



Council on Programs in
Technical and Scientific
Communication



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PRESENTATION ABSTRACTS

CPTSC 2006

COUNCIL ON PROGRAMS IN TECHNICAL AND SCIENTIFIC COMMUNICATION

33RD ANNUAL CONFERENCE

"MEETING CHALLENGES OF THE NEW ECONOMY"

Information Development in a Flat World

JoAnn Hackos

President

Comtech Services, Inc.

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.

Join me in an examination of the latest requirements for successful information-development careers.

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

Sam Dragga

Texas Tech University

Laura Gurak

University of Minnesota

Carolyn Miller

North Carolina State
University

James P. Zappen

Rensselaer Polytechnic
Institute

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.

The Academic Job Market in Technical Communication, 2005-2006

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English Department

Utah State University

Over the past decade, development of new academic programs in technical communication and expansion of existing programs have increased the demand for faculty with credentials in professional and technical communication. However, the number of graduates emerging from degree programs in the field 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 complicates selection.

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 is to develop data on the academic job market. This research, being 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 Academic Job Market in Technical Communication 2005-2006” is the second part of a longitudinal study of the academic job market in technical communication. The project originally developed from a series of questions we had about the academic market in our field. On listservs and at national conferences for technical communicators, questions about the job market are perennially asked:

- 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?

To answer these questions, we conducted our first survey of the academic job market in 2002-2003. This study provided us with a baseline for understanding the academic job market in the field. Our current research will revisit the academic market in 2005-2006 to identify possible trends and changes.

In our CPTSC presentation, we will provide participants with preliminary findings from our survey of the 2005-2006 job market. We will report on the number of positions advertised, the number filled, and the number of closed or unfilled searches. We will also report preliminary trends and changes between the first survey in 2002-2003 and the current survey. At the end of presentation, we will ask participants to provide us with additional questions that they would like to see answered in our final published report.

CPTSC Assessment: A Community Research Model

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Norbert Elliot

Department of Humanities

**New Jersey Institute of
Technology (NJIT)**

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

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During the 15th annual meeting of CPTSC in 1988, the workshop group on certificate programs recommended that the council perform a nationwide survey to “gather information on the context of existing Certificate programs.” While characterizations of certificate program curricula have been offered in detailed studies by both Sherry Burgus Little and myself, the field currently lacks firm data on the professional status of certificate program instructors. This paper will discuss my upcoming CPTSC-supported research designed to address this longstanding informational void. And

while the proposed research is still in progress, this paper will also share some preliminary results regarding the curricular makeup of certificate programs.

In the proposed study, I intend to survey certificate program administrators to determine their instructors’ status as full time, part-time (adjunct), tenure-track, or non-tenure track employees. I will also collect data regarding instructors’ qualifications, specializations, and work experience. Finally, I hope to gather other valuable 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 programs, and the relationship of programs to local industry.

This research is circumscribed by a number of vital issues and important questions:

- What is known, and what needs to be known, about technical communication certificate programs?
- Do certificate programs evidence a shift toward vocationalism, and does that matter?
- What are the implications of certificate programs for academy/industry collaboration?
- What are the implications of certificate programs for professionalizing the field?
- What curricular and theoretical models can help us to situate and to make sense of certificate program

Preparing Students Across the Technical Communication Program for a Global Economy

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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 e-mail, 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 e-mail, 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

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Department of English

East Carolina University

Debby Andrews

Department of English

University of Delaware

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

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EILA (Etudes Interculturelles de Langues Appliquées – Intercultural Applied Languages Studies)

Université Paris 7

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 3 weeks of classes at the university and 3 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 explore during the discussion 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, that 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, and 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 subsidiary to hire the student in the US, to 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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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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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 Departments 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 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

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This paper argues that online collaborative work groups offer outstanding opportunities for perspective transformation and for the fostering of what could be referred to as 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) result in more emotionally intelligent and socially skillful people who welcome perspectives that may fall

outside of those held by the dominant culture. Thus, students learn to more creatively complete projects and solve problems in school and on the job.

Although cyberspace poses some unique challenges to the social cohesion of collaborators, which this paper discusses in detail, it also offers the distance individuals need to critically reflect on their communications with others. Students can learn to critically reflect on archived communications in what Schon (1983) referred to as “reflection on action.” In less than successful communications, a student in dialogue with someone else, a peer 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 Mezirow (2000, p. 22) outlines. Students can also reflect on what went well, particularly on how all perspectives were shared, how conflict was kept constructive rather than destructive, etc.

A section of the paper discusses strategies that educators and trainers can use to promote this kind of critical reflection in their students who collaborate in cyberspace by reviewing in detail literature surrounding online group dynamics. This section will discuss 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 will be 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. Besides the relevant literature, data from eight online collaborative groups will be used to illustrate cohesive, well functioning groups in which group members critically reflect on their communications and also to illustrate dysfunctional groups in which individuals do not hold themselves accountable for the failure of the collaborative effort. This section will also discuss the perspective transformations of several of the collaborators.

This paper will be of great value to educators who want to use cyberspace to begin developing in their students the ability to critically reflect on their collaborations and communications.

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

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Content Management Systems (CMSs) have begun and will continue to change profoundly our responsibilities as 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.

Globalization and Online Teamwork

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Technology

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 Towards Organizational Memory, Community, & Identity

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Georgia State University

The blogosphere doubles in size every 6 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 will 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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MA/MS Students as TA's: Current Practice & Challenges

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Donna Niday

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Iowa State University

Don Payne

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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.

The presentation provides a brief overview 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

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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

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One aspect of teaching/ learning in TPC programs involves exploring the learning functions and potentials of various discourse genres. And that exploring, according to Gerald Savage, leads to questions such as “Do different kinds of courses and subjects call for different discourse genres? If so, are the subject-specific discourse genres necessary because of the way that discourse communities work, i.e., because of conventions that have emerged in relation to a particular discipline and its modes of practice? [In academic contexts] what are the necessary relationships of classroom discourse to the

disciplinary practice discourse genres, if any?”

This presentation focuses on technical and professional communication programs and faculty re-thinking the discourse genre of discussion ... a reflective approach to the subject. Most faculty include some type of discussion whether teaching f2f, hybrid, or online classes. We maintain the value of discussion, for example, as a heuristic for "teaching" critical thinking abilities and possibly creativity.

Students need to learn how to discuss through reflection and suitable activities and, just as important, to discuss in relation to discourse genres of their intended work environment. For example, Catherine Smith, who teaches courses covering writing in the public interest states, "discussion is more productive when it's conducted within an identifiable framework or genre of practice, e.g. simulated public meetings, field interviews, even 'class discussion.' 'Topic' or 'question for discussion' (probably the most common heuristic) works as a prompt because participants understand that they are in a framework/genre, i.e. 'discussion for purposes of this course.' Framing discussion in a (semi)-familiar oral genre is a useful heuristic. For my courses, examples would come mainly from my simulated hearings in the policy communication course and rehearsal interviews in the research methods course. Difficulties students encounter include confusion of objectives, or getting so involved in rituals of the role playing process that the product suffers (e.g. students learn to testify or interview, but don't absorb the general dynamics of interaction for information giving and gathering)."

Faculty and programs in technical and professional communication are faced with not only articulating a critical pedagogy for teaching discussion as a reflective process appropriate for a variety of work environments, but also for using it as part of a variety of learning environments (f2f, hybrid, or online).

If re-thinking discussion as a reflective pedagogy helps increase the effectiveness of discussion as a part of student-centered learning environments for program content, that approach achieves an objective of value in and of itself. When discussing this topic in relationship to programmatic concerns, however, we must remember, as Gerald Savage reminds us, that programs must “show measurable results for our investments in teaching technologies, faculty hires, professional development, and other facilities intended to support learning ... [W]hat learning practices do our pedagogies foster and what learning outcomes can we demonstrate from these practices?”

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

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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 programs in technical communication 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 re-evaluate 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 5 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.

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

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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 techcomm 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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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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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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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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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 (2005) argue that we need to train technical communicators to critically analyze technology from an organizational perspective so that they can sell ideas to management (p. 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.

Reference

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Technological Readiness: How to Make It

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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 complaints, “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, multimedia 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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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 3D 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?

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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, Ph.D.s 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 NCEC 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

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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 practice 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 in the Goffmanian sense. 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

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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, 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

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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

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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]. The new report, "Hate Crimes Reported by Victims and Police," found an average annual total of 191,000 hate crimes.

In April, 2005, Kenneth Stern, a leading hate expert with the Anti-Defamation League (ADL) outlined the need for an interdisciplinary field of Hate Studies. 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. 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 identify. 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. Academics could define areas of research and collaborate to solve the varied and complex issues involving hate.

Given our expertise in rhetoric, ethics, visual communication, psychology, technology, usability, education and intercultural issues this paper proposes that technical communication programs should educate students about hate, 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 them 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 inter-group attitudes? How 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?

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

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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 1990’s, 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

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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

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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 which 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

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Stephany Filimon**

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Technology

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

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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

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Technical Communication

Metropolitan State College
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Should TechComm 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

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North Carolina State
University

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

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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

Department of English

Northern Illinois University

Laurie A. Johnson

*Department of Rhetoric and
Scientific and Technical
Communication*

University of Minnesota

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

English Department

Clemson University

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 light-weight, moveable tables and chairs, interactive and traditional whiteboards, tackboards, 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. 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 I will describe how some 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 us to improve the quality and innovativeness of our program.

Persuasion in the Contemporary Workplace: Proposals Reconsidered

Mark Zachry

Technical Communication

University of Washington

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

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Metropolitan State
University

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

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Department of English

University of Maine

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 in all four years of an engineering curriculum. The initial design and core principles of the ECP were presented at the 2003 CPTSC meeting at Clarkson University.

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 crew 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 four ECP courses. This presentation is the cautiously optimistic story of how there will be other cohorts to follow.

Fostering Professionalism and Community Awareness: Launching an Undergraduate Scholarly Journal

W. J. Williamson

Department of English

Saginaw Valley State
University

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

Patty Sotirin

Humanities Department

Michigan Technological
University

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

Diane Allen

*Instructor and Technical Writing
Coordinator*

Midland College

Emil Towner

*Senior Writer
Marketing Communications*

Wolters Kluwer
Financial Services

Pamela Estes Brewer

*Department of English &
Philosophy*

Murray State University

Kendall Kelly

Lecturer, English Department

Texas State University—
San Marcos

All panelists are also

*Ph.D. Students, Technical
Communication and Rhetoric*

Texas Tech University

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

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

Emil Towner

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

Pam Estes Brewer

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 a variety of 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 for globalized work and their roles as communication leaders in virtual teams.

In this presentation, I will discuss how work in the online doctoral program in Technical Communication and Rhetoric at Texas Tech University offers students 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. Students may restructure a Wiki multiple times before it manages class content in a way that is most useful. 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.

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. 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.

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

Kendall Kelly

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
Department of English

 Auburn University

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 pursuing 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

Michael R. Moore

Department of Humanities

Michigan Technological
University

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

Wanda L. Worley

Technical Communication

Purdue School of
Engineering and
Technology

Indiana University-Purdue
University Indianapolis

With increasing competition and decreasing enrollment at the University and School levels, growing our Technical Communication (TCM) Certificate program has its challenges.

The TCM Certificate, in cooperation with the Society for Technical Communication and the Departments of English and Communication, is offered by the Technical Communication program located in the Purdue School of Engineering & Technology, one of the largest academic units at Indiana University-Purdue University Indianapolis (IUPUI).

All students in these engineering and technology programs are required to complete at least one Technical Communication (TCM) course during their programs. TCM courses are also taken as electives by students in other programs at IUPUI, including Informatics, English, and Computer Science.

That the TCM Certificate is located in the School of Engineering and Technology may be a positive and a negative at the same time. While being located in the Engineering and Technology school may give the Certificate credibility, it may also limit visibility to a pool of potential students.

Engineering and Technology students are not generally known for a strong interest in *communication skills*. As a matter of fact, they may be known more for their lack of interest, some seeing our TCM courses as *soft* and *not important*. This characterization may generally fit the engineering students more than the technology students. Thus, we are not surrounded by students who are looking for an avenue to earn a credential in technical communication skills.

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 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 or Business. The question is how do we accomplish this task.

In this session, I will share the results of an empirical research study conducted by three graduate students in a course taught by Dr. Marj Rush-Hovde spring 2006 semester. The research question they investigated is “How effectively is IUPUI (via the Technical Communication department) communicating information about these certificate programs to students?” Using surveys and usability testing, they studied students’ perceptions and knowledge of the TCM Certificate and the usability of the TCM Certificate Web site. The study yielded valuable data and excellent recommendations.

Their findings and recommendations will help guide the direction we take to better market our program and should inform and help other technical communication programs market and grow their programs.

The Branded Program: Burden or Blandishment?

Henrietta Nickels Shirk

*Professional & Technical
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Montana Tech of The
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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

English Department

West Virginia University

My position paper will introduce the potential for and challenges of a hybrid professional writing program (pedagogically and administratively) and propose 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 in a way that structurally parallel to the principles of writing the students are expected to master.

Hybrid, or “blended,” writing course formats have gotten a good bit of attention since Texas Tech reconfigured its first year composition program

around such a model. According to proponents of this kind of program, the pedagogical promise of the hybrid model 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 efficient uses of space and labor resources. Decreasing student “seat-time” by half in most cases, hybrid courses allow programs to matriculate a larger number of students without needing to build new physical classroom.

At a time when many colleges and universities are facing budget issues and record enrollments, hybrid courses seem to be a more desirable alternative 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 dangers of such courses and programs seems particularly timely. This is even more pressing for professional and technical writing courses at my home institution since these are the courses for which, semester after semester, we have the hardest time finding enough student seats. In other words, our demand for these courses seems increasingly to 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.

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. This 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. I hope that the discussion generated by my position paper will help me as I embark on this process.

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

Gerald Savage
Marcea K. Seible
English Department
Illinois State University

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.

Internship Requirements in Technical Communication and Other Applied Fields: Discussion of Methodology and Findings of the Study

Marcea K. Seible

We gathered data by surveying 4-year programs included in the ATTW and STC academic program lists. We did not include certificate programs in our research. Data was primarily obtained from program web sites, and when information was not available online, we queried internship directors by email.

Preliminary data indicate that of the programs surveyed, the majority require an internship of 3 credit hours. Data for on-site contact hours required shows a considerable disparity among programs, ranging from 25 to 350 hours per credit hour.

In the presentation of our data, we will show comparisons between technical communication program internship requirements and those of several programs in applied fields with certification or licensure requirements. The results will, we hope, offer insight into the implications for certification for technical communication programs and provide directions for further research and discussion about programmatic internship requirements.

Internship Requirements in Technical Communication and Other Applied Fields: Implications, Conclusions, Recommendations

Jerry Savage

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 listserv responses and discussion were interesting and no doubt somewhat helpful, they represented only a small fraction of all U.S. 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.

Déjà vu: Certification Once Again

Kenneth T. Rainey

*Humanities and Technical
Communication*

Southern Polytechnic
State University

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 it 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 Tech. Comm. Programs

Han Yu

English Department

Illinois State University

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 at least one technical communication program objective to prepare students for workplace communications. 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 these 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 authentic assessment 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 tech. comm. 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.

Doing and Dreaming: Lessons from Walt Disney

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One of the most prolifically creative institutions on the globe is the Walt Disney Company. From the big screen to the small, the invention of the theme park, the development of sponsorships, licensing agreements, and cross-promotion, to merchandise, books, music and now to the internet and mobile technology, the creative engine of the Walt Disney Company is as vibrant and focused today as it was when Walt Disney started with a handful of artists.

The Walt Disney Company formula for success mixes creativity, innovation, organization, and efficiency. Walt said: *"I suppose my formula might be: dream, diversify and never miss an angle."* Walt coined a term – Imagineer - which blends the words "Imagination" and "Engineer." to describe the person who could learn and succeed by dreaming and doing.

Technical and scientific communicators are the new "Imagineers" for the post-Information Age. The Conceptual Age, according to Dan Pink, prizes pattern recognizers and meaning makers, those who have big picture capabilities. Phillip Brown describes the need to develop a *high skill* workforce – defined as a society designed to encourage continued lifelong learning, wherein skills are more than the mere learning and dissemination of technical composition. Robert Florida's book, "The Rise of the Creative Class," states that creativity will become the most valuable asset in our swiftly changing economy, a commodity more valuable even than physical and financial resources.

But are our scientific and technical communication programs preparing students to be innovators and leaders in this new Creative Class? A quick survey of the program goals of several scientific and technical communication programs as stated on websites yielded these aims:

... strives to prepare professional communicators for a variety of careers that involve the relationships between people and technical systems.

... prepares students to design, write, edit, present, and evaluate technical and scientific information, collaborate in interdisciplinary teams on technical and communication projects, and apply emerging technologies to technical communication

... prepares students for a career in technical writing, or enhances attractiveness to potential employers in the scientific and technical fields.

This poster presentation will demonstrate strategies that programs might adopt to animate both the doing and the dreaming. As a Cast Member of the Walt Disney Company and a student in the Master of Science in Professional and Technical Communication program at the New Jersey Institute of Technology, I propose a poster that will show program administrators, professors, and students how the rise of the Creative Class necessitates the development of stimulating work and learning environments, such as those at the Walt Disney Company, that justify and encourage the risk taking needed to enhance the creative process.

Speaking of Software: An Example of Interdisciplinary Work for the 21st Century

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The future of technical communication has been explored and debated in several recent journal and book collections (Kynell-Hunt and Savage, 2003 & 2004; Mirel and Spilka, 2004; Albers, 2005). Issues such as legitimacy, professionalism, professional status, the role of technology in the profession, and the current state of academic curricula have been addressed from a variety of points of view. Implied in many of these discussions is the ever-lurking issue of “interdisciplinarity.” Interestingly, the problem of interdisciplinary work lies beneath the surface.

However, the term itself has become ubiquitous and is taken for granted. In short, it has become an empty rhetoric and thus is not seen or heard: it becomes literally invisible. A true, enriched rhetoric of interdisciplinarity strives to make the connections between the disciplines open and visible.

In our poster session, we will display the work of a two-year long project (funded by the National Science Foundation), a project that has involved technical communication scholars and teachers, software engineers, and students. Titled “Speaking of Software: Integrating Communication and Documentation Techniques into an Undergraduate Software Engineering Curriculum,” the two-year project has increased opportunities for all those participating to view communication as a rhetorical act and to integrate the theories and pedagogies of technical communication and software development. More specifically, software engineering curricular materials have been produced that draw from technical communication pedagogy and scholarship to develop case scenarios that sensitize students to the needs and knowledge of end users and other traditionally marginalized stakeholders in the development process. Further, we use software engineering tools and methodologies for documenting requirements and design. And finally, our evaluation methods, drawn from qualitative studies and usability techniques in technical communication, seek to determine the degree to which engineering students instructed in rhetorical analysis have increased their abilities to communicate with stakeholders. Moving beyond the typical service approach that presents communication as a side-car for engineers and scientists, the project embeds technical communication practices into software engineering courses for the purpose of preparing software engineers for the communication realities of their professional lives. Grounded in interdisciplinary exchange, “Speaking of Software” thus exemplifies the kind of curriculum and pedagogy needed to move technical communication forward to position the discipline for future growth.

Potholes, Gatekeepers, and Missing Bridges: A Program's Journey to ePortfolios

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Let us take you on our journey through ePortfolio Land—a program director's board game—a colorful experience that will detail possible obstacles to electronic portfolios and highlight the decision process.

Graduation portfolios have long been part of the curriculum in our professional writing (PW) program; however, since the quality of the portfolio has not been a barrier to graduation, students haven't taken the requirement seriously, which compromises our ability to use these portfolios for program assessment or as a

tool to better inform and “reinforce good teaching practices,” best practices suggested by CCCC's position statement on assessment.

After hearing Karen Kuralt's 2005 CPTSC presentation addressing similar portfolio concerns at the University of Arkansas-Little Rock and her program's adaptation of electronic portfolio open source software, we re-opened our program's exploration of eportfolios immediately upon our return to UHD. We believed we could adapt Karen's work and have a viable assessment tool within just a few months.

A year later, however, we still don't have eportfolios. We're not even close. What happened in the ensuing year is the focus of this poster. We ran into technology glitches more complex than we had anticipated, especially given that we considered ourselves to be rather technologically savvy. We are among 2005's fifty most wireless universities in the US. And one of our PW faculty members is an electrical engineer with advanced programming skills. What's the problem?

First we discovered that open source was open source for a reason: The code wasn't clean and easily adaptable. Then we learned that PW eportfolios demand substantial hard coding that limits program flexibility and growth and requires major software revisions any time change is sought. Finally, we discovered that storage, access, and ethical issues don't have simple answers.

Among others, Ed White (2005), Barbara Cambridge (2001), and Miles Kimball (2000) have provided ample guidelines about appropriate writing portfolio practices and content, but PW eportfolios raise *technology* and *institutional* issues that further complicate student assessment.

Our poster of ePortfolio Land will detail the technological and institutional journey that program directors might encounter along the eportfolio highway, revealing obstacles, potholes, gatekeepers, and missing bridges. We anticipate that our poster will stimulate discussion about these relevant eportfolio issues:

- *Options*: Webfolios, open source or custom software or personal portfolio tools for course-management software (WebCT Vista or Blackboard)
- *Storage*: Storage capacity, post 9/11 security and access, proprietary content
- *Viewing/using multiple software modes* for graphics, text, multimedia materials