I'm less certain the broad approach provides sufficient depth to allow newcomers to the field to be immediately employable. However, experiencing the world of medical communications from the inside has provided another, perhaps more favorable comparison: medical writers resemble renaissance courtiers, who must be circumspect, current in the relevant medical and social literature,

statistically astute, and able to switch specialties on short notice. Enabling students to learn the necessary medical material will require alliances with other parts of the University, but that may provide another important service: training alongside medical professionals could enable future doctors, nurses, and pharmacists to appreciate writers as colleagues, not phantoms or devils.

My presentation will examine the core competencies for medical writers, some strategies for recruiting faculty and a quick tour through the minefield of medical manuscript development.

From National to Global Environmental Regulation: Sustainability as Defined by the ISO 14001

Michael Salvo
Purdue University

Keywords: environmental regulation, information design, rhetoric of technology

Environmental regulation has shifted from a matter of law enforced by national government to opt-in standards and regulation by international trade organizations. This shift reduces national governments' policing and enforcement function, yet defines stricter levels of environmental sustainability.

The change from national to global environmental regulation changes the rhetorical situation of the Environmental Impact Statement (EIS) as a genre of technical report. In this rhetorical situation, the technical communicator is caught among the competing demands of 1) global capital, 2) local populations and 3) environmental concerns, and technical communication is re-articulated in this global regulatory environment.

International Organization for Standardization (the ISO) announced the Environmental Management Systems program in 1996 (revised 2004). These regulations, labeled ISO 14001, have become international standards for industry-defined environmentally-friendly manufacturing. They are the current global standards for environmental sustainability.

The ISO 14001 has defined environmental strictures above and beyond the pollution standards set in government regulation. In the United States, Federal Government standards define a baseline for national legal environmental compliance, establishing a threshold for environmental standards within the United States. However, International agreements codified by a Non-Governmental Organization (NGO), define international–global—standards. These global regulations are often (but not always) beyond the legal threshold of Federal, national regulation.

In the United States, the Federal Government defined the parameters for the scope of study of an established technical genre, the Environmental Impact Statement (EIS) through the National Environmental Policy Act of 1969. This act became the model other countries used to articulate their own versions of the EIS. Now, with the ISO 14001 family of standards, definitions and constructions have become global, which alters the relationship between national government, international business, and environmental compliance. Compliance has become voluntary, and depends on market-based enforcement. But voluntary compliance, in many cases, meets higher environmental standards.

This presentation investigates both the irony and seeming contradiction of global, standards-based compliance, articulating the market model for pollution trading, and focuses on one example where ISO standards are more stringent than national (US) standards. Enforced by the marketplace, set by industry, and dependent upon transparent corporate governance,

international standards compliance results in an uneasy relationship between local populations of stakeholders and trans-national corporate interests. Uneasy local populations question the veracity and forthrightness of international capital. The exigencies and defining characteristics of the Environmental Impact Statement shift as well, becoming a site of inquiry for global communication and shifting regulatory emphasis. Federal regulation seems obsolete when international standards hold manufacturers to stricter pollution controls and thresholds, yet many stakeholders remain uneasy with this emerging relationship between international organizations and local environmental issues.

Using Digital Environments to Interface with Students in Professional & Technical Communication Programs

Michelle Eble
East Carolina University

Keywords: digital communication, interface, online communication, technology

For sometime now, the use of open source content/course management systems and blogging technologies have been used to deliver courses online and supplement face to face courses in our technical and professional communication programs. With growing programs at the undergraduate and graduate levels, including a master's degree and a PhD and a steady stream of new faculty and students, our department uses a distributed model of program administration. To aid us in this effort, we have implemented blogs, a listserv, and a CMS to help us distribute information to many people (including students and faculty) at one time. Using these technologies helps transfer responsibility to the students to access the information as they need it and/or to ask questions. The information and content of these digital environments can also be documented and archived for future use and searched for specific reasons.

The Director of Undergraduate Studies and undergraduate advisors help to facilitate student enrollment in courses according to their goals and interests. We have a lead faculty member in technical and communication who administers the certificate and master's degree programs and another member that serves as advisor for these students. For the PhD program, the Director of Graduate Studies and her assistant have a committee made up of graduate faculty as well as a doctoral program working group that planned the PhD and has been responsible for its implementation. With all the different programs and layers of communication, it is becoming increasingly important to communicate accurately and document and/or archive decisions, policies, and procedures for students and faculty.

To help facilitate some of this communication, the Director of Undergraduate Studies keeps undergraduate students informed through a weblog. At the master's level, we use a listserv to disseminate information, and we use an open source content management system that students access to post their photographs and biographies, so those in classes together can see each other and learn about each other. The new Director of Graduate Studies will also use a weblog to communicate important information to students. The Directors' assistants also have access to these digital environments and can communicate using them as well.

My discussion will describe the effectiveness of and barriers to this distributed model of program administration and will discuss student responses to these digital environments. I also hope to hear about other program administrative structures and how communication is facilitated within these programs.

Distributed Work and Virtual Collaborative Environments

Susan Feinberg
Stephany Filimon
Illinois Institute of Technology

Keywords: collaboration, information architecture, online communication

This position paper presents one systematic approach that can be useful to technical communicators for evaluating distributed work in a global, cross-cultural context. We both describe and advocate for our approach as one that can both accommodate and redirect technical communication practice in the context of globally distributed work, and one that can be easily adopted by academic programs in technical communication.

We ground our case study within other recent work in technical communication, namely that on the potential of online virtual collaborative environments (CVEs) as tools in conducting remote and distributed research and the need for students in technical communication to gain experience and comfort in working in distributed environments. This research method does not require complex applications or additional administrative support. The professor and graduate students in the Research and Methodology course established a process to identify and evaluate research articles in technical communication, collect and analyze the data, and report results. The team also had access to an internal IIT tool, Blackboard 5, that is a high-quality and easy-to-use application for content management. We used email to explain the project, distribute the instrument, and collect the data.

In order to accomplish our goals, we modified an approach (originally developed at the Rand Corporation) for polling qualitative expert opinion and using information gained early in the process to later move towards a quantitative group consensus. We believe that our approach can help discover the mental constructs of groups of global site users and determine where members of different distributed workers expect to find particular types of content. Knowing where global users expect to find things provides validation for development of intuitive information architecture and supporting design. This systematic process may lead to more usable information systems, as well as easy yet valuable adoption by academic programs in technical communication.

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Fostering Teamwork and Responsibility in Online Group Work

Michael S. Martin
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Keywords: collaboration, online communication, pedagogy

Group work is not a new concept for classes in the Technical Communication classroom. Pedagogically, using group work to foster a sense of responsibility and better understanding of audience is well documented. However, managing group work when the class is online is something that requires a much greater attention to issues of language, tone, and audience if a good learning experience is to occur.

Moving toward providing courses online is one goal of many technical communication programs and administrations as state funding for high education is shrinking significantly. Thus, our new economy requires that we as educators and directors of programs be accessible to a wider variety of students in a broader scope of learning localities. This paper will discuss and reflect on the ever increasing probability of working with online students (e.g., on-campus and off-campus students, traditional and non-traditional students, and undergraduate and graduate students) while helping them to understand issues of audience and communication and teamwork while working in a virtual group setting.

Program directors and faculty need to work in concert to provide a pedagogically sound and programmatically viable classroom result for both students and faculty. To successfully manage an online experience it is critical that there is appropriate software and training for each faculty person. Time to research and develop the course is also an important element for raising the probability of success for that particular course. Finally support from the administration in providing either grant monies or release time will help ensure that there is appropriate time to create and establish a strong class experience as we increasingly offer classes in a virtual environment. Positive results in the classroom are in the best interest of both technical communication programs and their respective universities.

Partnering in Technical Communication

Kathryn O'Donnell
Metropolitan State College of Denver

Keywords: program partnering, international communication, faculty and program exchanges, curriculum development

Should Technical Communication programs in different academic institutions collaborate in making their course offerings available to students at both campuses?

The technical communication programs at Metro State College (Denver, Colorado) and Mt. Royal College (Calgary, Canada) are exploring the possibility of a mutual exchange of classes, guest lecturers, and international internships. Both colleges offer similar undergraduate degrees and certificates in technical communication, and they share the same time zone—an important consideration for students and administrators. As faculty at both institutions believe, this international emphasis would help develop interest in *both* technical communication programs, and students would benefit from the emphasis on the international aspects of communicating technical information. The institutions see possibilities for sharing both courses and faculty:

Expanded Course Offerings

- Both colleges could expand their faculty expertise without hiring new faculty or replacing existing faculty.
- Both colleges could expand the course offerings by offering established courses from the college, thus expanding their curriculum without new curriculum proposals.
- Both colleges benefit from the sharing of instructional technology resources, meeting and application software.
- Colleges have options to develop new courses at a more comfortable pace while students take courses at the sister college.
- Colleges have the benefit of reviewing programs practices at the partner college for incorporation into their program.

Exchanges of Teaching Personnel

- Colleges benefit from the exchange of professors to add experience to a particular component of their program.
- College can benefit by using the partner college to teach courses during faculty hiring searches.
- Colleges share guest lectures in a joint lecture program both onsite and Internet broadcast
- Colleges benefit from grant funding programs that seek resource sharing and dissemination of educational programs.

But how sound is this undertaking? What are the disadvantages that might make the effort less inviting? What additional advantages might

compensate for any drawbacks? And finally, if this project succeeds, what are the consequences for other programs? Will we all be sharing courses? Do we all want to?

Graduate Student Projects and the New Economy

Susan Katz
North Carolina State University

Keywords: assessment; curriculum, graduate; graduate program design; pedagogy

In 1998 the master's thesis was replaced with a semester-long projects course for all students earning an MS in Technical Communication at North Carolina State University. In this course, students are required to prepare and defend a professional-level piece of technical communication, such as a Web site, an instruction manual, a reference manual, or other similar works. Those students interested in pursuing further academic work have the option of writing a scholarly article intended for publication in a refereed journal.

This modification to our curriculum was in direct response to an increasing awareness of the needs of both students and employers for a more relevant capstone experience. The proposal for curriculum revision specifically stated that a "better balance between the academic structure of the program and the more practical goals of students is needed." To meet this need, the capstone course was created "to initiate students into the kinds of communication projects they are most likely to encounter in the workplace."

A secondary reason for the change was the length of time that students were taking to complete the MS. In the mid-1990s, for example, the average time to completion was nearly five years. Since instituting the projects course, the time to completion varies between two and three years.

Students are given a great deal of freedom in choosing their projects. Most of our students work full time, many as technical communicators, and thus many of them choose projects that are directly related to their work. However, we also have students who work full time in other careers, and who see the MS program as a way to move in a new direction. Although these students occasionally choose projects relevant to their current positions, most use it as an opportunity to try something quite different. In addition, we always have a few full-time students, whose projects are rarely a reflection of the needs of a specific workplace.

Since instituting the projects course, however, we have done nothing to assess the validity of our rationale. We are confident that the projects are better preparation than a thesis, but do the projects, in fact, prepare the students for today's workplace? What do the students' project choices tell us about their recognition of the workplaces they plan to enter? Do we see any awareness, for example, of the need to collaborate internationally? Do the projects demonstrate creativity and innovation? Does the experience of producing a project in any way prepare students for virtualized culture and workplace diversity?

To start our discussion of the validity of the capstone projects course as preparation for the new economy, I will provide attendees with brief descriptions and an analysis of the projects produced by master's students in our program over the past eight years. I will also contact as many alumni as

possible to determine and report on (1) their current position and (2) their perception of the relevance of the project in attaining, keeping, or contributing to their current position.

Using Minimal Teaching to Enhance Adaptability in a Flat World

Dan Riordan
University of Wisconsin-Stout

Keywords: globalization, pedagogy, theory-practice relationships

As a result of globalization, technical communication programs now need to produce graduates who, in addition to everything else, won't be liable to be outsourced. In 'The World is Flat' and various interviews Thomas Friedman analyzes of global realities and the capabilities people must now bring to the work place. The capabilities include being able to synthesize, explain, adapt, leverage, orchestrate insights, and deal with horizontal collaboration. In particular Friedman emphasizes "teaching students how to learn, instilling passion and curiosity in them, and developing their intuitive skills." In short graduates must land running, able to function effectively in the new global reality.

Combining these needs with traditional skills and knowledge presents a formidable challenge for programs. One strategy that can help combine the new and old skills is Minimal Teaching, a pedagogical method that fosters the kind of capabilities that Friedman emphasizes.

Closely related to Problem-Based Learning, this method focuses on the learning that the student must achieve rather than the content that the teacher must present. This method uses three basic strategies: to situate students so that they must define the actions that they need to undertake in order to achieve creating a successful final product; to give them "ill-defined problems", and to create iterative situations in which students must reuse and refine techniques that they used in previous work.

The method enables students to create a repertoire of strategies that they can "mix and match" in order to solve communication problems. The teacher focuses on a mentoring role in which she or he only describes the final product briefly, e.g. create a website for your work in this course; create a set of instructions ready for translation into Japanese. After that description the teacher does not employ the traditional scaffolding of introductory lecture, worksheets and the like. Instead the students are assigned groups in which they define everything from resources needed to research questions, to mileposts for completing the assignment. The teacher, acting as a mentor, involves him or herself with the discussions of the groups, offering formative assessment throughout the process. This mentoring replaces the traditional scaffolding.

The benefits of this technique are two-fold: Students develop those Flat World skills such as collaboration, learning-to-learn, explaining, adapting and the other soft skills. In addition, since the responsibility for the final deliverable rests with them, they quickly (or gradually) internalize the production skills that programs develop--creating timelines, researching, discovering resources, etc.

Attendees receive a basic understanding of the method, some of its pitfalls, and how it helps students transition to the new workplace demands.

Rethinking Plagiarism in Technical and Professional Communication Programs

Jessica Reyman, Northern Illinois Univeristy

Laurie A. Johnson, University of Minnesota

Keywords: assessment, ethics, instructional technology,

In this presentation, we will propose that technical and professional communication programs reconsider the treatment of the concept of plagiarism in curriculum. We will examine existing policies and programmatic approaches to plagiarism, and explain the need for rethinking plagiarism in light of contemporary technical communication practices. We will conclude by suggesting more effective ways to implement course-specific and program-wide changes that effectively address these issues.

Jessica Reyman

Speaker 1 will show that there is a widening gap between technical and professional writing practices and the treatment of the concept of plagiarism in many technical communication programs. I will examine the coverage of plagiarism in popular introductory technical communication textbooks and show that the treatment of the concept is often in conflict with other teaching practices that encourage student writers to recycle and re-use materials in their writing. Traditional approaches to plagiarism, which are often consistent with the plagiarism policies adopted by many universities, reflect a print-focused approach based on a dichotomy between "theft" and "originality" in writing practices. Such approaches do not speak to the types of activities performed by technical communicators in a digital age, such as using boilerplate materials and templates, relying on existing designs and layouts, cutting, pasting and re-purposing content, and single-sourcing. For each of these activities, a student writer may be guilty of plagiarism (at the academic level) while at the same time performing the tasks of an effective technical communicator. This discrepancy presents a tension between meeting the demands of the institutional setting and allowing our students to work within the common practices of their chosen profession.

Laura A. Johnson

Speaker 2 will propose methods for implementing curriculum changes that address the disparity between the treatment of plagiarism and technical communication practices. Rather than using the term "plagiarism" to apply equally to all copying, I argue that technical communication programs need to more openly acknowledge the range of "allowable" copying and re-use of intellectual property that is inherent in many contemporary composing practices, while still emphasizing the importance of adhering to University or departmental policies. This might be done first by reconsidering the plagiarism policies adopted in our departments. Are these policies sufficient

for our programs? Do they reflect the range of activities that involve copying in which technical and professional writing students are asked to participate? Do they reflect the tensions between what we ask students to do within the classroom space and what students will be asked to do as practitioners? Second, programs will also need to "teach plagiarism." By this I mean integrating into curriculum tasks directed at helping students to distinguish between allowable copying and the academic offense of plagiarism. In these ways, programs can more explicitly acknowledge the gray areas that exist between original composition, plagiarism, copying, and re-using text, particularly for technical communicators writing in an age of digital composing.

Transforming Spaces: Effects of Studio Space on Collaborative Learning and Innovative Teaching

Summer Smith Taylor
Clemson University

Keywords: pedagogy, collaboration, faculty, space

At Clemson, we have designed a new space for teaching and learning: the Class of 1941 Studio for Student Communication. We are using this space as both classroom and out-of-class workspace for some of our Advanced Writing Program classes, which are required undergraduate business and technical writing classes. Our assessments indicate that the space is improving students' learning of collaborative skills, including their ability to function in a variety of team roles. We have also found that the space is improving teachers' motivation and ability to use innovative active learning pedagogies that are integral to our program. My presentation will describe the Studio and how we are using it for classes and out-of-class work, explain the effects we have seen, and discuss ways other programs could create similar spaces and effects even without the funding that allowed Clemson to build the Studio.

The Studio for Student Communication features lightweight, moveable tables and chairs, interactive and traditional whiteboards, tack boards, a muted blue and green color scheme, and corporate-like quality of furnishings and construction. Renovation of the space was funded by a $1 million gift from the Class of 1941.

We have found that the studio space provides a solution for two problems faced by our program. First, the Studio provides more appropriate space than traditional classrooms for the active learning pedagogies required by our program (project-based, problem-solving approaches, for example). In particular, it facilitates collaboration in teams. Program classes that meet in the Studio use the space to create team "offices" with posted drafts-in-progress, responses to these drafts, team calendars and to-do lists, and other materials that make visible the critical thinking and project management activities of the team. Some faculty create a metateam, a managerial group including one member of each project team. The metateam manages the class' work, determining tasks and deadlines for the class and facilitating the exchange of ideas among teams. The metateam also uses the flexible facilities of the Studio to call meetings, create meeting space, and alert the class to their decisions. They develop their own innovative ways to use the space. Other faculty have found that the fluidity of the Studio spaces encourages their students to re-form teams continually during the semester, allowing students to seek particular expertise from classmates and to learn to fill a variety of roles.

Second, and perhaps even more importantly for the program, we have found that teaching in the Studio space can launch even reluctant teachers into active learning pedagogy. We have faced the problem that some faculty

are reluctant to use active learning approaches due to concerns about relinquishing control, covering an adequate amount of material, complicating their teaching preparation, and so forth. But teachers who use the Studio space, even if they do not intend to use it to facilitate active learning, have been inspired to innovate in their teaching. We have also found that faculty who had not been particularly successful with active learning in traditional classrooms can be successful in the Studio. As a result, the Studio space has enabled the program to improve the quality and innovation of our classes as a whole.

Even without the level of funding needed to create a space like Clemson's Studio, colleges and universities can create similar spaces. I will provide some ideas. Then, discussion can focus on not only the ways the Clemson Studio is used to improve teams and teaching but also on ways that colleges and universities can create their own lower-cost spaces.

Persuasion in the Contemporary Workplace: Proposals Reconsidered

Mark Zachry
University of Washington

Keywords: graphic design, information architecture, workplace literacy

In the contemporary workplace where organizational structures are increasingly based on ad hoc federations of individuals with diverse and complementary skill sets and where work activities often emerge from local innovation rather than master administrative plans, the work of persuasion is key. Such persuasion, of course, takes many forms as individuals and alliances attempt to accomplish their own goals. Among these forms, however, is a genre that has long been a focal point in discussions of technical communication: the proposal.

Proposals energize much of the activity in the work world, persuading people and organizations to do such diverse things as spend money, allocate resources, change objectives, reorganize, and launch new initiatives. Despite the prevalence of proposals, however, little is known about how successful proposal writers make decisions, manage their time and resources, and execute their work so as to realize a return on their investment of time and energy—issues that merit the attention of those who are engaged in the education of today's knowledge workers.

To help open a wider discussion about proposal writing and its place in technical communication programs, this presentation will consider the current state of proposal writing instruction. The presentation will be framed by the overarching question: If proposal writing is as important a work activity as the limited current research suggests, how is that importance being reflected in the technical communication courses we are offering the knowledge workers of tomorrow?

Related to that question, the presentation will explore how proposal writing might most effectively be integrated in the instruction we offer. For example, the literature associated with proposal writing clearly shows that the nature of proposal writing work is more complex than the direct composition of persuasive texts. Proposal writing today involves many disparate texts that aid the proposal writer: checklists, solution maps, graphic representations of work, storyboards, and databases and spreadsheets. Are our methods of teaching proposals adequate for teaching students how to create and negotiate such complex networks of documents when they need to develop a proposal? If not, how might instruction in proposal writing be more adequately addressed in our programs?
This presentation will end by inviting discussion about some specific tools we might offer our students for thinking about and discussing their many work practices related to proposal development in the contemporary workplace.

Just Trying to Do Something Good: International Service-Learning and Administrative Hoop-dom

Helen Correll
Metropolitan State University

Keywords: community engagement, cooperative education, service learning

Service-learning in technical communication has always been a very important part of our mission and history at Metropolitan State University. Throughout the years, we have worked with various non profits to help with their documentation, project management, and web development needs. We thought that we had developed a seamless, effective process that enabled our students and our clients to benefit from the various projects and challenges. With the idea of further improving and developing our program, we attended the 3M Campus/Corporate Engaged Department Institute for Engineering, Computer Science and Math, and Related Fields in April, 2005. During this institute, we were introduced to Professor John Duffy, a solar engineering expert from the University of Massachusetts-Lowell (UML), who presented his international service-learning project for solar engineering in remote mountainous regions of Peru. After numerous conversations during this presentation, it became clear that one of the problems with the Peru project was the lack of understandable, user-friendly documentation for the sometimes complicated solar-powered equipment used by the Peruvians. As we have a required course in international technical communication for our master's students in technical communication, we volunteered to help with that documentation problem.

The project began fall semester of 2005 with master's students developing three beta-version brochures to illustrate the operation of the solar-powered radios that are so crucial to communication in the Peruvian mountains. We had set up a web forum to communicate with the engineers at UML, but we found it difficult to document the process without actually seeing the product. We applied for and received a grant to fund travel for students to UML and Peru; however, the funds were not deposited into our grant account in time for the students to travel to UML to research the radios for which we were providing documentation. I personally paid for the trip for the students which led to the first in a series of administrative red tape, delays, and general mayhem.

Throughout the rest of the project, we ran into so many administrative roadblocks that we considered quitting the project: students' reservations to Peru were made too late to meet the UML group, our IT department decided to remove the software that we needed to make translations for the brochures, our university didn't cover student travel insurance for other-than recognized student organizations, students weren't reimbursed for their travel expenses, and we continually had to justify the reasons for this worthy international service-learning project.

This rather frustrating (and on-going) project has reinforced the importance of administrative support for any innovative program that we may wish to attempt in our on-going goal of providing innovative, valuable, real-world experiences for our students. Suggestions from other CPTSC members as to how they grapple with their administrative hoops would be genuinely appreciated.

Lions & Tigers & Bears: Perpetuating an Interdisciplinary Writing Project in Three Engineering Departments

David J. Adams
University of Maine

Keywords: curriculum, undergraduate; engineering communication; instructional design; interdisciplinary programs

In 2003, the Engineering Communication Project (ECP) began at the University of Maine. The ECP is essentially a series of sequenced, writing-intensive partnerships between engineering faculty and faculty from the Department of English. These partnerships provide writing instruction for students across an engineering curriculum. The initial design and core principles of the ECP were presented at the 2003 CPTSC meeting at Clarkson University (Adams). The existing requirement for engineering students had proved unsatisfactory by almost every measure, dissatisfaction underscored through faculty and alumni surveys in the fall of 2003. That course was a stand alone service offering in technical writing that students took at the end of their careers and was taught largely by adjuncts with no special understanding of engineering.

The ECP was designed to provide a deep level of integration between writing instruction and engineering content. ECP partnerships were also designed to accommodate each engineering department's curricula and core outcomes for technical communication, as well as the varied approaches for meeting ABET Inc. standards for communication skills. The primary goal was to produce engineering graduates with levels of technical communication skills demanded in the workplace. A three-year initial grant from the Davis Educational Foundation provided financial support (and the luxury of flexibility) to the ECP. By and large, the ECP efforts have demonstrated success and validated the model of instruction, and this paper will briefly summarize that progress. But, as is said, there is more to the story.

From the beginning the ECP represented a formidable bureaucratic and administrative challenge. That part of the story may prove instructive (or cautionary) to those in other institutions who might wish to design a similar project. Initially, the ECP involved the cooperation of five academic departments in two colleges, and did so at a level for which no precedent existed at this institution. The bulk of this presentation will encompass a few of the critical administrative and political challenges faced by the ECP:

- Overcoming the skepticism of many engineering faculty and handling the decision of one engineering department to leave the project after three semesters.
- Assembling and sustaining a capable and dedicated cadre of writing instructors from among English Department faculty and maintaining support for that effort within the department.

- Navigating the political maelstroms and differing agendas of the departments and colleges involved while completing the necessary administrative steps to sustain the work.
- Seeking continued support from the Davis Educational Foundation while negotiating a transition to full institutional support for the ECP (and doing so in a budget crisis and within a decidedly *ad hoc* organizational structure).

As of this writing, these challenges have been largely overcome and the core principles and vision of the ECP have been preserved (knock on wood). The first ECP cohort will graduate in 2007, having completed the full sequence of ECP courses. This presentation is the cautiously optimistic story of how there will be other cohorts to follow.

Skepticism of Engineering Faculty. The ECP was designed from the start to evolve within the respective cultures of each engineering department involved, and indeed that evolution proceeded along slightly different paths and at different paces. While engineering departments were largely dissatisfied with the existing stand alone technical writing course, they were also wary of redefining their curricula to meet ECP objectives.

Part of this wariness can be explained within institutional history. More than a decade earlier, the University had engaged faculty in a writing-across-the-curriculum initiative, but funding was withdrawn in another cyclical budget shortfall, and the effort put forth by faculty withered away, leaving only a deep-seated cynicism about such endeavors. Another part of the wariness stemmed from the concerns of engineering faculty that they were being asked to shoulder additional work at a time when they felt under pressure to cover ever more engineering content in classes that were steadily growing larger.

The Department of Civil & Environmental Engineering was initially most committed to ECP work (an experience echoed at two previous engineering colleges) while the departments of Mechanical and Electrical & Computer engineering were wary of making commitments. Initially, the ECP was also to work with three small departments within the School of Engineering Technology (SET)—a separate engineering technology program with the College of Engineering. Faculty and administrators within SET departments proved unwilling to shoulder the work involved or to commit to achieving project milestones. As a result, the SET departments were dropped from the project after three frustrating semesters—a decision that required the endorsement of both deans involved, as well as understanding from the program officer at the Davis Educational Foundation.

Over the next three years the remaining three engineering departments undertook the difficult work of creating a sequence of partnerships that would provide students with coherent instruction in technical communication that was derived from the engineering content of the courses involved. This effort involved redefining course assignments from what had been, in many cases, long held routines by engineering faculty. Some of these efforts were described in detail in papers presented at meetings of the American Society for Engineering Education (ASEE). Adams and Manion detailed the

cooperative efforts in Civil and Environmental Engineering. Beenfeldt and Peterson did the same for Electrical and Computer Engineering. After several years of false starts and a great deal of persistent effort, in May of 2007 the Department of Mechanical Engineering fully adopted the ECP regime—thereby creating a full sequence of courses in all three departments. Table 1 illustrated the progression to full ECP development.

Table 1. ECP Courses in Transition to Full Development
By the spring of 2008 each engineering department will offer three one-credit ECP courses listed as co-requisites with existing engineering courses**.**

Engineering Dept.	Fall 2006 Courses	Spring 2007 Courses	Fall 2007 Courses	Spring 2008 Courses	Fall 2008 Courses
Civil & Environmental Engineering (CIE)	CIE 111[1]	ECP 225[2] ECP 366 ECP 411	CIE 111	ECP 225 ECP 366 ECP 411	CIE 111
Mechanical Engineering (MEE)	MEE 101 MEE 270[3]	MEE 341 MEE 488	ECP 101	ECP 341 ECP 488	ECP 101
Electrical & Computer Engineering (ECE)	ECE 342 ECE 410	ECE 214 ECE 410	ECP 342 ECP 410	ECP 214 ECP 410	ECP 342 ECP 410
Projected Total Enrollments[4]	**225**	**350**	**225**	**350**	**225**

[1]CIE 111 is not a credit-bearing partnership, but, after three-years of collaboration, has evolved to become a writing-intensive course with minimal ECP involvement. 20-25 second-year students in the Construction Management Technology program also take this course.
[2] Beginning in spring of 2007, the ECP designator is given to the one-credit technical writing modules paired with a department's engineering course with the same number (for example, ECP 225 is paired with CIE 225, Introduction to Transportation Engineering).
[3] After several unsatisfactory efforts, faculty agreed that this course (Dynamics) was not suited for a writing partnership.
[4]The projections may be revised upward should the current growth in engineering enrollments continue. Current projections mean that the ECP will reach about 575 students in a given academic year.

A cadre of writing instructors. From the beginning it was clear that the success of the ECP would depend on providing an engineering department with long-term instructional partners. These partnerships were necessary to build trust within the engineering departments, but also to provide writing instructors with time to develop a familiarity with the particular needs of a given engineering department. Fortunately, there were several sufficiently interested and experienced faculty within the lecturer-

level of writing instructors within the English department, along with the full-time faculty member directing the project. The grant provided the financial support for these partnerships to evolve from initial stages to the credit-bearing regime that represents the full-developed ECP. Writing instructors attended engineering lectures and labs and over time, gained enough awareness of content and discipline to help craft writing assignments and instruction that would provide a coherent sequence of experiences within that department. Sustaining this cadre required the English department to give scheduling and workload priorities to ECP courses.

Some Notes on the Developmental Nature of Work in the ECP

- When faculty from two different fields collaborate to bring writing instruction into an engineering course, they also bring with them the culture and preconceptions of their own disciplines. Before engineering faculty and students may trust their commentary on written work, *writing faculty* may have to attend engineering lectures and labs for some time to gain a working appreciation for the content of the work that students produce. *Engineering faculty* may have to adjust their assignment regimes and spend extra time planning for a different view of writing in the course, as well as agree upon a scheme for evaluating the work.
- For example, ECE faculty worked with their ECP partner to change some of their assignments from strict reports of lab procedure on circuit design. These changes introduced elements of writing for a specific purpose and audience. During in-class reviews of student work, writing and engineering partners share insights regarding the efficacy of the writing and what that writing reveals about engineering content.
- All partnerships employ a continuous improvement model in which faculty review student work, discuss what is working, and what needs greater emphasis either right away or in the future. In another example from CIE 111, memo assignments revealed that students were struggling to shape language that described probability. That struggle indicated confusion about the concept, which was addressed immediately and then accounted for in the assignment prep for future semesters.
- Another level of developmental effort occurs in coordinating the writing instruction across a sequence of courses within an engineering department. That sequential effort is a guiding principle within the ECP. In CIE/ECP 225, for instance, students write a short proposal to research a topic in transportation engineering. This short proposal is an introduction to the longer, formal proposal that students will write in the CIE/ECP Soil Mechanics lab, the next course in the ECP sequence.
- Add to these examples the need to work with curriculum committees in each department, to adjust as new faculty may rotate into a course, to develop a menu of annotated model assignments, to refine local and cumulative assessments—to do all of these things across disciplines.

Maelstroms and differing agendas. By 2003, there was a consensus (alas, a fairly high-level consensus) among all stakeholders that the previous mode of teaching technical communication to engineers was not working. Nonetheless, it became obvious rather quickly that the plan envisioned in the ECP would require a major culture change among faculty, administrators and students. While it did not work very well, the old division-of-labor model (let the English Department teach them how to write) was firmly entrenched in the minds of those involved and was administratively simple. On the other hand, the simplest features of the ECP were that it would require more work from everyone involved and a level of cooperation that had not existed previously.

While universities will happily apply the tag "interdisciplinary" to almost any initiative, the nuts and bolts substructures (budgets, credit hours, scheduling, allocations of workload, and the parochial vision of departments and colleges) function as a severe undertow for these same initiatives. Furthermore, college/department structures had, over time, bred a wariness and misunderstanding between the different units who often felt themselves caught in a zero-sum game of fighting for institutional resources. For example, many humanities faculty and administrators assumed that engineering departments were hoarding gold in their closets (whereas the closets were actually empty). And many engineering faculty assumed that humanities faculty were not really interested in engineering fields or sympathetic to the different demands and costs of an engineering education. Navigating these differing college and departmental waters would prove to be an ongoing focus of energy.

Transition to Institutional Support. The initial three-year grant from the Davis Educational Foundation would expire in 2006. Recognizing the dimensions of the ECP work, the Foundation agreed to consider a rare second round of funding to complete the development of the ECP through the full four-year curriculum. As a condition of this consideration, the Foundation required a documented plan to transition the ECP to full institutional support within two years.

As this proposal was prepared in the spring of 2006, nearly all the structural differences mentioned above would come to the forefront. After nearly five months of difficult (sometimes beyond difficult) negotiations, a proposal with the required plan for institutional support was sent to the Foundation. That proposal was subsequently approved in June of 2007. The key elements in the plan were the transfer of instructional costs from the previously required stand alone technical writing course to support the new one-credit ECP courses, as well as an ongoing commitment from the provost for other costs (travel, technology, etc) of the ECP at roughly $11,000 per year. This support will phase in during fiscal years 2008 and 2009, at which point the ECP will be fully funded through institutional support.

Another helpful element in this proposal was the creation of an ECP oversight committee comprised of the chairs of the participating departments and a member of one engineering department's advisory board. This

oversight committee provides a formal structure coordinating the work in this interdisciplinary project.

The first cohort of students to experience the whole ECP curriculum (albeit some who experiences it in its early versions) graduated in the Civil and Environmental Engineering department in 2007. Preliminary responses to the seniors' capstone design papers from faculty and alumni evaluators have been highly positive. In addition Electrical and Computer Engineering students in this class experienced most of the ECP curriculum. The Mechanical Engineering department voted in spring 2007 to fully adopt the ECP curriculum, thereby bring all three departments fully into the fold—a change that now means between 550 and 600 students per year will receive a more effective regimen of writing instruction than had existed before the ECP. In the end, they will do so at roughly the same cost—perhaps even a bit less. The lessons learned over the past three years should provide an even stronger curriculum for cohorts to come.

Nonetheless, the forces that nearly overwhelmed the ECP still exist at this institution. The budget difficulties that frame every discussion are not likely to recede. Sustaining the project over time will require the ongoing support and attention and good will of all the stakeholders involved.

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Fostering Professionalism and Community Awareness: Launching an Undergraduate Scholarly Journal

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Keywords: community engagement, online communication, undergraduate curriculum

Although the conference theme highlights the variety of challenges faced by new graduates of professional and technical communication programs, I suspect that most of our students remain either unaware of such issues, or are not sure what such issues might mean to them in practical terms. Assignments, activities, projects, and internships might all contribute some measure of professional awareness for students; and then again, they might not.

At Saginaw Valley State University, we have launched a venture aimed at fostering professionalism and community awareness. In short, we are developing an online undergraduate research journal that will be designed by, written by, produced by, and aimed toward the student members of our professional community. Although the journal will be supported by a faculty advisory board, the editorial board will be made up entirely of students. This project is a programmatic, rather than pedagogical venture: it is not linked directly to a specific local course, or even to coursework in general, although many courses might provide opportunities for students to develop material for submission. By the time the CPTSC meets, we will have begun development of the first issue of the publication, working toward a Spring 2007 launch.

By participating in this project, students at the local level will experience managing a professional publication, an endeavor with many and diverse challenges. By providing this outlet for professional and scholarly development to their peers, our students will play a role in defining a stronger sense of professionalism, community awareness, and professional identity. It is our hope that this project will thus play a role in students recognizing what it means to play a role in addressing the challenges of working in a new economy. This presentation will elaborate on the programmatic and community significance of this publication project.

Performing Professionalism through Senior Portfolios

Ann Brady
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Michigan Technological University

Keywords: online communication, pedagogy, workplace literacy

Technical communication programs have used print portfolios for quite some time to accomplish three intersecting goals: first, to give students a way to collect, display, and reflect on their work; second, to "monitor growth of the students' knowledge, skills, and attitudes" (Vavra); third, to evaluate curricular design and the development of the programs themselves. Programs are increasingly interested in electronic portfolios as venues for the collection and assessment of student work (Yancey) and as ways to assess and support teaching (Dubinsky). In our two-person panel presentation, we propose that portfolios also be used as sites where students perform professionalism. We believe that doing so supports technical communication programs' efforts to prepare students to develop skills necessary for the new economy.

We understand the new economy to be one of expanding marketplaces and hybridized companies that draw on post-industrial strategies to drive innovation (Anderson). The resulting explosion of communication technologies and philosophies (Selber & Kynell) requires that technical communicators in these workplaces demonstrate intellectual curiosity, flexibility, and self-direction. No longer tied to one career path, technical communicators must be capable of adapting to organizational flux and change. They must be explainers, synthesizers, storytellers, and model builders (Barrett). While portfolios, conventionally conceived, do offer a way for students to collect their work and for programs to assess it, they do not necessarily encourage such traits. Before we introduced the portfolio as performance two years ago, students often talked about their professional identities as definitive and stable. They saw themselves as documentation writers or web-designers exclusively, not as cross-disciplinary network builders or adaptive collaborators.

As co-directors of a scientific and technical communication (STC) program, we were concerned about the limited nature of these descriptions and thus decided to require senior portfolio presentations as part of the exit process. Requiring students to explain publicly how they synthesize their communication, information, and media skills and how they might adapt those skills to construct professional identities and professional networks has enhanced our understanding of what our program does best, and what it must do better.

In framing the final portfolio presentation as a performance of the professional self, we drew on Goffman's theory of the self as an embodied performance, socially constructed and negotiated, engaging both immediate audiences—students' peers, instructors, our program and university—and

larger communities—potential employers, other programs, and the profession itself. We contend that in their "front stage" portfolio performances, students enact their version of the "entrepreneurial subject" (duGay), the preferred subject position in the new economy. Portfolio performances in this view are intended to entail a range of communicative, interpersonal, and technical skills that constitute a student's job market value and display the attributes of a professional self through embodied image, social comportment, and personal style.

As we watch the senior portfolio presentations, we find in them what programs look for in conventional portfolios: competence in, if not mastery of, written, digital, visual, and oral communication skills. But we also find students constructing, more and more confidently, models for using these skills to become corporate trainers, game translators, science writers, and risk communicators, to name a few. In other words, we see students demonstrating what they have learned in the broader context of who they have become and might be, professionally. Portfolios as performance thus provide us complex feedback on our program and multiple opportunities to reflect on its place in educating STC professionals for the new entrepreneurial workplace.

Graduate Technical Communication in the New Economy: Responding to the Market and the Academy

The new millennium has brought with it a new economy, characterized by distributed work, globalization, a contingent workforce, and pervasive and innovative technological advances. While these changes are welcomed in many quarters, some question the impact they have on the academy. This panel discusses the impact the new economy has on technical communication graduate education. The new economy forces educators to respond to market forces both from students and industry. Educators must raise new revenues, employ different media for instruction and equip their students with new knowledge and skills to compete in the marketplace. Successful technical communication educators will realize that the new economy provides unprecedented opportunities for technical communicators and by rising to meet them, everyone benefits: educators, programs, students, practitioners, and the audiences they all serve.

The Academy: A Market Place of Ideas or the Market Place?

Diane Allen
Midland College

Keywords: administration, assessment, economics, workplace literacy

A trend accompanying increased globalization is that of conservative political economic policies, particularly supply-side economics and debt-reduction, with a concurrent increase in funding for entitlement programs. Post-secondary education, not considered an entitlement, has seen federal and state funding drastically reduced. As a result, universities and colleges have been forced to rely more and more on external funding, instigating market and market-like behaviors in both the faculties and administrations. As a result, the academy is assuming an entrepreneurial façade and along with it, a commitment to wealth production as a social responsibility.

In the business model of the university, students become both products and customers, creating friction between the mission of a university and the practical reality of day-to-day faculty-student interaction. Faculty, too, are exploited as tenured and tenure-track faculty are replaced by contingent faculty. The importance of the market place usurps the value of higher education as a public good. How should we respond to these inevitable changes? This paper explores the role that graduate technical communication programs ought to assume in the changing world of the new economy as it radically alters the nature of universities, colleges, departments, and programs.

Educating Today's Technical Communicators: The Economic Incentives of Online Graduate Education

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Wolters Kluwer Financial Services

Keywords: distance education, industry-academe relationships, economics, technology

The new economy has thrown the field of technical communications into the middle of a market shift. This shift is changing not only the roles technical communicators fill in corporations, but also how they obtain the knowledge and experience they need to succeed in those roles. For example, the technical "writers" of yesterday are often asked to assume expanded roles in usability testing and visual design. In essence, they're being called upon to act as consultants in a wide variety of areas that require an in-depth understanding of technical information and communication as a whole. In addition to these expanded roles, the field of technical communications—and education in general—is experiencing the growing pains of technology itself. Journals, conferences, and listservs are filled with online (or distance) education topics. Some discussions focus on the financial aspects, some focus on which tools are most useful, and still others debate whether online education can be used for undergraduate as well as graduate programs. Though the reasons for offering online education are many, they largely boil down to economic incentives—incentives that go beyond cost-savings for the institution.

In this presentation, I will explore online graduate programs as a method for educating today's technical communication workforce to meet the demands of a changing market. In doing so, I will discuss the incentives from three perspectives: (1) the technical communicators who are already in the workforce, (2) the corporations who employ those individuals, and (3) the universities that offer online graduate programs.

Specifically, I will explore how these incentives are connected and how each group can benefit from the others. For example, universities can recruit a broader range of qualified students (as well as build inroads that take advantage of corporate training and tuition reimbursement funds), technical communicators have access to educational opportunities that might otherwise not be available, and corporations gain highly trained and experienced communicators.

By better understanding the connections between each group's economic incentives, we begin to see how online graduate programs can help meet the needs of each group, as well as the demands of the changing technical communication market.

Virtual Workplaces: From Online Graduate Education to Communication Leadership

Pamela Estes Brewer
Murray State University, Texas Tech University

Keywords: online education, virtual workplaces, new economy, graduate distance education

The new economy is increasingly supported by virtual workplaces that connect workers from around the world. Within these workplaces, workers use new modes of communication to make new knowledge in new ways. Because online education necessitates the use of similar media and modes of communication, it builds new economy skills in a way that traditional education has difficulty matching. Instructors of face-to-face classes can require many new media assignments, but such disassociated learning is less effective than having students fully engaged in using a variety of media to support their success in the course. By fully engaging students in the modes of communication most common to virtual workplaces, online graduate courses in technical communication can prepare students well for global work and their roles as communication leaders in virtual teams.

"Current research points to planning, face-to-face opportunities, mixed media, boundaries, and meta communication" as most important to the success of virtual workplaces (Brewer). When developed and managed effectively, the virtual workplace has a strong thread of trust and social engagement. The online PhD program in Technical Communication and Rhetoric (TCR) at Texas Tech University models these characteristics both in its design and delivery; thus, by virtue of both content and delivery, it prepares students in each of these areas.

Through careful planning, the online TCR program at Texas Tech has become a virtual workplace that offers students from across the globe the opportunity to collaborate online using modes of communication similar to those used in the virtual workplaces of the new economy. Both synchronous and asynchronous modes of communication are employed by faculty and students to best accomplish the program's learning outcomes, and students are challenged to use tools in new ways.

Mixed media supports the need for both formal and informal communication. A typical class meets one and one half hours a week in a synchronous session that includes students and faculty; classes are intimate, seldom exceeding a dozen students. Professors may use multi-media presentations, or they may rely solely on textual exchange. In addition, most professors also require regular participation in an asynchronous discussion board, where students discuss the readings at length and make connections. Outside of class, students email and instant message regularly with one another and with their professors. This use of mixed media is innovative as students and faculty seek ways to best meet their goals. Students may restructure a Wiki multiple times before it manages class content in a way that is most useful, or they may adopt conventions in a synchronous MOO chat that are welcoming to students of various cultural backgrounds. They may learn that responses in quickly-moving synchronous chats must be labeled in such a way as to refer back to the correct antecedent and that they must be exceedingly concise and clear. Students may also innovate in ways that allow for more spontaneity and exchange of

tacit information than is readily apparent in distance collaboration—skills that are valuable in virtual workplaces where trust has been widely cited as the most important issue in effective teams.

Boundaries mediate the rhetoric of the virtual workplace; "their presence is significant, and they can be used deliberately to promote the success of virtual teams" (Brewer). According to Lipnack and Stamps, boundaries allow teams the opportunity for privacy, for informal communication, and for establishing authority. The enCore MOO which supports synchronous chats in the Texas Tech program is password protected, and each class has its own virtual classroom. While others with MOO passwords might wander into a room, their presence is known. Asynchronous tools such as web boards and Wikis are also password protected, and subgroups like the first PhD class may also use a private listserv. Thus boundaries partition off private working spaces as needed by students and professors.

Scholars suggest that face-to-face meetings be used to kick off new virtual teams and that face-to-face meetings take place occasionally throughout the life of a team because during face-to-face time, organizations can "promote shared mental models and the formation of interpersonal relationships" (Priest, Stagl, Klein and Salas 204). Face-to-face meetings particularly offer the opportunity to share tacit knowledge. Students enrolled in the online PhD in TCR at Texas Tech are required to attend a 2-week seminar each May until they graduate. The seminar is an intensive experience packed with coursework, socializing with other students and faculty, presentations, and evaluations. In addition, students and faculty begin to collaborate on projects and meet at conferences throughout the year.

Work in the online PhD program is a continual process of metacommunication (i.e., communicating about the program itself). Students are questioned, surveyed, and interviewed perhaps a dozen times throughout a year on how the program is delivering, whether or not the communication is working, and so on. Students, themselves, actively discuss the experience and share expectations and suggestions with one another. Their opinion is valued which further builds trust. Richard Lanham in his *Economics of Attention* considers the at/through and fluff/stuff dichotomies (158). Graduate distance education necessitates that we look at the process of education rather than through it, specifically at how it prepares students for a career in technical communication in a global workplace.

Online graduate work offers other benefits that can be leveraged once they have been recognized. For example, in classroom settings, the exchange is somewhat slower textually than it would be orally, but the records of conversations are far more extensive than those available in a face-to-face class and preserve much of the communication's context. Distance students remain a part of their local professional community while at the same time being full participants in a virtual professional community.

Distance education allows us to move beyond the Newtonian concept: "I can only be in one place at a time, and if I leave that place to go to another, I am no longer there." According to a 2002 article in *U.S. News and World Report*, the largest market for online education has turned out to be working

adults who must hold on to their jobs while seeking a degree. This is certainly true of the student profile in the online doctoral program at Texas Tech. Most of the students are employed full time; in fact, they are employed full time in education with many years of experience to their credit. They use technology in sophisticated and innovative ways because they are fully engaged as explorers for success in distributed work environments. Through their distance education, students become experienced users of the information and knowledge management technologies necessary to communication leadership in the new economy.

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Pedagogical Focus in the New Economy: Transforming Line Workers into Symbolic-Analytic Workers

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Keywords: pedagogy, theory-practice relationships, workplace literacy

Robert Reich claims that symbolic-analytic workers will be the most valued and powerful in the new economy. And Johnson-Eilola helpfully points out that technical communicators seem ideally suited to become symbolic-analytical workers, because "symbolic-analytic work mediates between the functional necessities of usability and efficiency while not losing sight of the larger rhetorical and social contexts in which users work and live"—a perfect description of a technical communicator's work as envisioned within the technical communication departments.

Unfortunately, the work that many technical communicators do in the field, filling formats with pre-selected content molded to a style-guide, turns them into little more than information-age line workers. According to Johnson-Eilola education will guide technical communicators into their new roles as symbolic-analytic workers, but his description of this new educational model is vague and lacks a clear theoretical focus even as the justification for the educational shift is compelling. The articulated view of communication theory as described by Slack, Miller, and Doak can provide

theoretical focus for this new pedagogical agenda. With this focus, technical-communication educators can mold their students into the symbolic-analytic workers that Reich and Johnson-Eilola describe, not post-industrial line workers.

This paper seeks to demonstrate why faculty members in technical communication programs should adopt this communication theory view. Further, it will explain how this theoretical shift will benefit not only technical communicators, but audiences as well, because it gives technical communicators the power to act ethically. Finally this paper will demonstrate how this view can influence pedagogy and curriculum and suggests models for instruction.

Corporate Research Support: Usability and Open-Source

Dave Yeats
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Keywords: collaboration, industry-academe relationships, open-source project

As part of my recent appointment to the faculty at Auburn University, I have been investigating many different avenues of funding a lab focused on usability research at the university. Many usability labs (such as Texas Tech University and Southern Polytechnic State University) solicit individual clients to support the ongoing mission of the research facility by paying for the consulting services of the lab and usability researchers.

However, I have been pursing a much different model for the lab at Auburn. Instead of working to find a series of individual clients who each use the lab's services for a particular product, I have been in talks with a large corporation who has expressed interest in funding a lab that would serve the open-source software community. Because the open-source community is volunteer-based with limited corporate support, there is rarely a budget for usability testing within individual open-source projects. In addition, open-source software, in many cases, lags behind proprietary software in terms of usability, largely because of a general lack of usability experts involved in the open-source community.

Enlisting the help of a corporate benefactor for open-source usability has many benefits:

Reduced overhead in attracting clients. Funding from a corporate benefactor would allow the lab to work on a pro bono basis for open-source projects interested in improving the usability of their interfaces. Rather than spending time seeking out potential clients, preparing budgets, and selling the services of the lab, clients would be seeking out the lab for its service-oriented approach to providing free usability testing for the open-source community.

Service and research in a community of interest to the technical communication field. Technical communication scholars (such as Brenton Faber, Johndan Johnson-Eilola, and Clay Spinuzzi) have published works dealing with open-source software or open systems, which reveals an interest in the activities of the open-source community. By serving such a community with usability research, technical communication scholars would have an opportunity to work more closely with members of the community and observe their communication and development practices even more closely.

Opportunities for reciprocal research initiatives. While benefactor funding may allow a university to more freely offer its usability expertise to the open-source community, it also opens doors for collaboration between the academic and corporate worlds at corporate sites. In conversations I've had with corporate representatives, it appears likely that academic usability

experts may be called upon to consult with corporate sponsors on similar research centers in other locations.

Greater freedom to share research findings. While corporate sponsorships may sometimes have negative connotations related to the limitations of proprietary intellectual property and nondisclosure agreements that limit the ways in which research can be shared with the field at large, seeking corporate funding for open-source projects helps to ensure that findings will be public and freely available.

Sponsored Entrepreneurial Communication in Technical, Professional, and Engineering Curricula: Research and Pedagogical Implications

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Keywords: entrepreneurial communication, engineering communication, pedagogy

The Enterprise Program at Michigan Tech University began as an NSF-funded initiative in 1998 in response to engineering-industry observations regarding the communication, teamwork, and multidisciplinary training of college graduates.

Now in its sixth year, with 625 enrolled students and 23 Enterprise teams, communication practices among Enterprise team members have revealed interesting and sometimes conflicting expectations among advising faculty, industry partners, and the students themselves. The speaker introduces "enterprise and entrepreneurial communication" in three contexts:

- Self-reported communication practices by students, comparing high-school and early college-career experiences, especially as they look ahead to professional and career opportunities and boundaries
- The one-unit communication course delivery problem, conceived as flexible "modules" by program administrators
- How "Enterprise communication" experiences and research possibilities compare (or not) with current discussions on research in Technical and Professional Communication

From a programmatic perspective, new forms of communication curricula such as enterprise and entrepreneurial courses are notable for several reasons, not the least of which is they are often initiatives developed outside of programs that are invited to staff them. In my talk, I discuss first the implications for staffing – often the first and most "practical" of challenges – focusing on assumptions about "time" imbedded in the credit hour. From those practical challenges, however, it is possible to explore related and more complicated relationships between emerging scholarship in entrepreneurial communication, technical communication, rhetoric, and the human values work in each of those areas might promote.

Using Marketing Research to Improve Certificate Program

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Indiana University-Purdue University Indianapolis

Keywords: research, marketing research, certificate programs, technical communication certificate

With increasing competition and decreasing enrollment at the University and School, growing our Technical Communication (TCM) Certificate program has its challenges. The TCM Certificate, in cooperation with the Indiana Chapter of the Society for Technical Communication (STC) and the Departments of English and Communication, is offered by the Technical Communication program located in the Purdue School of Engineering and Technology, one of the largest academic units at Indiana University-Purdue University Indianapolis (IUPUI). The issue I'll be discussing today is how marketing research can be used to grow our Certificate program.

All students in the School of Engineering and Technology are required to complete at least one Technical Communication (TCM) course during their academic program. TCM courses are also taken as electives by students in several other schools on campus, including Informatics, Liberal Arts, and Computer Science.

Being located in the School of Engineering and Technology definitely gives the Certificate credibility; however, only a small percentage of our Certificate enrollees come from our school. Many of our Engineering and Technology students see our TCM courses as *soft* and *not as important as their other courses*. Thus, we are surrounded by students who are not necessarily looking for an avenue to earn a credential in technical communication.

Having said that, if we are to grow the Certificate program, we need to find a way either to attract the students in our own School who may not be inclined to seek the Certificate or find a way to be more visible to students who may be more inclined outside our School, for example, the Schools of Liberal Arts, Business, Law, Medicine. The question is how do we accomplish this task?

As we began to think about ways to grow the TCM Certificate, we realized how little information (in fact, no information) we had on how well we communicate the existence of the Certificate on our own campus: in other words, do students on campus know about the Certificate and if they know about it, what do they think about it?

So last spring (2006), three graduate students in a course taught by a colleague Dr. Marj Rush Hovde conducted a research study. The research question they investigated is "How effectively is IUPUI (via the Technical Communication program) communicating information about the certificate program to students?" Using surveys and usability testing, these graduate

students studied students' perceptions and knowledge of the TCM Certificate and the usability of the TCM Certificate Web site.

Survey of Current Certificate Students and Graduates of the Certificate Program

Current students pursuing a certificate and students who already completed a certificate were surveyed. Nine of the 50 surveys were returned (a 20% rate of return). Of those returned, students reported becoming aware of the certificate program through talking with faculty and advisers, taking a related course, or visiting the Web site. One student reported hearing about the Certificate program through STC.

Seven of the 9 respondents reported having seen the Certificate brochure and felt it did an adequate job of reflecting the program. The respondents did report having some problems locating the Web site and finding the information they sought once on the site.

The majority of the respondents did not think the program's existence was communicated very effectively campus wide. They, in fact, had to seek information rather than being recruited by marketing strategies of the Certificate program.

Survey respondents recommended an aggressive, direct marketing plan to increase awareness of the program to current and incoming students at IUPUI. Here are their specific suggestions:

1. aggressively market to incoming students
    a. include brochures/flyers with materials sent/given to all new students
2. advertise in other campus Schools outside the School of Engineering & Technology
3. offer more internships in local companies
4. promote students' work through campus bulletin boards and the Certificate Web site (include testimonials from graduates in the field)
5. promote program through the IUPUI website and IUPUI e-bulletins
6. market the program as unique to IUPUI, on campus and off
7. make presentations in select classes each semester
8. put ads in the campus publications (student and otherwise)
9. place brochures around campus
10. promote the program in conjunction with Computer and Information Technology and Computer Graphics courses or offer a free introductory workshop
11. promote the program in conjunction with Web design classes

Survey of General Student Population

A second survey was given to the general IUPUI student population. Again, the survey focused on whether students were aware of the TCM certificate and what perceptions of the program they had. Participants were undergraduate students in a junior/senior integrator course, a political science course, an English W132 course, and a Speech R110 course. Three of these courses are required of all incoming students. Forty surveys were

returned out of approximately 100 (with the captive audience, the return was better).

Most students (60%) reported not knowing what technical communication is; 10% reported they had taken a technical communication class; 100% reported not knowing anyone in the Certificate program; almost 80% were unaware of the TCM Certificate; more than 50% reported not knowing where to find information about the TCM Certificate.

The conclusion is simple: according to those surveyed, most students outside of Engineering and Technology were not aware of the Certificate and did not understand what technical communication is.

Usability Testing of Web Site

The usability test of the effectiveness of the TCM Web site to provide information to potentially interested students in the Certificate also uncovered useful information. The criteria included whether the students could navigate and find information quickly, whether the site included relevant information, and whether the information on the site was clearly communicated. Thirteen English W131 students participated in the usability study.

The test showed that none of the students were able to answer all of the questions correctly in the time that was allotted, students were frustrated as they tried to find information, and several students ended up on other School home pages within the Indiana University system.

Based on the usability testing of the Certificate Web site, these recommendations were offered:

1. re-tool the Web site to aid navigation
2. ask other sites (including communication studies and English) to direct students to the main Certificate homepage
3. add a link to the main Certificate homepage on the IUPUI homepage
4. locate all Certificate information on the main Web page
5. eliminate all auxiliary sites or remove the majority of the information and direct visitors to the main page
6. work with the webmaster to make sure all searches using key words such as "technical communication certificate," "professional communication," "technical communication" are directed to the Certificate main page only and not to auxiliary pages
7. remove or redirect any non-functional links
8. reword and reorganize text on the main page to bulleted points
9. focus the text on the main page to include a broad definition of technical communication and careers a Certificate could possibly lead to
10. reevaluate the information included on the page and include only what would be interesting and needed by the target audience

Summary

To summarize, we learned a great deal from the research of these three graduate students. We learned that the students who are in the Certificate program sought information rather than being recruited. From these respondents, we also learned that we need an aggressive marketing plan.

We learned that students outside of the School of Engineering and Technology had almost no knowledge of the TCM Certificate program.

We also learned from the usability testing of the Web page that we have work to do if the information is to be accessible to our target audience.

In conclusion, I'd like to ask you these questions:

1) Have you done any marketing research on your programs, and if you have, what did you learn?

2) From your experience, what are best practices when it comes to marketing a certificate program?

3) How do we actually market our programs when we have only a few faculty members who already have full teaching, research, and service loads and no extra time and when we have no budget for marketing?

Information from students' final report in English W609 (Advanced Research Skills in Technical and Professional Writing) taught by Marj Rush Hovde.

The Branded Program: Burden or Blandishment?

Henrietta Nickels Shirk
Montana Tech of the University of Montana

Keywords: administration, branding, economics, visual thinking

One of the current practices in higher education is that of "product branding" – the process of verbally and visually differentiating colleges and universities and their academic programs in the marketplace of potential students (often referred to as customers). With the metaphorical concept of "student-as-consumer" in mind, many university administrators and admissions professionals are currently engaging in branding exercises under the direction of highly-paid marketing firms. Those who direct technical communication programs must understand not only the consumer-related practices of branding, but also how branding can offer new incentives for programmatic visibility and potential innovation.

My own university's recent branding exercise has occasioned a reflective process that highlights and explores the application, evolution, and implications of branding its market presence and its academic programs. As universities "roll-out" newly designed or revised logos and marketing slogans, those directing technical communication programs must determine what such branding exercises mean, how their approaches can create a university's "brand-new" image, and (as a consequence) "brand" our technical communication programs themselves. Do we resist such crass consumer-based changes, or do we evolve, adapt, and embrace these changes as ways for developing and marketing our programs? The potential alternative to branding is stagnation and possible fragmentation from the corporate (academic) entities that enable our existence.

Is branding a business-management fad or actually a best business practice? Gary A. Berg makes a compelling case for the connection of a business model to the practices of higher education (Lessons from the Edge: For-Profit and Nontraditional Higher Education in America, American Council on Education/Praeger Series on Higher Education, 2005). He believes that business models applied to academia can be viewed either as a threat to historical academic values and practices, or as an impetus and opportunity for change and innovation at traditional institutions. In capitalizing on the customer/student-centered approach, technical communication programs can more readily address the needs of adult students, now the majority in undergraduate education nationally (Berg, p.25). We can also begin to more readily identify our specific strengths in the marketplace of potential students, and perhaps refocus our program missions and promotional materials. Although most technical communication programs offer similar core courses, we are not identical in terms of our curricula – nor should we be identical. The practice of branding can initiate an investigation of how our programs differ from each other, and how these differences are our strengths.

The student-as-consumer metaphor has been discussed on many levels, including those relating to ethical, curricular, and student services practices. By engaging in a branding exercise, this metaphor must be analyzed and redefined in ways that will continue to inform, challenge, and develop technical communication programs. We can resist the student-as-consumer metaphor, or we can contribute to its effective application by examining and revising our current programmatic definitions. In this process of accommodating, redirecting, and redefining the student-as-consumer metaphor and our technical communication programs' assumptions about and relationships to branding, we can begin to create fresh visions for the future of our programs and of our discipline.

Hybrid Courses in Professional and Technical Writing

Catherine Gouge
West Virginia University

Keywords: curriculum, undergraduate; distance education; instructional design; instructional technology

With this paper, I am interested in exploring the pedagogical and administrative potential for and challenges of hybrid professional writing programs. Ultimately, my position is that if such a program is going to be institutionally successful--not just profitable but good for student learning and fair to instructors—it must be designed so that its structure is parallel to the principles of writing the students are expected to master. In other words, the program must be structured such that it supports (reflects and iterates), not undermines, what it is attempting to teach. The question obvious question is how to do this while still maximizing the benefits of flexibility and efficiency of the hybridity to students, instructors, and institutions.

Hybrid writing course formats have gotten a good bit of attention informally since Texas Tech reconfigured it first year composition program around such a model, which is sometimes also referred to as "blended" or "mixed-mode." (See Jeffrey Young's article in the Chronicle of Higher Education: "'Hybrid' Teaching Seeks to End the Divide Between Traditional and Online Instruction" [2002].) A number of schools have been working on developing extensive hybrid course offerings for the last five or six years. According to folks at the University of Wisconsin-Madison and the University of Central Florida—two schools with extensive offerings—and other proponents of program designs, the pedagogical promise of the hybrid model is that it makes use of the best of both onsite and online formats for instruction; and from an administrative point of view, such courses are considered to be incredibly cost efficient: making the most of limited space and labor resources. Decreasing student "seat-time" (the time students spend sitting in an onsite classroom) by half in many cases, hybrid courses allow programs to matriculate a larger number of students without needing to find more physical, on-site classroom space.

Although such courses have been around for at least half a decade now, currently--at a time when many colleges and universities are facing budget issues and record enrollments--hybrid courses seem to be becoming even more desirable alternatives to fully web-based courses and programs. And with the new legislation that passed this spring, allowing students to receive federal funding so long as they earn at least 50% of their degree hours onsite, discussing potential for and challenges of such courses and programs seems particularly timely. This is even more relevant for professional and technical writing courses at my home institution since these are the courses for which, semester after semester, we struggle to accommodate all of the students who want and need these courses to graduate (minors, majors, and certificate folks). Our demand for these courses, in other words, seems to

increasingly far exceed the number of sections we are able to staff, and even if we were able to staff more sections, we would quickly run out of classroom space in which to schedule the sections. Our scheduling coordinator, for example, must delay scheduling rooms for about ten sections each term because of insufficient physical classroom availability. As a result, blending seat-time learning with on-line learning is something our upper administration is becoming more interested in as a way of creating room for our traditional on-campus students to take the professional and technical writing courses they need for their degree program and, in some cases, courses they want to take simply to make them more marketable after graduation.

As the course designer and program coordinator for my university's fully web-based Professional Writing and Editing undergraduate minor/ concentration/ certificate program for part-time adult learners, I am positioned to help shape or stall the development of hybrid courses. Given this pivotal position, my immediate concern is that I think carefully through this before I help create something which, motivated by cost, labor, and space efficiency, undermines any of our goals for student learning.

Programmatic Potential for Hybrid Professional Writing and Editing Programs

To get a better sense of the ways in which cost and labor efficiency might motivate a writing program administrator to pursue a hybrid writing program design, it is important to understand the basic operational differences such a hybrid program makes available. The "aggregation model" of hybrid course programs reduces the required seat-time per hybrid course by scheduling multiple sections in the same seat space. In this model, three sections of a medium enrollment course combine into a single blended 'super section,'" which has the potential to "reduce direct instructional costs by 25 to 50 percent" (Dziubian 3-4). What was a traditional on-site medium enrollment class that met on Monday, Wednesday, and Friday, for example, in the blended model would instead have one third of the super section meet on a Monday, Wednesday, or a Friday and all students engaging in web-based class activities throughout the week. Some operational challenges are posed to the potential for seat-space saving when it is time to coordinate seat space for final exams or for individual section instructors who want to use the classroom two or three days a week and then not at all for a weeks at a time (instead of one a week). However, multi-section courses with centralized administration, like first year composition, are more able to take advantage of the potential for seat-space efficiency. With such a centrally administered set of courses, for example, it is easier for multiple sections to be scheduled such that one classroom can be used efficiently by multiple sections.

Course-Level Potential for Hybrid Professional Writing and Editing Programs

There may be a great deal of potential for hybrid professional writing courses. Before beginning the design of any hybrid course, however, it is important to ask some basic questions about goals for the course and how

suited they are to different delivery methods. (See "Technology Learning Center Questions" for one set of question used at the University of Wisconsin, Madison.) Regarding the particular appropriateness of hybrid courses for professional writing programs, Rachel Spilka at the University of Wisconsin-Milwaukee argues that, much more than on-site professional writing courses, hybrid courses help instructors prepare professional writing students for "the relative freedom and independence of [the] kind of thinking and writing" required of those in the field. About the fully on-site version of the course she writes,

> I was there every week. I was monitoring everything. I was there constantly to answer student questions. In short, I was there too much. My students never had the opportunity to collaborate and write without my constant presence. With so much instructor input and oversight, of course my students never quite managed to develop the level of maturity or responsibility or the kind of complex thinking and decision making that they would later be expected to demonstrate in full-time, post-graduate writing positions.

On the contrary, of the hybrid course Spilka reports that the class met for "several weeks in a row [so that she could] teach [them the] basic principles of writing. Then," she writes, "we would spend several weeks away from the classroom, so that the students could work on projects from start to finish all on their own." "I was somewhat accessible," she writes, "If the students needed questions answered, they could email or call me."

Spilka argues that the maturity and independence required of the hybrid courses supports the goals for student learning in such courses since professional writers must work very independently and must have a certain level of maturity to do so. They must, she writes, work "independently or with collaborators, without direct or constant supervision; with frequent interaction with team members at remote locations, and not just with those at their own division or company; with computers and other electronic equipment; and with the freedom to make important decisions about project and time management, such as determining when and how to interact with others, how to collaborate with irresponsible writing partners, how to resolve unexpected problems that arise, and how to meet deadlines despite mishaps and obstacles." The hybrid version of professional writing she taught was uniquely positioned to help students practice the skills required of such professional activity because "the work was done mostly online, [and therefore] the students developed many skills that they would need to use, later on, in workplace jobs. They became much more responsible for solving their own problems," she writes, "and I encouraged that, because I wanted them to work on their own to the fullest extent possible without my help."

Spilka's argument and detailed list of benefits make a great deal of sense in terms of requiring that students in a professional writing course practice the skills necessary to succeed in the workplace in a course on workplace communication. However, one might debate the sink-or-swim logic since courses which are designed based on the premise that success in course depends upon having the skills the course is designed teach is somewhat tricky. On the one hand, successful students will be those who have the skills

necessary in the modern workplace. On the other, such a course may end up having more of a gate-keeping function than a pedagogical one: those who already posses the necessary skills or are close to possessing them, will make it; those who need more help developing them, will likely fail or drop the course.

Programmatic Challenges of Hybrid Course's for Professional Writing Programs

The operational challenges of coordinating classrooms for hybrid courses will add a new and significant element of organization and management—in particular, 1) when scheduling class times, calls location, and final exams and 2) when enrolling students. There has been some discussion of cost considerations of creating virtual instructional spaces. Christopher Dede of George Mason University argued in the late 90's that while courses which use a combination of physical and virtual spaces for class instruction certainly have the potential to generate revenue, constructing and maintaining the virtual spaces is certainly not free: "a college—if it used space efficiently—could enroll one-third more students by holding one-forth of each course's class meeting on lone, rather than in the classroom. The extra revenue in tuition can more than pay for the cost of the technology" (Depew 6 of 19). Reporting on the pioneering institutionalization of blended learning at the University of Central Florida, Dziubian et all echo this slightly more moderate perspective on the financial considerations that blended learning models pose to administrators: "The university must weigh the costs of faculty and student support versus the opportunity to expand capacity while reducing the demands on the brick-and-mortar infrastructure" (10). They also note that administrators must consider the time intensive nature of teaching blended courses, especially in what they call the "conversion phase" during which instructors are re-designing teaching methods and courses to work with a blended course model. All of these "opportunity costs of faculty involvement" need to be seriously considered if blended programs are going to work at any given institution

Perhaps the greatest challenge to institutions of such programs will be financial: the costs of course redesign and the development of materials will include not only one time up-front, start-up money and faculty time, but also maintenance as technologies changes and new programs become available. There have been many attempts to develop and equation to quantify these costs, but none yet exists as a standard to get a clear picture. There has been much speculation, however, that in spite of the seat-saving ability of such programs, to date, the cost-saving benefits are more hopeful than realized.

Course-level Challenges of Hybrid Courses for Professional Writing Programs

The learning curve for students and faculty will vary, in terms of how long it takes each to become proficient students and instructors in mixed-mode courses, but a learning curve will exist nonetheless, and should be carefully accommodated. Jack Johnson at the University of Wisconsin-Milwaukee

(http://www.uwsa.edu/ttt/articles/jjohnson.htm) identified three larger categories of areas for concern after he taught a hybrid course in 2002. The first issue he identified is accessibility to course content. Choosing an appropriate level of minimum technological adeptness required to take course with an online component so that you can make use of effective tools for online learning must be weighed against your student population's technical skills and capabilities. Furthermore, many of our students at WVU are parents, employees, and/or spouses, which means that they have other important commitments. Missing even a couple of lectures because of other responsibilities can be more significant if there are fewer offered. A second issue of important is effectiveness of the larger lecture instruction for writing courses. Many hybrid courses have their onsite course meetings include more students than the average onsite writing course cap (22-25). With more students needing to ask questions, instructors may find that there is less time to explain the concepts and principles and still leave adequate time for face-to-face practice and discussion. The final issue Johnson discusses is connectivity between students and instructors. He writes of this that he

> would walk into the lecture hall, deliver a lecture, answer a few questions, and then walk back to [his] office. Once in a while a student dropped by my office to ask a question, but, for the most part, my experience was reminiscent of the Maytag repairman. To overcome this problem, I held small, informal discussion groups with students at prescheduled times during the week. However, competing time demands prevented many of these students from taking advantage of the small groups. Once again, the issue of accessibility reared its ugly head. Regardless of how I sliced the pie, the facts remained the same: there were three hundred of them and one of me, and we had limited time to interact. Odds were I would probably not get to know my students individually. Nor was it likely they would have the opportunity to know me as more than a conduit for conveying information.

These three issues are important to successful courses and program, whether those courses are on-site or online. The stakes rise, however, once we start moving courses online—in whole or in part—since doing so will change the face of institutions of higher learning, figuratively and literally as seat-space becomes unhinged as the "place" where learning is presumed to take place.

Conclusion

The most recent studies published by the Sloan Consortium and Pew Foundation indicate that mixing online with onsite coursework is becoming increasingly prevalent at institutions of higher learning. In order to develop hybrid professional writing programs responsibly, we need to make sure that we think carefully about why we are moving them online: For pedagogical reasons? For financial reasons? If we move professional writing courses online for both pedagogical and financial reasons, which will take priority in policy decisions? Who will be eligible to take the classes? Will class size

increase, decrease or stay the same? Who will manage and update the online materials and how will that person or persons be compensated? Who will train instructors new to teaching part online and part onsite? How will students be prepared for this transition into hybrid courses? Or, will they be expected to sink or swim? How will we evaluate the effectiveness of these courses and programs: Quantitatively? Qualitatively? These are some of the questions I think we need to consider before we begin the work to move professional writing programs online—in whole or in part. Developed thoughtfully, they may indeed be a good fit for both student learning and institutions. But they are not likely to be a panacea for either.

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Internship Requirements in 4-Year Programs: How We Compare Among Ourselves and Across Other Applied Fields

Gerald Savage
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Keywords: internships, research, certification, professionalization

Overview of Panel Topic

In a study of the role of internships and their equivalents in several applied fields, we surveyed approximately 120 undergraduate college and university programs in technical communication. We collected data on internship requirements to answer four questions: 1) Are internships offered as a way to fulfill program credit hour requirements? 2) If internships are offered, are they required or elective? 3) What are the minimum/maximum credit hours allowed toward fulfillment of program requirements? 4) How many hours of work are required in the internship per credit hour?

The second part of the study investigates internship or equivalent requirements in several applied fields in which programs are certified by state or national boards or organizations. Fields investigated included education, nursing, social work, and paralegals. Technical communication program requirements will be presented in comparison to the requirements of certified programs in the other applied fields we investigated.

In our panel, Marcea Seible will discuss the methodology and present the data from the study. Jerry Savage will discuss the potential value of the study and the implications for programs and for the field as a whole.

Discussion of Methodology and Findings of the Study

In this presentation, we share our data concerning internship requirements of 4-year programs in technical communication. We began our data collection knowing that disparities exist among technical communication programs and internship requirements.

Our study was guided by the following questions:

1) Are internships offered as a way to fulfill program credit hour requirements?
2) If internships are offered, are they required or elective?
3) What are minimum/maximum credit hours allowed toward fulfillment of program requirements?
4) How many hours of work are required in the internship per credit hour?
5) What is the total number of internship hours required?

Ultimately, we hope our research will provide insight into how technical communication programs compare and that the results will contribute to the ongoing debate about certification programs and the status of technical communication as a profession.

Methodology

We used data from the ATTW and STC listings for 4-year programs, a total of 118 listings after removing duplicates. We recognize that a number of additional programs exist that are not represented in the ATTW and STC program listings. We judged that the majority of programs that maintain development in the field, as well as in research and practice, are aware of leading professional organizations such as the ATTW and STC and, therefore, associate themselves with these two organizations. Thus, we judged the programs on these lists to be representative of technical communication programs as a whole.

We narrowed our search by focusing only on 4-year programs. From the initial list, this left 87 programs, 69 from which we have received data at this time. Four of these programs, however, offer two 4-year degrees in technical communication, each with different internship criteria. Therefore, to account for this, we listed them as separate programs, making our total 91 programs with completed data for 73.

To find the answers to our questions, we relied on program websites for information or emailed/telephoned directors of programs, internship coordinators, or even college deans. We collected the following data for each program:

- type of program
- degree offered
- whether an internship was offered
- whether an internship was required
- credits allowed
- hours of work required per credit hour
- total number of internship work hours required

Results (See Table 1)

Additional Data Analysis / Conclusion

The data we have presented today is part of a larger study we are doing, which includes comparison of internship requirements in technical communication with requirements in other applied fields. Our findings concerning other fields are preliminary, and we are not ready to discuss specific data at this point.

It will be surprising to no one that, in established professions in which certification is required for practice, academic programs must meet clearly defined standards for internships or their equivalent. Such standards are set either at the state level or by national certification boards governed by the professions themselves. Although standards for internships in such fields

include a number of factors and practices, one constant standard is a minimum number of on-site hours. Clearly, the technical communication field has no such standard at this point.

Data important to consider:

- About 95% of the programs we looked at provide internships.
- Of the programs offering internships, only 49% require internships.
- 46% of internship programs allow variable numbers of hours of internship to apply toward fulfillment of graduation requirements. This fact in itself does not seem problematic; however, among those programs, the difference between minimum and maximum hours applicable for graduation credit varies greatly, ranging from a difference of 60 hours up to 750.
- Of programs offering internships, 48% have a minimum credit hour requirement in the range of 100 to 200 credit hours.

Implications of Technical Communication Internship Standards for Programs and Professionalization

The argument for setting clear standards for internships is not difficult to make if the field is inclined to move toward certification for practitioners. The question of whether we should make such a move is still far from settled. However, a number of problems may prevent the field from settling on standards even for internships.

First, the question of whether internships should be elective or required needs to consider the availability of appropriate internships in the program area. Where internships are required programs generally should expect to have established internship arrangements with organizations that can be counted on to provide acceptable experiences. This is not necessarily the case in many locations. It is often necessary to refer students to a number of different organizations in order to ensure placements for all candidates. However, this can involve difficulties in defining comparable criteria for acceptable internships. Moreover, for programs situated in small towns far from major urban areas, it may not be possible to place interns locally, which imposes a considerable hardship on students. A potential exists in such cases that students may not be able to meet graduation requirements or may be delayed in graduating because they have no access to an internship near the university.

Second, we saw evidence, directly or indirectly, in some of our data that programs have to contend with resistance from faculty and/or university administrators to the idea of giving academic credit for internships. This issue appears to be a factor in some cases where a program requires an extraordinary number of hours of work for little academic credit, or where the internship entails not only workplace experience but classroom work, as well.

Third, another resistance factor may be operating in programs where the job of coordinating internships is extra duty; that is, where there is no course release for internship coordinators. Such conditions work against the

possibility of having well-managed programs, consistent standards within programs, or having experienced coordinators who are willing to stay in that role. Internship coordinators who work without release time for their duties are unlikely to be familiar with theories of experiential and cooperative learning or to regard internships as an area of scholarship. In other research in this area I have found that internship program coordinators generally have little knowledge of legal concerns relating to internships, an issue that takes on great importance in programs where internships are required.

These are just a few difficulties standing in the way of speedy solutions to defining standards for internships. Nevertheless, we believe that high quality internships are an important part of students' preparation for professional practice and that the field stands to benefit from continuing engagement with the issues we are raising in this study.

Implications, Conclusions, Recommendations

This study may be useful in several ways. First, on the ATTW listserv in recent years the question has been asked, what are reasonable internship hour per credit hour requirements. Although listerv responses and discussion were interesting and no doubt somewhat helpful, they represented only a small fraction of all US programs. Many people we queried for information about their internship programs expressed great interest in our findings, and a surprising number indicated that they did not know what thinking determined the requirements they had. Some indicated that they felt they should revise their requirements after our request for information caused them to look closely at the data they provided us. This suggests that many program administrators are interested in how their programs compare with others. Such a comparison responds to such concerns as the intrinsic desire to offer quality programs, the need of new programs for guidance in program development, and the importance of being able to demonstrate program strength in program assessments and accreditation reviews.

The study also has potential value in the ongoing debate in our field about certification of programs. Comparison of our internship practices with those of other fields for which certification of programs is required may be helpful in understanding the implications of certification. Inevitably, our study raises as many questions as it answers, indicating some important directions for further research.

Finally, the study contributes to questions about the status of technical communication as a profession. It provides some concrete terms in which we can discuss the merits and problems of establishing professional status for our field.

Table 1: Internship requirements in 4-year programs

Total Programs Researched	Programs with Completed Data	Internships Required / Elective	Credits Allowed per Internship	Hours Per Credit Hour	Total Hours Required
91	73 (93%)	34 Required (49%) 35 Elective (48%)	0-30 Majority of Programs specify 3 credit hours	Range: 15-350 per credit hour. Midrange: 40-60 hours per credit hour	Range: 30-1200 Midrange: 100-200 Of the 34 required internships, 21 (62%) have fixed number of hours with no minimum/maximum range. Of the 35 counted as electives, 16 (47%) have a fixed number of hours and credits with no minimum/maximum range.

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- Of programs offering internships, 48% have a minimum credit hour requirement in the range of 100 to 200 credit hours.

Déjà vu: Certification Once Again

Kenneth T. Rainey
Southern Polytechnic State University

Keywords: assessment, certification, program review

Once again the Society for Technical Communication is embarking on a study of certification. Paula Berger, the current STC President has appointed a committee led by Jonathan Baker of the Boston Chapter and Dan Wise of the Birmingham Chapter. I am a member of that committee. In this presentation, I will sketch the history of the Society's involvement with certification as a background to the current effort. I will finally describe—to the extent information is available—what the Society's current effort will pursue.

STC has made numerous efforts in the area of certification in its history.

- The first formal study began in 1981 under Robert DiGiovanni. In 1982, he conducted a survey that indicated wide support for a certification program (Malcolm, "On Certifying"). In May of 1982, Andrew Malcolm became manager of the ad hoc Committee on Certification that examined certification programs of other professional groups and developed a certification plan (Ad hoc Committee). Even though the certification program was approved by a majority of the members, the program was stopped due to financial concerns (Malcolm, "On Certifying").
- The second study of certification began under Shirley Andersen, Assistant to the President (AP) for Professional Development in 1993. Andersen and Terry Skelton, Manager, STC Professionalism Committee, published an editorial in Technical Communication outlining key criteria common to professions and applied these criteria to the technical communication profession (Skelton and Andersen 205–206)
- By 1995, a Certification Issues Committee, headed by Chris Velotta, was charged to research the need for a certification program, and what STC's role might be if one were instituted. The Board approved a RFP for a feasibility study in 1996, and the study was conducted in the following years. The study was to evaluate the current market strength, legal liabilities, and costs of a certification program.
- In 1996, then STC President Saul Carliner established a Job Competencies Committee, which was headed by Peter Daniels. The charge of the committee was to identify the job competencies required for the profession of technical communicator, irrespective of the industry in which the person works, or non-industry specific competencies.
- In 1997, Lance Gelein, then President of STC, reconstituted the Core Competencies Committee under the leadership of Kenneth Rainey, charging the committee to complete the work begun by the Job Competencies Committee

- The effort halted in 1999, with the decision of the Board to act as subject-matter experts in any future efforts to update the study made by the NorthWest Center for Emerging Technologies
- Finally, the Society also cooperated in some measure with a survey mounted by a commercial enterprise known as Applied Skills & Knowledge, Inc., in 2003.

So the issues—as far as the Society for Technical Communication goes—remain exactly where they were in 1985. And the issues for STC have revolved around the practical and legal implications for the Society rather than around the validity of the concept for the profession.

Now, the Society is embarking on another effort to study the issue. This time, it appears that a more measured and, possibly realistic, approach will be taken. As a first step, the Society's Conference Program Committee is redesigning the Annual Conference so that is will offer a series of workshops on professional topics and award certificates to those who complete the workshops. I hope to have more details before the presentation.

Incorporating Authentic Assessment in Technical Communication Programs

Han Yu
Illinois State University

Keywords: assessment, instructional design, new economy, workplace

With higher education's increasing emphases on accountability, program administrators seek to introduce student learning outcomes into program review. In this presentation, I describe how authentic assessment can be incorporated into such reviews and other program efforts to measure and promote applications of learning as students transition into social and workplace contexts.

This incorporation is consistent with and facilitates one of technical communication program objectives: to prepare students for workplace communication tasks. Programs have developed curricula to address communication skills used in workplaces and advocated writing assignments with real-life applications; however, we need to understand how assessment conducted in technical communication curricula relates to workplace realities. Otherwise, assessment innovation will remain largely a pedagogical effort of individual teachers when it needs to be a program effort to bridge education with real-life performance and to integrate assessment within learning processes.

Authentic assessment helps to address these issues. Authentic assessment entails longitudinal, contextualized, and collaborative assessment that emphasizes real-life contexts. In my discussion, I use the concept to describe writing assessment that integrates common classroom methods (multiple drafts, pre-determined criteria, instructors as primary assessors, and peer responding) with workplace practices (performance reviews, informal reviews of low-stake tasks, multiple assessors, and intensive peer assessment).

As the new economy reshapes workplace practices, authentic assessment is particularly relevant. In terms of team roles/responsibilities, with the new economy's emphasis on information and flattened corporate hierarchies, project team members routinely examine each others' work for knowledge sharing and quality control, and even evaluate each other during performance reviews, whereas in classrooms, we rely primarily on a limited number of group projects and peer responding to teach collaboration. Authentic assessment helps to address theses gaps by, for example, having students collaboratively develop assessment instruments (group contracts and individualized writing criteria) and conduct contextualized peer assessment with these instruments. These methods are relevant to workplace practices and also an inherent part of learning: they develop students' collaborative and symbolic-analytic skills essential for success in the new economy.

In my presentation, I recommend technical communication programs use the authentic assessment pedagogy as a standard strategy or advocate it as

a best practice. I argue program support (curriculum development, teacher training in authentic assessment, and facilitation of liaisons with industry organizations) help individual teachers implement authentic assessment. Program support also creates consistency across curricula in how classes teach and assess writing to collectively reach intended objectives. Emphasizing accountability and raising program visibility through industry liaisons, program incorporation of authentic assessment helps technical communication gain full disciplinary status in the university and professional status in industry. These efforts are also value-add activities that create portals between the university and industry, leading to potential business-education partnership, informed career advisement from teachers, and better job placement for students.

Minutes of the Business Meeting

CPTSC 33rd Annual Meeting
14 October 2006
San Francisco State University, San Francisco, CA, USA

Meeting called to order at 8:00 a.m. with 37 members in attendance.

1. **Announcements**: Lu Rehling reviewed excursion plans beginning after business meeting adjourns.

2. **Approval request: Kelli** Cargile Cook distributed minutes of the 2005 business meeting. Membership reviewed minutes. Michelle Eble made motion to approve minutes; Tracy Bridgeford seconded. Motion carried.

3. **Standing reports**

   a. ***Secretary*** (Kelli Cargile Cook): no additional report

   b. ***Treasurer*** (Karen Schnakenberg): Karen Schnakenberg distributed 2006 treasurer's report and reported on financial standing. She indicated that she would be investigating possibilities for investing part of balance in an interest-bearing account.

   c. ***Publications*** (Jeff Grabill for Jim Dubinsky): Jeff Grabill reported that 2004 proceedings are completed and available on the CPTSC website. He indicated that the 2005 proceedings lacked a few abstracts but would be ready soon. Jeff also reported that Jim Dubinsky had hired an editorial assistant to help expedite proceedings publication, and he noted that future abstracts would be submitted through the CPTSC website, which should also make it easier to produce the proceedings.

   d. ***Program reviews*** (Kirk St. Amant): No formal report, although Jeff Grabill indicated that the committee continues to work on program review procedures and that two committee members were developing a special issue of TCQ on program review.

   e. ***Web site*** (Tracy Bridgeford): Tracy Bridgeford reported that the website continues to be updated and that she will continue to post job ads through the fall hiring season. She indicated that she will be working this year to locate and upload missing information and to reshape the website architecture. By next year, she hopes to be able to post posters from the conference on the website, post meeting minutes, and provide conference attendees with communication poster design minutes.

f. ***Distinguished service award*** (Bruce Maylath): Bruce Maylath reported that Debbie Andrews, Katherine Staples, and Ken Rainey comprised the DSA committee this year. They chose Karen Schnakenberg as the DSA award winner. She was recognized at the reception on Thursday.

g. Research Grants committee (Kelli Cargile Cook)—Kelli Cargile Cook reported that the research grants committee had nine proposals submitted for funding. Readers selected three winners using a blind-review process. She stated that a new research grant committee chair would be appointed this fall and that the chair would solicit readers/volunteers from the membership to select proposals for next year's competition.

h. Election report (Bruce Maylath): Bruce Maylath distributed the 2006-2008 election report to the membership. He described the election process and noted that electronic election participation had increased by three times over the 2004 election. Bruce congratulated the winners and thanked everyone who agreed to be nominated for office.

4. Other Reports

a. ***STC (Sandi Harner):*** Sandra Harner announced that she was no longer on the STC board. She was asked whether STC was moving away from academic to focus more completely on practitioner issues. She responded that STC appears to be moving in that direction. STC has plans to modify the conference, which will likely result in higher conference costs. She identified Hilary Hart as the new academic liaison, but noted that Hart does not sit on the board. Research grants are still headed by Rachel Spilka, and Tommy Barker is heading the academic community listserv.

b. ***CPTSC/ATTW Roundtable*** (Bruce Maylath): no report

c. ***ATTW***: no report

d. ***ACM SigDoc***: Jeff Grabill reported that the next meeting will be in El Paso in 2007 and Clay Spinuzzi will serve as program chair.

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

f. ***Consortium for the Study of Engineering Communication:*** Linda Driskill reported that the consortium no longer exists but noted that problems with NSF recognition of technical communication still exist. Jeff Grabill concurred that federal funding was difficult to acquire for this reason.

g. ***CPTSC Roundtable/Forum 2007—***Bruce Maylath reported that Forum would be moved from 2007 to 2008, possibly in the Netherlands. He will coordinate information and send an announcement to the listserv when more information is available. Several individuals indicated that they would assist Bruce with planning, if he needed help: Tracy Bridgeford, Michael Salvo, Michelle Eble, Jennifer Bowie, and Kelli Cargile Cook.

5. **Old Business**

a. ***Committee for Diversity follow-up*** (Jef Grabill for Jerry Savage): Jeff Grabill reported that Jerry Savage is drafting a diversity plan, following up recommendations from the diversity committee. Discussion followed regarding diversity issues, including suggestions that the research grant CFP call for research in this area, that we extend programmatic outreach to historically black or Hispanic-serving institutions, like University of Houston Downtown, and that CPTSC formally recognize students who might pursue graduate students and recruit them. Bill Williamson suggested that the topic be included in the Administrator's Roundtable next year.

b. ***Joint CPTSC/ATTW statement on hiring and shared meetings*** (Jeff Grabill): Jeff reported that he had meet with ATTW executive officers and there was no interest or consensus in either a hiring statement or shared meetings. CPTSC and ATTW officers will continue to meet to discuss relevant issues and shared topics of concern.

6. **New Business**

a. ***Election on amendment to constitution:*** Bruce Maylath oversaw the election process (see attached amendment change). The membership voted unanimously in favor of adding a fourth member-at-large.
b. ***Election of fourth member-at-large:*** Bruce Maylath suggested that the fourth place member-at-large be appointed. As president, Jeff Grabill is allowed to appoint a new member-at-large or hold an election. Jeff entertained a motion to elect a fourth member-at large. Bruce Maylath made the motion, and Tracy Bridgeford seconded. Michelle Eble called for the question; Elizabeth Pass seconded. Motion carried. Jeff Grabill opened nominations for fourth member-at-large position.

   Bruce Maylath nominated Kathryn Northcut. Carolyn Rude seconded nomination. Michael Salvo nominated Russell Willerton. Jennifer Bowie seconded nomination. Bill Williamson nominated Rick Mott. Bruce Maylath seconded nomination. Michael Martin moved that nominations close. Michael Salvo seconded.

The election was conducted with secret ballots, and Kathryn Northcut was elected with 24 votes over 10 votes for Mott and 3 votes for Willerton.

c. ***Introduction of new officers*** (Jeff Grabill): Jeff Grabill recognized the new officers, recognized Lu Rehling for her work as local arrangements chair and recognized Nancy Coppola for her work as program chair.

d. ***Meeting sites*** (Minnesota, 2008; 2009 open; Auburn, 2010) : Jeff Grabill discussed the location of the 2008 meeting and indicated that Auburn will seek 2010 conference. The 2009 conference is still open.

e. ***Connexions***—Linda Driskill discussion the Connexions initiative at Rice University, and requested a link from CTPSC website to Connexions. The membership discussed the possibility of inviting Connexion to the 2007 conference, as a vendor.

f. Vote on 2007 meeting site—East Carolina—Jeff Grabill called for a vote on the 2007 meeting in East Carolina. Michael Martin moved that the conference be held at East Carolina University in 2007. Lu Rehling seconded the motion. The membership approved the motion.

g. Post-conference evaluation—Jeff Grabill and Lu Rehling reminded the membership to complete the post-conference evaluation on Survey Monday.

7. **Invitation to 2007 annual meeting, hosted by East Carolina University** (Michelle Eble***)—***Michelle Eble extended East Carolina University's invitation to the 2007 annual meeting and conference.

Adjournment: Michael Martin moved for adjournment. Tracy Bridgeford seconded. Meeting was adjourned at 11:00 a.m.

Respectfully submitted
Kelli Cargile Cook, Secretary, CPTSC