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Issue Preview

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We're pleased to present the second issue of 2012. The articles in this issue all look at program assessment but from different perspectives—a systems perspective of program outcomes, professionalism, and portfolio assessment.

We begin the issue with Tommy Barker, who examines the history and methods of program evaluation by reporting on a pilot version of a survey conducted by the CPTSC Assessment and Review Committee, the *CPTSC Outcomes Survey*. The survey demonstrates one way that CPTSC is taking an important leadership position that responds to our cross-institutional perspectives. This timely subject reveals important research that foregrounds the conceptual systems in program assessment and contributes to conversations by suggesting a new way to conceptualize program assessment through student performance.

Following Barker's report, David Reamer recommends an assessment-oriented approach to the issue of professionalism grounded in measurable outcomes. Also timely in our discussions, Reamer tackles the ideas of "profession" and "professionalism," aspects of a conversation that that been going on for at least a decade, but one that remains, as one reviewer mentioned, "unresolved." Reamer offers what he calls a classroom-oriented approach that addresses issues of professionalism as a guide to practice. Situating his approach in current models of professionalism, he compares three models of assessment—workplace competence, ethos and social role—contributing an important counterpoint for thinking about the problem of professionalism.

Michael Charleton follows these important discussions of assessment with a case study of Missouri Western State University's "best practices"

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approach to an ePortfolio evaluation method that he calls a "Swiss army approach." In this "bottom up" initiative Charleton, reveals challenges felt by smaller programs with limited resources for large-scale assessment that are often forced to measure student work coming from various disciplinary perspectives. He contends that the ePortfolio method, as a relatively inexpensive method for presentation of student work, can be adapted by other programs faced with similar challenges.

In a program showcase focused for the first time on the service course, Karen Gulbrandsen takes the reader through the process of rethinking the value added by this course, using symbolic analysis as a lens for redesign and drawing from scholars in the field who have referenced Robert Reich's framework as grounds for teaching the kinds of work in which students will engage in the workplace.

In this issue's editorial, Tracy Bridgeford and Kirk St. Amant theorize the program administrator as a broker and imagine the possibilities for brokering as a programmatic enterprise. They editorialize their position that the act of brokering fosters relationships across boundaries, bringing elements of one area of interest into another and vice versa, opening up multiple and varied opportunities for creating communities of practice, or as Wenger (2000) theorized, social ecologies of learning.

The issue concludes with reviews of two books from Baywood's Technical Communication Series. Cassandra Branham reviews *Complex Worlds: Digital culture, Rhetoric, and Professional Communication*, and Laura Ewing reviews Barry Thatcher and Kirk St. Amant's *Teaching Intercultural Rhetoric and Technical Communication: Theories, Curriculum, Pedagogies and Practices*.

We are pleased to announce the winner of the Programmatic Perspectives logo contest. Winner John Slaughter, University of Arkansas Little Rock, won for his logo, which reviewers felt captured the essence of the journal and is now proudly displayed on the journal website and issue cover. An honorable mention for her logo submission goes to Kara Sordelett, James Madison University.

And as always, the issue ends with several important announcements. We hope you all enjoy the issue and we look forward to receiving more manuscripts in the future. Any manuscripts submitted in October can be considered for the March 2013 issue. So, don't wait; start revising your CPTSC 2012 Annual Meeting position descriptions now!

Have a good fall semester, everyone.
Tracy and BIll

Assessing Professionalism in Undergraduate Technical Communication Courses

Products, Performances, and Processes

David J. Reamer
The University of Tampa

Abstract. Although much scholarship in recent years has emphasized the need to professionalize technical communicators, those discussions tend to focus on prestige and establishing a clearly defined position for technical communication within a workplace economy. This essay focuses instead on performance as a guiding concept underlying all of our practices, from product to presentation to process. The concept is currently applied in a broad variety of ways in scholarship and teaching practices: Existing models for professionalism range from an unreflective, skills-based approach to practice to a system of formal certification reflecting the important social role of technical communicators. The author suggests an assessment-oriented approach to professionalism that grounds the concept in measurable outcomes.

Keywords. Professionalism, professionalization, professional communication, technical communication, teaching technical communication, assessment, study, workplace practices, technical communication ethos

In his 2002 essay, Brenton Faber asked a foundational question that has dogged practitioners, scholars, and instructors of technical and professional communication for decades: "What's professional about professional communication?" Many answers to this question have been proposed in various attempts to more clearly define the work and role of professional communicators, including emphases on the workplace orientation of our field (see Spilka, 1998), the unique services provided by practitioners (e.g., Johnson-Eilola, 2004), the social value of the practice (Miller, 1991), and the educational structures in place to train and endorse practitioners (see Turner & Rainey, 2004). For more than 30 years, debate has centered on whether and how to provide certification for technical communicators and to reify the practice as a legitimate "profession," culminating in the Society

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for Technical Communication's (STC) newly-minted Certified Professional Technical Communicator (CPTC) credential. This certification represents an important step in the development of a discipline viewed by outsiders as a legitimate "profession" in line with such fields as engineering, architecture, and medicine. Although the debates that informed the development of this certificate program represent a set of concerns immediately relevant to practitioners working in a competitive marketplace, they tend to elide concerns of particular importance to the classroom.

The first stated goal of the CPTC credential—to "legitimize the contribution of, and respect for, our profession" (STC, Why certification?, 2012)—illustrates that a driving force behind the accreditation program is the desire for greater respect for the profession of technical communication, including pay commensurate with members' perception of their own value. These are legitimate concerns in our current economic context, and I do not wish to downplay the value of such efforts. As an instructor of technical and professional communication courses, however, I am less interested in the relative status and pay scale of those already in the workplace and more concerned about the important lessons my students must learn to be successful, effective practitioners when they reach that point. That is, rather than furthering debate about the status of the field as a profession, I am concerned with the professional as an individual who must make sound decisions and produce high-quality work when called upon. I echo David L. Parnas's assertion that professionals are not simply members of an egalitarian group with particular credentials; rather,

> as a professional. . . I am responsible for my own actions and cannot rely on any external authority to make my decisions for me. . . . I cannot ignore ethical and moral issues. I must devote some of my energy to deciding whether the task that I have been given is of benefit to society. (as cited in Dombrowski, 2007, p. 315)

In line with this humanist definition of professionalism, I offer a classroom-oriented approach to the concept of professionalism as a set of values that guide practice via a discussion of scholarship, textbooks, and original survey data regarding teaching practices geared toward that end. I then present models for assessing this concept in line with innovative literature on technical communication pedagogy and assessment. This approach is intended to inform technical and professional communication pedagogy and programmatic assessment, and in so doing, contribute an important counterpoint to discourse supporting professionalization as represented primarily by certification.

The Problem of Professionalism

The concept of professionalism has been central—both implicitly and explicitly—to technical communication's development as a practice and as an academic discipline. The origins of the field as a means of professional training for aspiring engineers are well documented (see Connors, 1982; Kynell, 2000). The service course remains a common incarnation of technical communication education, and even those programs and courses geared toward majors rely heavily on the concept. As of 2011, STC's database of educational programs in technical communication included more than 80 North American universities with undergraduate technical communication programs containing "professional" in the title. Such programs include majors, minors, certificates, as well as concentrations and emphases within other degree programs (usually English); program titles range from "Professional Writing;" to "Technical and Professional Communication;" to "Rhetoric, Digital Media, and Professional Communication," and include a wide diversity of curricula designed to match those program descriptions and institutional contexts.

The discipline of technical communication has latched onto the concept of professionalization as a means of gaining increased status and earning power. Calls for professional certification have been common but highly contested throughout the last three decades, as demonstrated by the 1980 STC Ad Hoc Committee on Certification report, which revealed that barely more than half of STC members supported investing time and energy in developing a certification program for technical communicators (p. 5). At the time, the Fellows and Associate Fellows of the organization voted 26 to 1 against developing such a program, concluding among other things that "there does not appear to be a clear need to protect the public from the hazard of an uncertified technical communicator in the same sense as the need exists to protect it from an unqualified doctor, lawyer, or engineer" (p. 6). Nonetheless, the desire for professional certification as a path to increased status has persisted, as typified by Rachel Spilka's (2002) assertion of "our chronic dissatisfaction with our status as technical communicators" and aspiration to "elevate our status and help the field mature" (p. 100). In 2011, STC formally announced its Certified Professional Technical Communicator (CPTC) credential. This certification "provides assurance to employers and the public that the certified practitioner possesses the knowledge, skill, and ability expected of a competent technical communicator" and is intended to "increase respect for our profession" (STC, Certification, 2012), echoing Spilka's earlier call.

Professionalization via certification may prove to be a productive step for the discipline, but as numerous scholars have pointed out in recent

years, the social implications are not all positive. Faber (2002) argued that professionals have an "ethical responsibility to achieve market dominance" (p. 322) that entails "creating an elitism that forms an antagonistic relationship with democracy, suppressing knowledge to gain monopoly power, and enforcing an ethic that requires withholding knowledge to gain both symbolic and material currency" (p. 320). Savage (2003) also noted the elitist potential of professionalism, writing, "Professionalization is an exclusive process; it requires the undemocratic presumption that, as the basis of expertise, certain kinds of knowledge should not be freely available to everyone" (p. 3). In addition, a professional certification program has the potential to alienate those not privileged by the system: Among the objections lodged by STC members in the 1980 survey were the "[p]ossibility of supervisors feeling threatened by certified employees" (p. 5) and the threat of a small group monopolizing certification.

In addition to fostering concerns about elitism and monopolized information, a vision of professionalism centered on disciplinary status and the potential to thrive in an information economy is problematic when brought to bear on the classroom. Students must certainly be made aware of the material realities of their practices, but those realities are not so much teachable and testable as they are imposed from without. Rather than forwarding a model of professionalism as a means of expanding cultural capital, I advocate an approach to professionalism that emphasizes students' and practitioners' responses to the realities of their work. Individuals' actions are the true measure of professional character; moreover, they can be guided by teachable and assessable theories and guidelines for behavior. More humanist models for teaching and assessing professionalism can help us ensure that the education we offer is valuable to students, to the academy, and to the work force students are preparing to enter.

Bringing Professionalism into the Classroom

For the concept of professionalism to have any value to our teaching practices, it must be defined as clearly relevant to the discipline and to our students. Moreover, to satisfy administrators, accreditation agencies, and even ourselves, teachers must be able to articulate *what* we teach, *why* we teach it, and *how* we evaluate students' mastery of key concepts and skills. As Margaret Hundleby and Jo Allen (2010) wrote in *Assessment in Technical and Professional Communication*, teachers and program administrators share responsibility for "ensuring that our pedagogical practices are based on an understanding of the epistemic values that characterize our discipline. If we don't know what has value in our practice, we can't teach it ad-

equately or assess for it authentically" (p. x). By proactively thinking about and implementing our assessment practices, "we will be able to gain the outcomes we want to gain, take back the authority of our own practice, and reconceive the meaningfulness of assessment on the basis of what we value as necessary and functional to literacy" (p. ix). These motivations to evaluate our practices are reinforced by the real material circumstances of modern-day education, which necessitate standardized, data-driven assessment to justify resource allocation.

This article takes as a starting point the discussions of professionalism already taking place in scholarship and in technical communication classrooms. The scholarship reviewed represents a variety of perspectives on professionalism as a set of values and practices that extend beyond a simple desire for increased status and higher pay. Also included in this corpus is a selection of introductory textbooks common to the field, many of which explicitly invoke professionalism as a goal for nascent practitioners. In addition, this article discusses the results of a 2007 survey of instructors of technical and professional communication.

In the fall of 2007, I solicited participation in a 28-question, IRB-approved survey from instructors of introductory technical communication courses via the listservs of the Council for Programs in Technical and Scientific Communication (CPTSC), the Association of Teachers of Technical Writing (ATTW), and the Council of Writing Program Administrators (WPA). Respondents were asked demographic as well as qualitative questions, including 10 questions about their approaches to teaching and assessing professionalism; they were also invited to submit pedagogical materials such as syllabi and assignment sheets as demonstrations of their teaching practices. Accounting for multiple and incomplete submissions, the online survey yielded 33 valid responses (that is, responses that included full demographic information and answers to at least 50% of the noncompulsory qualitative questions) from a variety of institutions, ranging from private associate's degree-granting colleges to research-extensive universities and representing ranks from graduate assistant through full professor. Responses were coded for key terms and concepts, and the results of that coding revealed consistent and pervasive use of the language and approaches described here.

Taken together, these sources reveal three dominant models of professionalism worth noting by instructors of technical communication. Some technical communication scholars, instructors, and practitioners treat *professional* as an adjective synonymous with *workplace*, choosing to focus on the broad applicability of professional writing skills to different workplace

contexts, often in opposition to the perceived limitations of academic writing. Others use the term to signify an ethos of responsibility and trustworthiness and may only invoke those standards when practitioners fail to reach them. And some describe technical communication as a unique profession with a specific social role. Although these models are certainly not mutually exclusive, their implications for technical communication pedagogy and practice (represented in Table 1) are significant and warrant individual discussion.

Table 1. Models of Professionalism

Model	Key Values	Assessment Measure
Workplace Competence	Skills, Presentation	Evaluation of Product and Presentation
Ethos	Character, Appearance	Evaluation of Performance
Social Role	Contribution to Society, Marketplace Dominance	Evaluation of Process, Certification

Professionalism as Workplace Competence

One of the strengths of technical communication as a discipline—indeed one of the primary reasons it continues to thrive in an era of budget cuts and competition for resources—continues to be its explicit connection to the workplace. Although scholars and practitioners have worked to expand the scope of their work beyond the standard forms of workplace writing, many within and outside the field continue to frame technical communication as a catchall for the kinds of communicating students must perform in a variety of future careers. Faber (2002) noted that in scholarship "professional communication [often] stands for any form of workplace writing, elid[ing] significant difference between those different types of workplace rhetorics" (p. 308). The emphasis on skills allows for clear measures of professionalism, such as performance-based tests or rubric-oriented assessment, but comes at the expense of discussions about the social nature and implications of professional communication.

A commitment to professionalizing technical communication students by training them in the basic skills expected of them in the workplace is clear in early technical communication education practices and scholarship. Early textbooks, such as Samuel Earle's (1911) *Theory and Practice of Technical Communication* and Mills and Walter's (1954) *Technical Writing*, accomplish this task not through explicit discussions of what it means to be a professional or the social role of the communicator, but rather through descriptions of the products of technical communication. Earle (1911) wrote that the engineering writer's task is to "get his [sic] ideas on

paper in satisfactory form" and that he thus needs instruction in the "special forms of engineering writings" (p. v). Mills and Walter's (1954) widely adopted textbook similarly emphasizes the "special techniques of technical writing" (p. 4), rather than discussing the context or consequences of that writing, and thus provides primarily stylistic lessons for technical communication students.

Modern textbooks, too, often emphasize workplace proficiency in their framing of the discipline. Mike Markel's (1996; 2007) *Technical Communication* explicitly presents technical communication as a skill set that is beneficial to students going into a variety of career tracks. The first paragraph of the 1996 edition stated, "Technical communication is workplace communication. Regardless of what field you enter, your success will depend, to a large degree, on how well you can write and speak. . . . [A] professional is a person who communicates with others about a technical subject" (p. 3). In the 2007 edition of *Technical Communication: A Reader-Centered Approach*, Paul V. Anderson (2006) wrote often about communicating technically *at work*, noting that "writing at work differs from writing at school" (p. 5) and "at work, writing is an action" (p. 10). Anderson noted that though students in a technical communication course may in fact pursue different professions, they will all benefit from the workplace-oriented skills they gain during the course. John M. Lannon (2008) likewise typified technical communication as workplace communication in his textbook, *Technical Communication*. Lannon wrote, "Even if you don't anticipate a 'writing' career, expect to be a 'part-time' technical communicator. . . .[T]he higher your career goals, the more effectively you need to communicate" (p. 8). He then elaborated: "All professionals specialize in solving problems. . . . But whatever your specialty, when you communicate on the job, your main problem is this: 'How do I prepare the right document for this situation?'" (p. 15). Each directive exemplifies the workplace competence model of professionalism, demonstrating how deeply it is ingrained in the culture of technical communication education. Introductory textbooks are the earliest exposure many students (and some instructors) have to technical communication as a discipline and these texts clearly articulate that technical communication is a means to improved standing in the working world.

This emphasis on products and basic skills, rather than on context or consequences, is common in technical communication scholarship as well. Since the early issues of *IRE Transactions on Engineering Writing and Speech*, much scholarship has focused on increasing workplace efficacy through improved communication skills. Joseph D. Chapline's (1958) "Tricks of the Trade," published in the first issue of *IRE Transactions*, offers one editor's

sentence-level suggestions for clarifying and improving the readability of reports and other office documents; John R. Pierce's (1958) "The Challenging Field of Engineering Writing and Speech," published in the same issue, offers an overview of the kinds of equipment (overhead projectors, film) engineers can use to improve their research presentations. Patrick Moore (1996) has proposed an "instrumental discourse" model for technical communication that emphasizes basic communication skills, arguing that academics' increasing focus on rhetorical concerns—as opposed to practical applications—in the 1980s and 1990s was insufficient or, worse, misleading for students and practitioners tasked with composing simplified, clear documentation. Even the edited collection *Innovative Approaches to Teaching Technical Communication* begins by pondering "our pedagogical responsibilities for preparing students for work now—at the beginning of the twenty-first century" (Bridgeford, Kitalong, & Selfe, 2004, pp. 5–6). The editors claimed that students need to develop learning strategies in addition to "mastery of the forms and typical genres of technical communication" if they are to succeed in capitalism's "new work order" (p. 6).

The *workplace competence* model of professionalism is often built into undergraduate technical communication curricula. Many students from other disciplines enroll in technical communication courses because members of their field have deemed the curriculum useful in professionalizing students for their future careers and thus have made technical communication a required or recommended writing course. Instructors buy into this model as well: 15 of the 33 respondents to my survey of technical writing instructors directly invoked workplace standards in their descriptions of the professional component of their classes. One participant wrote, "I believe professionalism is about doing your job and doing it well." Several other participants indirectly referenced the workplace via discussions of resume building and meeting client expectations. Another common way that the workplace competence model manifested in the instructor survey was in an emphasis on product quality. One respondent wrote, "I do try to represent the standards of quality for assignments in my classes as professional standards." In addition, several survey respondents cited product-centered qualities such as spelling, grammar, and design as key components of their curriculum, thereby reinforcing the notion that professionalism can be measured via basic workplace competency.

The consequences of the workplace competence model for technical communication are significant. On one hand, associating technical communication with professional development increases the public perception of the value of technical communication, which is invaluable

in constructing arguments for funding. Products and workplace skills are also relatively simple to evaluate via model assignments, internship evaluations, and employer surveys that lead to quantifiable data for assessment and accreditation purposes. At the same time, however, framing the discipline in these terms devalues the work done to distinguish technical communication as a discipline in its own right, with its own goals, theories, and pedagogical models. The value of specialization in technical communication is undermined in this model in favor of broad applicability. By framing technical communication as a tool that increases jobsite proficiency, instructors and scholars reduce the discipline to a series of skills and competencies necessary to function in any workplace.

More troubling even than the reduction of technical communication to a series of broadly applicable skills is the uncomplicated way in which this model frames the practice. The social role and nature of technical communication are not acknowledged as part of the workplace competence model; practitioners' motivations for completing a contract on time or proofreading a document are not necessarily even addressed. As Kenneth Ehrensal (2001) noted, such unreflective practice may in the long run breed a work force of "capitalism's foot soldiers" rather than thinking, feeling employees motivated to bring about change. To find overt discussions of professionalism as a set of values rather than practices, we must turn to a different model, the *professionalism as ethos* model.

Professionalism as Ethos

Although the workplace competence model of professionalism is common in scholarship and teaching practices, it is by no means the sole model employed. That model may be complicated, supplemented, or replaced to suit an institutional context. One such variation involves establishing professionalism as an ethos, an ideal that practitioners should strive to live up to—or appear to live up to—in all aspects of their practice. This version of professionalism is evident in statements such as Markel's (1996) imperative to technical communication students: "Be careful that all your writing reflects the highest standards of professionalism" (p. 8). Professionalism in this model involves more than simple competence; it is an aura that surrounds the practitioner, a reputation for excellence, trustworthiness, or other qualities deemed desirable in a coworker or the provider of a service. This professional ethos is multifaceted and can be hard to pin down. As H. Lee Shinberg (1980) noted in "Technical Communicators and Moral Ethics," "Professional behavior toward one's peers is usually unnoticeable; unprofessional behavior is as evident as a compound fracture" (p. 10). This definition of professionalism through the absence of unprofessionalism

manifests whenever a student or practitioner is criticized for error-marred writing, sloppy presentation, or unethical behaviors such as a breach of confidentiality or plagiarism. Although discussions of professionalism framed using this model may touch on the specific tasks that professionals perform, the primary difference between the ethos model and the workplace competence model is that the ethos model of professionalism is centered on qualities perceived in an individual or an organization rather than on a description of specific skills or products.

Some versions of the *professionalism as ethos* model present the technical communicator as an extension of an institution—often as a representative of his or her employer and that organization's goals, practices, and image. Shinberg (1980) argued just that

> the professional work ethic demands extremely high loyalty to the organization. That is, you must work with enthusiasm for your organization whether you approve or disapprove of the goods or services it provides, whether you endorse or oppose its labor practices, and whether or not the organization's perception of your contribution is sufficiently elevated. (p. 11)

Here Shinberg exemplified one of the more problematic elements of an organization-centered definition of professionalism: A slavish devotion to the task at hand, to the ideals of a corporation, or to one's immediate supervisors leaves no room for critical reflection upon the ethical dimensions of one's own work or on whether a course of action recommended by one's employer is just or warranted.

Perhaps as a result of discomfort with the notion that an individual's ethics should be wholly determined by his or her employer, some scholars and practitioners emphasize the standards of a community of practitioners rather than the standards of an organization in their definitions of professionalism. Dubinsky (2004) wrote of professionalism as "conduct becoming the discipline" (p. 18). David Russell (2004) similarly called professionalism the "ethos of the profession," noting that "professional communities must initiate new members and teach them to make the rhetorical choices that will project the image that serves the profession" (p. 167). Russell wrote that professionalization can be seen as the process of "acquir[ing] deep loyalties to the values and perspectives of [one's] profession" (p. 167). Organizations such as STC, CPTSC, and ATTW function to define these standards and imbue their members with the *ethos* of their professional organizations; however, it is up to the individual practitioner to exemplify those ideals in public.

Because ethos can only be assessed by observing performance and outward appearances, some scholars and instructors attempt to quantify professionalism by outlining positive behaviors that should be emulated. Markel (1996) did so throughout his introductory textbooks, including "professional appearance" in his list of "basic measures of excellence" for technical communication. In the 1996 edition of *Technical Communication: Situations and Strategies*, Markel elaborated on his idea of professional appearance, writing, "You must be careful that all your writing reflects the highest standards of professionalism" (p. 8) because "if the documents looks attractive and professional, the reader is more likely to read it and more likely to form a positive impression of you" (p. 10). In later editions of his textbook, Markel expanded his notion of professionalism to include other qualities desirable in an individual producing a technical document though continuing to emphasize that these qualities must be *demonstrated*:

> Once you have shown that you understand readers' needs and can offer a well-conceived plan, demonstrate that you are the kind of person (or that yours is the kind of organization) who is committed to delivering what you promise. Convince readers that you have the pride, ingenuity, and perseverance to solve the problems that are likely to occur. In short, show that you are a professional. (2007, p. 412)

Markel went on to provide specific examples of how to demonstrate one's professionalism in writing a proposal, including citing one's credentials and work history, providing a timeline for one's work, describing measures for quality control, and providing a detailed budget. Again, Markel's discussion focused on the outward expression of inner qualities such as work ethic and responsibility, whether one actually values or engenders those qualities. What matters in this view is appearance—preparation of documents, outward behaviors—and the impressions that appearances foster.

Survey responses invoked the professionalism as ethos model in a variety of ways, often overlapping with the workplace competence model. Some instructors referred to the rhetorical concept of ethos specifically, as when one participant wrote, "Every behavior that students engage in, and every document they create, is a reflection of themselves, and they need to establish a positive ethos in order to succeed in any avenue of life." Others wrote about professionalism more generally as a means of building (or displaying) one's reputation: "Professionalism is the basis of one's reputation and largely affects the quality of the work"; "We discuss professionalism in the sense [that] your writing reflects you and your organization." Profes-

sionalism referred to an embodiment of an organization's ideals in several responses, as when one participant wrote, "I use the term decorum and matching your appearance and actions to what is expected within … organizations." Submitted course materials also employed the professionalism as ethos model; statements emphasizing this model in course materials often vaguely referenced professional standards of quality without explicitly outlining what those standards entailed. Examples include "you'll have to produce a professional-quality scientific poster," and the requirements that résumés be submitted "in a professional-looking folder or envelope" and that emails "should be in a standard query format to show your professionalism" (examples supplied by three separate respondents). The implied counterpart to professionalism, unprofessionalism, was present in two of these responses in which participants wrote that they wanted students to avoid typos and other *faux pas* in their work to avoid appearing careless. These classroom-level descriptions of professionalism are consistent with the general tone of scholarship and textbook discussions of the concept.

Similar to the workplace competence model, the professionalism as ethos model is useful to instructors in that it is fairly straightforward to teach and evaluate. Standards for appearance and performance can be established using simple "do" and "don't" lists, which are abundant in professional newsletters and trade publications. Although the absence of a quality is more difficult to clearly define, sloppiness and other violations of professional standards for appearance are often apparent to any outside observer and can be pointed out for instructional purposes. One survey respondent indicated that students can identify professional and unprofessional qualities of presentation even without specific instruction: "In general I don't explicitly discuss professionalism except when students themselves talk about documents that 'look' or 'sound' professional. Then I ask them to explain what exactly it is that they see/hear in the document that they identify as professional." Because this model is both explainable and assessable, it is no surprise that it would be common in both textbooks and classroom practice.

Hall and Nelson (1987) viewed this ethos model of professionalism as limiting and problematic, however, writing, "If we teach our students to write like professionals in their chosen fields, we have imbued them with professional ethos but not necessarily with the ethical implications of what is written" (p. 47). This omission is a limitation of any model based solely on appearance: It fails to account for larger contexts, for the motivations behind and the consequences following an action. In addition, deferring to the ethos of an organization or to predefined standards for conduct

and appearance denies individuals the ability and even the opportunity to exercise judgment and make decisions. In contrast, some posit a model of professionalism that involves qualities beyond the externally visible, including the ability to judge right from wrong and to contribute to communities large and small. I call this the *social role* model of professionalism.

Professionalism as Social Role

A third version of the professionalism frame entails formally articulating the public necessity of technical communication. To some degree, all professions involve interactions with the public—the Latin *professio* signified "public declaration"—but few occupations are generally accepted as necessary to a functioning society. Proponents of the social role model of professionalism thus argue that technical communicators provide a service that others cannot (and in some cases, should not be allowed to) perform, much like doctors, lawyers, and clergy do. In this epistemology, one could say that professionals perform tasks that nonprofessionals lack the skill, knowledge, and status to undertake; the practice may be legislated to protect both the discipline and the public from fraudulent practitioners. At some level, therefore, this model for professionalism emphasizes the processes undertaken by professionals that ensure the quality of their work. The argument that technical communication is such a profession has proven highly contentious in the discipline, however, and this model's integration into technical communication curricula is in many respects more difficult than the other models discussed here.

Discussions about the social necessity of the technical communicator have persisted since as early as 1974, when Eugene A. Cogan wrote in an article in *Technical Communication* that professionals are "a set of people performing socially useful, specialized services for the public. These services require special skills and knowledge, and social mechanisms are developed to validate the competence both of the training programs and of the members of the profession" (pp. 15–16). Many within the discipline believe that technical communication meets Cogan's first condition of being "socially useful": Thomas Miller (1991) wrote that technical communicators can "say the right thing at the right time to solve a public problem because they know how to put the shared beliefs and values of the community into practice" (p. 57). Patricia A. Sullivan and James E. Porter (1993) argued that technical communication entails a social and ethical responsibility to tailor communicative solutions to the public, writing that the goal of the practice "is not to better represent the company to the public but, rather, to help the company better understand the needs and interests of the public" (p.

414). Cezar M. Ornatowski and Linn K. Bekins (2002) argued that technical communicators "construct communities as part of their professional writing activities" (p. 265). These arguments in favor of the social importance of technical communication are widespread and persuasive, but they clearly respond to a perceived "lack of a central societal need or prevalent social cause that defines technical communication in the way that health care (eradication of disease) informs medicine or the pursuit of justice informs law" (Faber & Johnson-Eilola, 2002, p. 140). For the discipline to meet this criterion for larger cultural recognition, it is incumbent upon members of the discipline to clearly convey their social role to outsiders.

The social role model also entails a clear articulation of what practitioners provide that others do not or cannot. The nature of the unique work that technical communicators perform, and by extension the domain of the discipline itself, has long been a source of contention among technical communication scholars (see Kynell-Hunt & Savage, 2003). David N. Dobrin (2004) cataloged a number of attempts to circumscribe the professional territory of technical communication by redefining it as "writing about a subject in the pure sciences or applied sciences . . . through an objective presentation of facts" or as "the rhetoric of the scientific method" (p. 109). Dobrin's suggestion that "technical writing is writing that accommodates technology to the user" (p. 118) attempts to carve out a professional space for technical communicators as liaisons between technology and the public. Spilka (2002) noted the common use of "information design" as an alternative title for technical communication courses, and in a similar vein, Johndan Johnson-Eilola (2004) argued that scholars and practitioners should "rearticulate technical communication as symbolic-analytic work" (p. 260) in an attempt to build esteem for technical communicators as information managers. Each articulation reworks the boundaries of the discipline to clearly define what makes technical communication special and valuable; that is, what the professional domain and social role of its practitioners and scholars are.

The final component of the social role model Cogan (1974) described is the need for social mechanisms to establish standards for practice, such as professional organizations, degree and certificate programs, journals and conferences that distribute disciplinary knowledge, and even legislation preventing nonspecialists from practicing. Technical communication already has many support structures, but though they may look to one another for guidance and share common members, organizations such as STC, CPTSC, and ATTW have their own officers, codes of conduct, conferences, and publications. As described earlier, the broader standardization

required for formal, legal recognition as a profession has been the subject of much debate within the discipline. Jo Allen (1990) hesitated to define the discipline at all, claiming that to define technical communication would be to emphasize limited features, types, and technologies of the practice and to neglect the "variations the future will bring" for technical communicators (p. 76). Even the STC's certification program represents a single professional organization's standards, and although it is intended to foster consistency among practitioners, it is by no means legally binding.

The social role model of professionalism also appeared in several survey participants' narratives, although some respondents noted its problematic implications for the service course. For many participants, professionalism entailed a sense of responsibility to one's community; as one respondent wrote, students' behavior "goes beyond just affecting them but affect[s] others as well." Other instructors wrote of expanding students' awareness beyond the specifics of the task at hand, arguing that students should "understand that it [professionalism] means being responsible and aware that meaning occurs in the interaction with texts, not in texts"; recommending that professionals "think about the big picture, not just take orders"; and stating simply that technical communication "is all about choices, not answers." But instructors acknowledged the difficulties of a more formal articulation of the social role of the technical communicator called for in some disciplinary scholarship, particularly in the context of the service course. One instructor wrote, "In some cases (although not often because it gets beyond most students' frame of reference) I may raise questions about the real social value of professions." Articulating this version of professionalism for nonmajors in particular proves to be a challenge for many instructors, and leads many respondents to avoid this version of the frame altogether.

As with the other models described here, the social role model of professionalism has positive and negative implications. This model acknowledges the larger contexts in which technical communicators work and endorses processes valuing theory and informed decision-making. In addition, this model encourages practitioners to be advocates for stakeholders, a benefit in line with many modern scholars' recommendations (e.g., Kimme Hea, 2005).. But the social role model is difficult to employ in a field as diverse as technical communication because practitioners and students possess a broad range of skills and specialized knowledge. In the classroom, discussing the social role of technical communication may prove misleadingly optimistic or simply confusing if divorced from actual experiences communicating with and to the public. Formal professional-

ism also has the potential to foster divisions among students and practitioners as they come to envision themselves as part of (or excluded from) a privileged class of professionals. Finally, in the case of the service course, in which students come from numerous disciplines come together to learn skills that will help professionalize them as they pursue diverse careers, discussions of certification and legislation options specific to the discipline can prove counterproductive.

The models of professionalism described here are neither universally employed nor mutually exclusive. In scholarship, pedagogy, and practice, the idea of professionalism is multifaceted and entails elements of each of these models, adapted to suit local and organizational contexts as diverse as the discipline and its practitioners. But the commonalities in these definitions reveal much about what the discipline of technical communication is and aspires to be. Technical communication has a long and valued history of association with workplace practices, and educational programs and practitioners trade on skills and competencies valued in that arena. Professional organizations and corporations alike value reputation and the appearance of propriety, which are hallmarks of the professional ethos model. And members of the field are increasingly eager to point out the social value of technical communication in an effort to increase the status of the discipline at the local and global levels. Altogether, this multifaceted model of professionalism portrays a discipline that prides itself on the value and quality of its work, but aspires toward greater respect for that work.

These values necessarily infuse the work done at all levels of the discipline and are made manifest in all of our products, performances, and processes. When consistently applied, a multifaceted framework of professionalism that incorporates elements of product, performance, and process can help practitioners, scholars, and students understand their work and develop a common identity as a field. When the framework is unclear or inconsistently deployed, however, no unifying vision defines the discipline or the profession. I contend that the best path to consistency throughout the discipline begins in the classroom, and that the most productive tool for bringing about this vision is outcomes-based assessment.

An Assessment-Oriented Approach to Professionalism

Outcomes-based assessment has recently become a popular topic for instructors and program administrators, in no small part because of pressures from senior administrators and accrediting agencies. As articulated

by the Commission on Colleges of the Southern Association of Colleges and Schools (2004), assessment "identifies expected outcomes for [a program's] educational programs . . . ; assesses whether it achieves these outcomes; and provides evidence of improvement based on analysis of these results" (p. 22). Many accrediting organizations, including the American Board of Engineering and Technology and National Council for Accreditation of Teacher Education, emphasize outcomes-based assessment as a means of measuring student learning and programmatic efficacy. Michael Carter, Chris M. Anson, and Carolyn R. Miller (2003) asked, "What are the skills, knowledge, and other attributes that should define a graduate of the program?" (p. 107); these goals guide the development of clearly stated outcomes that aim to make a given teaching objective "sufficiently teachable and measurable" (p. 107). Allen (2004) similarly asked about the "the kinds of experiences we want students to have in our programs," arguing that programs should take an active role in developing outcomes matched to those goals, lest outcomes be imposed by outside agencies (p. 95). At the institutional level, outcomes offer common goals for assignments, courses, and programs that can be used to assess student and programmatic success and aid in continuous improvement efforts. Common disciplinary outcomes function in the same way, but they can also help shape the future direction of the field.

A growing corpus of scholarship exists about the value of outcomes-based assessment for the field of technical communication. Allen (2004) wrote that "technical communication courses are perfectly situated to engage discussions of both knowledge and ability, making it a natural showcase for accountability and evidence of impact on knowledge/attitudes and skills/behaviors" (p. 95). Michael Carter (2010) described the role of technical communicators in the process of developing and evaluating outcomes for the ABET accreditation process. Norbert Elliot (2010) outlined a variety of modernist and postmodernist approaches for assessing technical communication programs, including rubric-oriented portfolio evaluation. Carol Siri Johnson and Norbert Elliot (2010) provided a thorough but flexible model for developing valid assessment plans for undergraduate technical communication programs; their model can be tailored to fit institutional contexts, but as a result of this flexibility, it lacks specific content that should be assessed. Models such as these help establish the context of and best practices for assessment, but assessment must be centered on core content and competencies.

In many ways, professionalism is a natural fit for outcomes-based assessment. Indeed, instructors in the 2007 survey indicated that they assess

professionalism in a variety of ways, although many tended toward the superficial. For example, one survey respondent defined one method of measuring professionalism thusly: "Because attendance in the professional world is expected without tardiness and without excuse, [students'] attendance in class is expected without tardiness and without excuse." Often the criteria used for evaluating work were less concrete, as in the requirement to submit homework "in a professional-looking folder or envelope." One respondent included the statement, "This document is suitable to distribute in a professional setting or publish" in a grading rubric, and several syllabi included outcomes such as "produce a professional-quality scientific poster" and "write varied technical forms [that] meet professional standards." Others included specific practices, such as avoiding plagiarism and timely submission, in their course syllabi and assignment sheets, indicating that students are held accountable for these actions across multiple assignments without necessarily providing a contextual discussion of why. The general sense conveyed by these measures seems to be that professionalism entails successfully completing tasks common to the workplace setting without making obvious blunders that reflect poorly on the writer or the organization.

Carter, Anson, and Miller (2003) discussed the need for clear standards, noting, "Lacking common curricular goals, [technical writing service courses in various incarnations] act independently, seeking to remedy a problem that is not well understood, using methods that are not carefully matched to the perceived problem, creating improvements that are difficult to measure and sustain" (p. 106), an assessment that is reflected in my survey data. In particular, these measures seem not to be tied to specific disciplinary outcomes beyond a desire for adequate presentation. At best, they address issues connected to a rhetorical understanding of the communicator's ethos; more often, they seem to oblige students' desires for basic skills that will enable them to function competently in the workplace without requiring reflection on the context of the practice. It is certainly more difficult to evaluate students on their understanding of those contexts or of the larger social implications of technical communication, but given the prevalence of that facet of professionalism in scholarship and in the recent move to professional certification, measuring students' understanding of larger structures seems necessary to move forward. Allen (2004) suggested some possibilities for such an outcome, including: "Establish a clear and rich context for [students'] communications, focusing on business, scientific, technological, and/or social drivers for that work"; and "Articulate the contextual, linguistic, experiential, and/or intellectual background and resulting needs of any

given audience for any given piece of information" (p. 100). To these suggestions, I add the abilities to analyze the stakeholders involved in a situation necessitating technical communication, to articulate the effects of that communication, and to reflect on the decision-making processes that guide communication decisions.

An additional approach to developing assessment criteria and instruments for a complex set of behaviors and values such as professionalism involves the concept of dispositions. The National Council for Accreditation of Teacher Education (2006) defined dispositions as the

> values, commitments, and professional ethics that influence behaviors… and affect student learning, motivation, and development…. Dispositions are guided by beliefs and attitudes related to values such as caring, fairness, honesty, responsibility, and social justice. For example, they might include a belief that all students can learn, a vision of high and challenging standards, or a commitment to a safe and supportive learning environment. (p. 53)

In other words, "a disposition is a trait or characteristic that is embedded in temperament and disposes a person toward certain choices and experiences that can shape his or her future" (Damon, 2007, p. 367).

Thinking about professionalism as a set of communally agreed-upon values and attitudes that drive a practitioner's decision-making can provide a starting point for teaching and assessing the concept. The first step is to begin codifying the discipline's (or a program's, or a course's) desired values, commitments, and behaviors related to professional conduct. For example, we might articulate a user-centered approach to technical communication as a desirable behavior; or we might identify a commitment to improving communities through writing and other forms of technical communication as an important value for students to internalize. Ethical reflection is another common component of technical communication instruction that might be identified with professionalism, although it is far from universal across courses and programs. Because dispositions are beliefs made manifest in actions, disposition theory can help instructors and administrators to develop assessment measures specially designed to gauge student understanding of those concepts they most value.

Assessment tools that can be used to measure a multifaceted version of professionalism abound in technical communication, though they are inconsistently structured and employed. The DANTES Subject Standardized Test in Technical Communication includes multiple-choice questions, editing exercises and paragraph reorganizations, and some short essay answers (Elliot, 2010, pp. 21–22). Such a test may be useful for measuring

knowledge of basic concepts and some skills, but professionalism seems to transcend such simple demonstrations. Portfolios, capstone reports, student surveys and interviews, alumni surveys, and employer surveys are all common assessment measures in the discipline, and any of these may be used to measure elements of professionalism indirectly with or without a specific rubric (Elliot, 2010). Feedback from community partners may be solicited as an assessment measure during client projects and service-learning curricula (see Dubinksy, 2002); although these are indirect measures of particular skills, they are an effective way of assessing students' performance and actual (as opposed to hypothetical) success on a project. Reflective essays can also provide an indirect measure of students' learning and provide a window into the thought processes involved in their completion of an assignment. In addition, scholars in teacher education have begun to theorize and attempt to measure their graduates' dispositions via exit interviews and essay tests that ask students to articulate their own beliefs. Those efforts have obtained mixed reviews—some question whether it is possible to measure a student's beliefs, and others suggest that it's presumptuous to attempt to guide those beliefs in the first place. William Damon (2007) cautioned that "beliefs that are directly related to the candidate's capacity and motivation to [practice] are appropriate to examine…. But when such questioning wanders into the realm of social and political ideology, it becomes out of bounds" (p. 368). We too must think about issues such as the sincerity and transferability of demonstrated commitments if we wish to take a disposition-oriented approach to assessing professionalism.

For a concept as complex as professionalism, it is likely that more than one method of assessment is necessary. Han Yu (2010) outlines a process for "authentic assessment" that incorporates workplace-oriented lessons delivered in real-world contexts (which she describes as the "authentic learning environment") paired with a 360-degree performance review to assess students' work (p. 43). Authentic learning environments can be achieved using a variety of pedagogical models, including service learning, client projects, civic simulations (Jackson, Juergensmeyer, & Reamer, 2004), action research (Clark, 2002), and charettes (Mara, 2006). Common in workplace settings, the 360-degree performance review incorporates supervisors, peers, and employees themselves to provide a robust report of employee strengths and weaknesses (p. 46). Variations on this model include combined instructor, peer, and/or client evaluations alongside self-reflection and portfolios of completed work that include multiple reference points for student performance. Regardless of the specific measures

used, for an assessment to truly be authentic and valid, it must include "direct evidence of learning and/or development" and triangulate that evidence using multiple data points (Allen, 2002, p. 98).

Clearly, no single solution exists to the problem of assessing professionalism. Rather, multiple and varied methods are used for assessing product, performance, and processes, each of which must be tailored to a specific local and disciplinary context. Our professional organizations and certifying body provide leadership on important concepts such as professionalism, but in practice assessment happens on the ground, in our classrooms, and in program administrators' offices. Instructors and administrators must therefore collaborate to develop clear, context-appropriate definitions and associated outcomes and to determine the most suitable means of assessing their students' and their programs' success in achieving those goals. Assessment should be triangulated and tailored as closely as possible to the actual or likely context of student work. And, important for a concept as foundational as professionalism, this work must be in line with current scholarship and best practices regarding professionalism and assessment, much of which is surveyed in this essay. All of these steps are necessary if we are to continue to claim that we offer a curriculum of value to our students, our institutions, and our discipline.

Conclusion: The Promise and Perils of Professionalism

Professionalism as an ideal is foundational to the discipline of technical communication. The discipline's roots as a form of professionalization for engineers have led to a widespread understanding that the discipline provides guidance in polishing and packaging information in a variety of media, and practitioners and scholars alike have long argued that the discipline offers unique perspectives and skills that contribute to social structures. One participant in my instructor survey encapsulated the tension nicely: "Are we just super-admins who can 'make it look nice' or do we offer a specific range of skills that add value and quality to an overall product or effort?" Scholarship produced in the last 25 years argues for recognition of technical communication's significant social role and a corresponding increase in professional status. Survey results indicate that teaching practices are evolving more slowly but developing a stronger sense of social responsibility and professional identity. The discipline's recognition of the cultural importance of professionalism is also reflected in the common conflation between *technical communication* and *professional communication* (or *writing*). Although the two may carry distinct meanings across and

even within institutions, those designations may be used interchangeably to convey the workplace orientation of technical communication courses (Faber, 2002; Sullivan & Porter, 1993).

The applications of the professionalism frame in technical communication are complex and multifaceted, in large part because the concept is invoked in a range of contexts. In an introductory or service course, "professionalism" may stand in for basic competencies expected in the workplaces; in the debates leading up to the recently implemented STC certification program, the discussion of "professionalism" was expanded to include social value and market share. Such inconsistent applications of the same term hamper instructors' and practitioners' abilities to articulate a consistent vision for the discipline, but they do provide a window into the commonalities those members of the field share. In the end, the value of the concept as an ideal for the field is that it brings together disparate members working in widely varying contexts and rallies them together in a common pursuit of professional identity and status. Spilka (2002) acknowledged the importance of such collaboration to the future of the field, writing that we should "embrace and promote our diversity and recognize that a lack of unity over what to call ourselves and how to define our roles could be where our greatest strengths and contributions lie" (p. 98). Indeed, the discipline continues to broaden its reach by including theories and practices from other fields, at the same time attempting to solidify its reputation as a legitimate field of work and study.

I believe the greatest potential of the professionalism frame for technical communication lies in the overlap between marketability and an understanding of the social nature of our work. Students and practitioners alike need to understand the social and material realities of their chosen field of study and position themselves to succeed in that context. Producing quality materials supported by a well-theorized understanding of the value of that work in maintaining and modifying social systems adds value to the technical communicator, regardless of his or her area of specialization. At the institutional level, outcomes-based assessment of professionalism can help ensure meaningful teaching and consistent curricula, and it can also help faculty and administrators articulate programmatic identity and support arguments for resource allocation. Finally, a professional frame paired with valid assessment adds value to the discipline as a whole: When practitioners and educational programs are able to clearly articulate their purpose and how they assess their own work, the field itself appears more legitimate.

Spilka (2002) suggested that "members of a profession generally enjoy status, prestige, and power both within particular organizations and

among the general public. There is typically little to no debate about the importance and right of workers in a profession to do their jobs as they deem best and to stake a claim in important decision-making in an organization" (pp. 98–99). Professional recognition has long been desired by scholars, instructors, and practitioners of technical communication. But the inconsistent and under-theorized use of terms like "professional" or "competence" does little to position members of the field to reap those benefits. Even a certification program such as that introduced by the STC is not enough to change the larger cultural context in which we work. After all, as Faber (2002) wrote, "Although professional work is profitable, its intent is not to maximize profit but to address the needs of people who require services essential to their well-being" (309). A well-theorized, clearly articulated, and consistently assessed vision of what it means to practice technical communication is necessary to change perceptions and elevate the field. Although we have not yet reached that point as a discipline, it is my hope that the assessment-oriented approach discussed here is a step in the right direction.

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Program Assessment

The Role of Outcomes

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Abstract. Increased emphasis on assessment in universities, coupled with the recent development of third-party certification by the Society for Technical Communication (STC), have created an exigency for this examination of the history and methods of program evaluation in technical and professional writing. This article addresses the pilot version of the Council for Programs in Technical and Scientific Communication (CPTSC) Assessment and Program Review Committee's CPTSC Outcomes Survey and situates the survey within the literature of descriptive and analytical program evaluations. The study recommends adjustments to the survey to make it better reflect scholarly trends in assessment and program evaluation and ways faculty can consider the role of assessment in program development and scholarship.

Keywords. assessment, outcomes, administration, technical communication, learning

In his book, *Planning and Assessment in Higher Education,* Michael Middaugh (2010) summed up the critique of colleges and universities as "fundamentally mismanaged" yet charging higher tuition rates for an educational product that is "not demonstrably worth the price" (p. 6). He went on to note that institutions lack the "analytical evidence of institutional effectiveness that would enable them to blunt this criticism" (p. 6). In the past decade or more, technical and professional communication programs have responded to the trends in higher education that Middaugh outlined as having resulted in this critique: The ebb and flow of institutional support, shifting priorities among professors, changing markets for graduates, and new developments in curriculum offerings. Programs have instituted course and program performance outcomes for students and linked those outcomes to curriculum development. Additionally, scholarship in assessment has matured with the publication of two collections of essays and a growing body of articles. Yet questions about how well these

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quality control mechanisms actually work in existing programs remain unanswered. Are program outcomes really working? How do program administrators tie these outcomes to student performance and "close the loop"? How can our programs respond to critiques of effectiveness?

The purpose of this article is to discuss the role of outcomes in program administration and assessment in technical communication programs with the goal of identifying how technical communication programs can validate their instructional effectiveness. The focus for this work is a project undertaken by the Council for Programs in Technical and Scientific Communication's (CPTSC) Assessment and Program Review (A&PR) Committee to explore the nature of program outcomes in our field. In this article, I discuss the project and situate its aims in the literature on assessment in technical communication. I then identify future goals for the project.

The pilot version of the research project discussed here took place during the summer of 2011. Members of the CPTSC A&PR Committee created a survey, the CPTSC Outcomes Survey, to ask technical communication program administrators to list their program outcomes and then answer eight questions about them to help us evaluate their effectiveness.

The Committee defined p*rogram outcomes* as a list of capabilities in technical and professional communication, usually 6–10, that a program (series of courses leading to a degree or certificate) wishes students to possess and to be able to demonstrate upon graduation. We defined *program types* as follows: undergraduate or graduate certificate, minor, BA or BS degree or concentration, masters (MA or MS), and PhD. So, for example, "The ability to write clear, persuasive, informative, and instructional prose," might be one outcome of one of these programs. The questions focused on how these outcomes were derived; how they were assessed, communicated to students, revised, and maintained; and so forth. We delivered the survey via email and received 27 valid, informative responses.

We based the survey on knowledge derived from our experience as program administrators, researchers, and faculty, so we had a good idea of the questions to ask and what options to suggest for respondents to choose from for each question. We presented the results of the pilot survey at the CPTSC Conference in Harrisonburg, VA, in October 2011. The reception suggested that the next stage of the survey could provide valuable information for those designing and maintaining technical communication programs. The scholarship presented in this article is an attempt to solidify the approach based on current thinking about the various roles program outcomes might play in overall writing program assessment.

I begin by examining the history of program goals and outcomes, how we have looked at our programs in the past, and the analytical structures that have been applied to them. This context can help in understanding the evolution of our awareness of how technical communication writing programs work, how they respond to trends in both academic and professional areas, and how they keep up with growth toward greater accountability.

Research Question

The questions of outcomes and, by implication, the nature of technical communication programs, derive from the interest in higher education standards, outcomes, and accountability in colleges and universities today. With declining budgets and governmental resources, universities have begun looking at teaching in programs and calling for greater accountability. As Jo Allen (2004) pointed out, measures of such accountability can take many forms—she mentioned student satisfaction, engagement, and learning itself. Margaret Hundleby and Allen (2010) situated assessment in the "context of operation," asserting that academic assessment needs to follow the knowledge-making practices of the larger professional arena (p. ix). However, our inquiry was also motivated by more immediate concerns.

Part of the exigency for this study, if not its knowledge-making apparatus, came not from institutional motivation, but from the field itself. Recent developments, such as the revised definition of technical communication in the *Occupational Outlook Handbook*, suggested a broadening of the official definition of technical communication. Similar developments of Classification of Instructional Programs (CIP) codes at the National Center for Educational Statistics (2010) further complicate matters by creating standardized definitions of courses in professional, technical, business, and scientific writing. At the same time, the Society for Technical Communication (STC) sponsored two initiatives—the Technical Communication Body of Knowledge Portal and a third-party certification program called the Certified Practitioner of Technical Communication (CPTC). Both initiatives brought renewed attention to issues of core competencies of professionals in technical communication. As many know, certification has a long history in technical communication. Roy Turner and Kenneth Rainey (2004) surveyed the history of certification, and their work highlights the importance of accountability and assessment that lie at the heart of the current trend in assessment of programs. They note that certification requires two kinds of achievement: a curriculum of academic study and a final validation by examination (p. 220). The Turner and Rainey survey and the subsequent

follow up by Rainey, Turner, and David Dayton (2005) detail efforts in the profession to identify core competencies over the past 20 years and raises issues of examinations, testing, standards, and portfolios that shape the current, STC-led effort in third-party certification.

The current third-party certification program established the STC Certification Commission as "an independent, third-party organization to grant credentials to technical communication practitioners" (‹www.stc.org/education/certification/why›). The commission examines the competence of practitioners in the following five core areas: user analysis, information design, process management, information development, and information production. Certification requires practitioners to submit a portfolio or packet of work accomplished that is then evaluated against criteria representing key competencies (knowledge, skills, and abilities) for practicing technical communicators.

Academic program administrators have a stake in the CPTC initiative because of their commitment to provide education for practicing technical communicators. Naturally questions arose among academics about the relationship of the outcomes of their programs and the competencies evaluated for CPTC certification. One might ask to what extent the five areas of competency evaluated by the certification process align with the areas of competency, or outcomes, of academic programs. Nancy Coppola (2011) articulated this alignment, noting, "If assessment of program outcomes allows evidence-based demonstration of professional accomplishment to the academic stakeholders of our field, how do we determine whether our core competencies align with those of the professional stakeholders?" (p. 280). She further noted, "practitioners and academics are not that far apart when we talk about core competencies" (p. 282). Any detailed answer to that question would depend on a knowledge of the outcomes of academic programs, which became the central question of the CPTSC Outcomes Survey project. To date, an attempt to systematically collect and analyze program assessment using outcomes as the starting point remains incomplete.

These initiatives focusing on core competencies in the field, coupled with institutional motivations from colleges and universities toward greater accountability, have resulted in an emphasis on what graduates of technical communication programs are actually competent to perform. Many institutions wishing to launch new programs, or to maintain existing ones, use program review capabilities available through the Writing Program Administration (WPA) organization or the CPTSC Assessment and Program Review (A&PR). The CPTSC A&PR Committee offers program

reviews, although few have been done in recent years, perhaps because institutional demands for assessment have made assessment an ongoing part of program administration rather than a once-in-a-while effort. It does seem evident, however, that any efforts at program review might do well to reflect knowledge of the outcomes of as many programs as possible.

An easy way to take a snapshot of a large number of technical communication programs was to collect and analyze program outcomes because program outcomes represent the most articulate statement of *what a program attempts to teach*. Thus, a survey of them could provide useful data for those interested in new programs, those interested in revising existing programs, and those wishing to explore the alignment of program outcomes and CPTC certification. A more subtle, underlying motivation lay in the logic that, if the CPTC Commission had identified the key competencies of practicing technical communicators, programs might do well to gauge how well they were preparing students to demonstrate those competencies in the workplace. Surveying academic programs for outcomes might allow for a greater understanding of the relationship between academic programs and the STC's effort toward third-party certification.

The larger picture, then, of technical communication programs has to do with how they relate in terms of student capabilities, academic structures, and outcomes, to the broad area of workplace technical communication. To begin to understand this larger picture, I turn to a review of how we have studied and defined technical communication programs in the past.

How can programs be defined?

Historically, technical communication programs have been examined from the point of view of both their academic content (usually represented by courses) and their professional context (usually represented by a set of capabilities needed by professional communicators). Additionally, programs have been examined in response to trends in their professional contexts. In a special issue of *Technical Communication* on program assessment in November 2007, Kirk St. Amant and Cindy Nahrwold presented a sampling of approaches to assessment, and, over the years, issues of *Technical Communication* have contained articles describing specific programs (Gribbons, 2000; Loel & Tolley, 2004; Meloncon, 2009; Wilson & Dyke Ford, 2003). Four studies of technical communication programs since 2004 indicate the methods used for analysis of technical communication programs. The first two, done by Sandi Harner and Anne Rich (2005) and by Nancy Allen and Steven Benninghoff (2004), take a descriptive approach; the second two,

done by Jo Allen (2009) and by Nancy Coppola and Norbert Elliot (2010) take an analytic approach using principles of assessment.

Descriptive Studies of Technical Communication Programs

Harner and Rich's 2005 study looks at courses, or the academic context, as a way to characterize programs (p. 211). Such an approach has been used elsewhere very productively by Rainey, Turner, and Dayton (2005) who looked at 156 course descriptions. The aim of the Harner and Rich study was to identify what programs "look like" (p. 209). Their study, prompted by a theme of the 2003 CPTSC conference, attempted to answer the question of whether existing programs should follow the model of generalized writing programs or whether they might try to evolve to meet the needs of niche markets, such as medical writing or engineering (p. 210). Their study tabulated information from 49 BA- and BS-granting institutions in North America. The study identified 29 courses commonly taught in these programs and their status as either required courses or electives (p. 213). The researchers also gathered data on where programs were situated departmentally in universities (English, engineering, humanities, communications, and so on). Finally, the study gathered data on whether programs required internships or portfolios (p. 216). The result was a comprehensive look at a number of important elements that shape the curriculum and define technical communication programs.

For the purposes of the present inquiry, we should note that Harner and Rich's study examined the state of technical communication programs from a primarily academic and descriptive perspective, as represented by their guiding research questions. The value of this approach was the thoroughness with which it examined the internal structures of academic programs and instructional design. The research questions suggested important characteristics of programs and helped identify how programs respond to workplace pressures in their design. As we shall see, though this study looked at the same characteristics as the CPTSC Outcomes Survey, it did not ask the same questions about the internal consistency of design and assessment that one can see from examining programmatic outcomes and how they are assessed. Similar to a study by Nancy Allen and Steven Benninghoff (2004), Harner and Rich's study takes a primarily descriptive snapshot of technical communication programs.

Allen and Benninghoff's 2004 study attempts to create a "general program profile" of technical and professional communication programs. The study takes a descriptive approach to "determine what concepts will inform a program core" (p. 161). Their study examined 42 schools in an

attempt to determine the impact on the humanistic core of technical communication of new developments in design, project management, information management, and technologies (computers in the classroom and workplace) (p. 159). The study examined the following six elements of programs:

1. Principles and topics engaged through projects and discussions.
2. Skills and procedures practiced through assignments.
3. Software tools taught and used in courses.
4. Pedagogical processes used to fulfill background gaps.
5. Core TPC concepts and courses.
6. Plans for developing curricula in the near future. (pp. 160–161)

As a focus for their study, Allen and Benninghoff looked at "principles and topics" (e.g., "audience," "rhetorical analysis," "collaboration") in programs. They also asked about the extent to which these elements were reflected in the courses students took. They called this the "level of engagement" (p. 161). For example, some topics were included in almost all courses, some in many courses, some in few, and so on. The study, thus, represents a valuable way of examining the relationship of curricula (courses) and overall program topics. Such a view is not unlike the familiar tool of the curriculum map or matrix that attempts to relate the outcomes of specific courses to overall programmatic outcomes.

The overall results of the study show the following nine *featured* topics that occur by percentage in the programs Allen and Benninghoff studied.

1. Audience 98%
2. Genre 95%
3. Visual rhetoric 95%
4. Document design 93%
5. Rhetorical analysis 90%
6. Collaboration 86%
7. Ethics 81%
8. User-centered design 76%
9. Project management 71%

Thus, audience analysis is a featured topic in courses in 98% of programs; genre is a featured topic in 95% of programs, and so forth.

Of perhaps greater interest in the Allen and Benninghoff study is their analysis of core concepts and topics. The study differentiates between a

topic and a *concept*. Program core *concepts* are articulated as emphasized skills or capabilities (writing with clarity, using digital media) and core *topics* are articulated as themes that differentiate one program from another (rhetorical analysis, document design). Looking at the core concepts in programs, the study found the following top-rated concepts:

1. Theoretical approaches 45%
2 Writing with clarity and conciseness 36%
3. Skills with writing tools 31%
4. Genre development 24%

The authors noted that these core concepts reflect the "strong association of TPC programs with practice" (p. 170). As for core topics, the survey asked respondents to select and rank core topics, resulting in the following list:

1. Rhetorical analysis 62%
2. Document design 48%
3. Genre writing 45%
4. Working with a team 43%
5. Editing for clarity and conciseness 38%

The overall perspective that the Allen and Benninghoff study provides is a view of how programs change in response to new technologies, while at the same time attempting to maintain traditional skills and principles (e.g., humanism, literacy). The changes are reflected in new courses and innovative programs that, as the authors noted, are "successfully meeting the challenges of maintaining a humanities perspective while also changing to meet new demands from science and technology" (p. 179). The descriptive approach of the study lies in how it depicts the frequency of core concepts and topics (in courses) as the building blocks of programs. The authors remarked that their results show how the concepts inherent in these programs are "in step" with a general model of "today's education."

The implication, however, is that these concepts underlie the development of programs, regardless of how they might be measured or used, either formatively, to shape new courses, or summatively, to evaluate existing courses. Such an approach, also seen in Harner and Rich (2005), allows us to see how programs respond to both industry and institutional trends, but it does not answer questions about how structures within programs—goals, outcomes, and assessments—lead to continuous improvement. The CPTSC Outcomes Survey was conceived more along the lines of outcomes than courses, topics, and concepts. This alternative, and the more analytic view of programs represented by the studies discussed next, presents a

complementary, but essentially, different picture of technical communication programs.

Analytical Studies of Technical Communication Programs

Studies that take a descriptive approach to programs have provided valuable, rich descriptions of the direction of instruction and program administration. They have allowed administrators to identify courses, concepts, topics, emphases, and other elements key to shaping and designing programs. On the other hand, the analytical approach that I identify as the basis of the next two studies, Jo Allen's (2009) and Nancy Coppola and Norbert Elliot's (2007), who examined many of the same elements, but from a different perspective. That analytical perspective inserts the element of performance assessment into the descriptive picture.

Approaching the topic of technical communication programs from an outcomes perspective—emphasizing student performance—makes visible how programs systematically connect broad programmatic goals with courses and assignments, so that one can see, with some degree of clarity, how specific assessments evolve from and inform larger goals. Such an approach focuses less on trends and developments in the field and more on the internal workings of a curriculum. For example, the goals and questions that Harner and Rich examined focused on whether a program might fulfill a niche market (such as medical writing or media writing). The Allen and Benninghoff (2004) study focused on whether the fundamentals of writing and rhetoric can be maintained amidst a trend in the early 2000s on the broadening of technical communication practitioners' work into diverse markets as a result of economic pressures and the drying up of the traditional IT base of programs. Additionally, Allen and Benninghoff's study of the relationship of humanistic core concerns to professional skills and topics reflects the broad trend toward increased emphasis on technologies in both the classroom and the workplace in the years previous to the study. Both these studies identified and analyzed broad economic and professional trends that influenced program design and change. And they described the change that resulted.

Concerns such as the development of niche markets or the influence of new technologies may not be those of current program administrators. For example, current program administrators might be interested in how programs react to social networking technologies. On the other hand, examining programs from the perspective of goals, outcomes, assessments, and curriculum management can provide a look at the structures that exist regardless of job markets or technological trends, while at the

same reflecting just those trends. Additionally, an examination of program outcomes and the patterns of assessments that they entail allows us to examine the learning mechanisms inherent in instruction in higher education and of importance to program developers.

The move from descriptive approaches to that represented by Allen (2004) and Coppola and Elliot (2007) indicates a shift from descriptive evaluation of programs to a more systematic approach to the mechanisms of goals, outcomes, assessment, and continuous improvement. Yet these two analytical studies look at different elements of programs. In the next section, I outline the approaches represented by these scholars.

The Analytical Approach

Coppola and Elliot's (2007) study of programs takes its emphasis from the move toward accountability in higher education. They took the approach reflected by the Council of Writing Program Administrators that asks, "What are students learning, and what are they capable of demonstrating as a result of their education?" (p. 459). They situated their case study within the culture of accountability in higher education that "embraces continuous innovation and quality improvement by developing new strategies to enhance learning" (p. 460). The questions asked in their study represent an alternative view of technical communication programs.

- What did our profession expect students to be able to do on graduation? How could we communicate those performance expectations to students?
- How could we design performance-based assessment measures that would allow students to demonstrate that they were meeting these performance standards? (p. 460)

Coppola and Elliot asked an additional question, "Could our assessment program be transferred to other communication programs?" (p. 460). Thus, the focus of their study is an examination of the theoretical and practical ways that one program's assessment model could act as a framework for other programs.

The study that Coppola and Elliot undertook looked first at the portfolio assessment methodology derived at the New Jersey Institute of Technology. They described how their program established eight core competencies that they shared with students and evaluated using portfolios representing students' work in the program. Following assessment theory guidelines, they involved the faculty in the design of core competencies and assessment methods and of how those competencies would

be taught and measured in individual courses. They consistently followed a consensus and discussion methodology that involved student and industry stakeholders in the assessment framework. In doing so, they followed Paul Anderson's (1995) recommendations that program assessment should be "multiperspectival" and "multivocal." This model, which emphasizes multiple measurements, was also employed by Michael Salvo and Jingfang Ren (2007) in their "participatory assessment" model. They assert that this model is an "example of multi-layered participatory design in a particular institutional and programmatic context, characterized by negotiations among various internal program stakeholders, including students, instructors, and administrators" (p. 424).

For the purpose of this article, Coppola and Elliot's analytic model represents a view of the components of programs, underscoring elements of programs that descriptive models imply but do not emphasize. Their approach, and that of Jo Allen (2004), provides a way to view actual student performance within the context of program outcomes. According to Allen, "carefully guided observations and commentary, based on clear criteria, are critical for a meaningful assessment" (p. 102). Allen referred to the metaphor of "closing the loop," which means, "using evidence to make decisions about course and program improvements and then evaluating the impact of the change" (p. 104). The use of evidence of student accomplishment and of a program's response to it is crucial to continuous improvement implicit in the assessment model.

Also implicit in this model is the involvement of faculty, something implied but absent in descriptive approaches. Assessment may be standardized or mandated by institutions, accrediting bodies, or administration. *Standardized assessment*, according to Allen (2004), is based on common standards and checklists, not on learning outcomes. Standardized assessment contrasts with faculty-motivated assessment. The best scenario occurs "when assessment arises from the genuine curiosity of the faculty as a simple question: Does what we do matter?" (p. 94). Faculty-based assessment provides evidence of impact and means for continuous improvement because it often focuses on student writing. Faculty-based assessment, in addition, falls in line with current trends toward the localization of assessment, which bases the results on local instructor knowledge, something that, as Brian Huot (1996) noted, "recognizes the importance of context, rhetoric, and other characteristics integral to a specific purpose and institution" (p. 552).

Allen (2004) emphasized writing, in a local context, as a primary means of outcomes assessment, rather than individual student evaluations in

classes. The reasoning here is that if you use a measure for more than one objective (student evaluations in courses applied to programmatic evaluation) then you "tend to compromise the strength and veracity of the measure" (Allen, p. 96). On the other hand, having multiple measures for success of an outcome is a worthwhile goal, and some of the multiple measures may require that assessments from other areas be applied to programmatic assessment. Thus, the compromise in using multiple measures is that some individual measures may only partly support an assessment. Similarly, finding one measure that you can call the primary one (fitting as a key indicator) might be the goal.

Allen (2004) discussed three kinds of assessment: satisfaction-based assessment, engagement or participation-based assessment, and the student learning outcomes approach (p. 98). The third approach most closely aligns with our responsibilities to educate students. The CPTSC Outcomes Survey did not collect data on programmatic assessment of the first two sorts. For example, we did not ask respondents whether they use satisfaction-based assessment (gathering data about students' perception of benefit from classes, professors, or learning support). Nor did we ask respondents whether they assess the benefits from engagement activities, such as club membership, class attendance, or study habits that led to a deeper understanding of students' communication decisions. In our survey, we assumed that the assessment will be based on some measure of whether students can accomplish the outcomes we profess in programmatic outcomes statements.

I turn, then, to the actual CPTSC Outcomes Survey as representative of elements of both the descriptive and analytical approaches to studies of program outcomes. Although leaning more to the analytical approach, I believe that the survey can benefit from elements of both approaches. In the next section, I briefly describe the survey and the questions asked as they reflect the approaches described in the previous section.

Anticipated Results

The goal of the CPTSC Outcomes Survey was to answer a special question: "To what extent do programs resemble one another in regards to program outcomes?" The more interesting question is "what degree of unanimity could we find among academic programs?" Clearly, we cannot expect to find unanimity. As Harner and Rich (2005) pointed out, the typical technical communication program does not exist (p. 209). Unlike disciplines, such as nursing or engineering, that create curriculums mandated through their accrediting bodies, we have no such body. And as we recall the debate

over core competencies surveyed by Turner and Rainey, core competencies are very difficult to define. On the other hand, we may be able to uncover a clustering of outcomes that might or might not align with the outcomes espoused by the CPTC accreditation program. The results of such a study might begin to point at central curricular concerns in our field.

Survey Questions and Sampling Plan

The CPTSC Outcomes Survey was designed in two parts: a section that simply asked respondents to provide a list of their programmatic outcomes, and a section that asked about the creation, maintenance, communication, and use of the programmatic outcomes. The committee sent it electronically to 148 programs and received 27 complete sets of results (an 18% return rate). The programs in the pilot survey were selected because we had reliable email addresses for administrators. We intended this version of the survey as a pilot to meet the goal of analysis of the methodology rather than as a representative sampling. In the next section of this article, I go over the questions briefly, discuss the thinking of the survey creators, and, where appropriate, provide the results of the pilot survey. My intention is to contextualize the questions in the kinds of issues raised by previous scholarship.

Demographics

The demographics section of the survey asked about types of institutions and types of programs. As we saw in the descriptive and analytic studies discussed earlier, technical communication programs range among types of colleges and universities and from certificates to PhD level. Results for this section would allow the survey responses to be grouped in ways that might tell about the prevalence of outcomes and assessment as it appeared in various instructional settings. One could easily build a hypothesis about which type of institution might foster a more advanced systems of outcomes and assessments, perhaps based on institutional requirements. During my tenure at Texas Tech University, I participated in a growing institutional culture of assessment, complete with software support, interested in ongoing programmatic assessment, assessment reporting, and narratives of continuing improvement. But other institutions might approach these developments differently or might have emphases on assessment at different levels of instruction.

Program Level

The second question in the CPTSC Outcomes Survey, "Please select the level of the program for which you are reporting outcomes," was intended

to identify the outcomes for particular degrees. The actual question was intended to allow institutions with more than one level to contribute outcomes for each level, suggesting interesting groupings of outcomes for each degree or certificate offered. The strategy of this approach, allowing a respondent to take the survey more than once for each of the programs offered, was a work-around. The CPTSC Assessment and Review Committee members realized that, as a research strategy, asking a respondent to take the survey more than once might lead to a low response rate, but we could think of no other way to encourage administrators who worked with various levels to record all their outcomes and assessment strategies effectively. The bottom line, however, was that perhaps at various program levels administrators and faculty maintained and communicated their outcomes differently; finding out about these differences seemed like useful knowledge.

Program Outcome Statements

The question about program outcome statements served as the core for the first part of the survey. It also proved to be a stumbling block because when administrators arrived at this question, many of them left the survey. The reason, as one administrator told me, was that he did not realize that he would actually be asked to provide the list in the survey. Not having the outcomes at hand became an impediment.

The rationale for focusing on outcomes may not be immediately clear. For example, Harner and Rich (2005) looked at courses instead of outcomes, as did Allen and Benninghoff (2004). On the other hand, Allen (2004) called outcomes "the most significant evidence" that a program has added to a student's learning. According to Allen, outcomes are the basis for programmatic assessment (p. 94). She reasoned that outcomes must be "embedded" in a program, rather than an afterthought (p. 95). Further, Allen claimed that "the most sophisticated forms of assessment focus on student learning outcomes: What students learn and what they are capable of doing as a result of their educational program" (p. 96). Teena Carnegie (2007) likewise asserted that "program assessment for technical communication, of course, must begin with the core skills and abilities that constitute the knowledge and practices of the profession" (p. 450).

The outcomes collected from the pilot survey were analyzed informally using a tabulation of key words in the outcomes statements. For example, Table 1 represents the top 10 key words used in the 27 sets of outcomes statements collected. Though this informal tabulation of results provides a very useful view of the prevalence of the more common outcomes, sub-

Table 1: A Snapshot of Program Outcomes

Outcome #	Outcome Category	# of Respondents	% of Respondents
1	Document Design	13	48.1
2	Rhetorical Situation	12	44.4
3	Team	11	40.7
4	Research	11	40.7
5	Ethics	10	37.0
6	Genres	10	37.0
7	Visual	10	37.0
8	Theory and Practice	10	37.0
9	Audience Analysis	9	33.3
10	Writing Ability	9	33.3

sequent revision of the survey instrument, which can always be improved, might strive for a greater degree of inter-rater reliability. Such revision might make the case for the relationship of outcomes to workplace capabilities more persuasive. Of equal and compelling interest, however, are the questions in the survey that collect data about how outcomes were derived, assessed, maintained, and communicated to students.

The Outcomes Processes[1]

In this section, I look at the questions in the survey that pertain to how outcomes are derived and maintained rather than the actual percentages of results. Subsequent versions of the survey will include these important numbers.

The question about what processes programs used to derive outcomes was worded as follows:

> What process did your administrators and faculty use to write the outcomes? (Choices: Researched others' outcomes; Used curriculum mapping; Consulted legacy documents; Asked colleagues at other institution(s) to share; Reviewed outcomes from other disciplines; Brought in a specialist; Other, please specify)

The pilot survey suggested that "researching others' outcomes," "using curriculum mapping," and "consulting legacy documents" were among the top methods for deriving outcomes (used by over half of all respondents). No respondents specified what specific legacy documents they consulted. "Other" responses included drawing on departmental expertise, using a committee, and reviewing regional employment needs.

[1] As the study was a pilot, I'm more concerned here with our method and questions than with actual results.

The scholarship on ways to derive outcomes is scanty in the technical communication literature. Allen (2004) suggested a conversation with faculty about what graduates of a program should be able to do. She also mentioned the North Carolina State University website that offers questions faculty can ask. The conversation, she asserted, should identify design, management, media, editorial, and other skills (99–100). The suggestion here is that the CPTSC Outcomes Survey could possibly add "conversation among faculty" as an option in the next version. On the other hand, Coppola and Elliot (2007) used a combination of methods to derive outcomes: "We looked to the literature of technical communication for empirically based and nationally recognized core competencies. Finding none, we developed our own criteria from published survey data and reports, the advice of our professional advisory board, and our own practitioner experience" (p. 460). The suggestions here might also be included in a subsequent version of the CPTSC Outcomes Survey: "sought advice from a professional advisory board" and "examined the faculty's practitioner experience." Clearly, the best-practices direction taken by these scholars is, first, toward shaping a consensus among faculty and stakeholders and, second, toward emphasizing practitioner and workplace experience. Such practices might also lead to productive assessment methods.

Assessment of Outcomes

The heart of the CPTSC Outcomes Survey may be in the question about how programmatic outcomes were assessed. It read as follows:

> Tell the process used to determine whether students have met these outcomes. (Choices: Portfolio assessment; Testimony of students; Review of key assignments; Performance in a capstone course; Outcomes not formally assessed yet; Student evaluation of faculty; Other, please specify)

Survey respondents indicated the portfolio as the primary method of outcomes assessment (69%), followed by a review of key assignments (50%), and performance in a capstone course (46%). Methods of assessment suggested in the literature on curriculum suggest these and other assessment methods. For example, Rainey, Turner, and Dayton (2005) found that some programs have a management focus in assessment. They found that "managerial advice regarding curriculum planning is an accepted dimension for many academic programs that have technical advisory boards composed of managers and professional communicators" (p. 335). Allen (2004) mentioned the following assessment methods: survey of students and faculty, surveys of employers about student abilities, knowledge, con-

fidence, attitude, and initiative. She also mentioned performance in a capstone course and student self-assessment (p. 102). By far, the predominant method of student self-assessment in a capstone course is the portfolio, which is consistent with other scholarship focusing on assessment (Cargile Cook & Zachary, 2010; Coppola, 1999; Johnson, 2006). In particular, Kelli Cargile Cook and Mark Zachary (2010) justify the use of portfolios specifically for *programmatic* assessment (p. 68), as was implied in the outcomes pilot survey. Salvo and Ren (2007) provided a valuable additional list of methods for including students in outcomes assessments that might also inform the next version of the survey. In the "participatory model" they described, they used student information forms, student focus groups, interviews with faculty, and class visits (p. 426).

What the question does not ask, however, is the mechanism of assessment. Like the processes of deriving outcomes, assessment should, as Carol Siri Johnson (2006) put it, be "created by teachers for teachers" (p. 415). Portfolios are an example of a way teachers like to assess their students' achievement. Some of the rationales for using portfolios come from institutional sources. Coppola and Elliot (2007) noted, for example, "Our university's general university requirements programs in humanities, from the first through the senior years, are assessed through a portfolio system" (p. 460). Thus, the portfolio may seem the logical choice for assessment. Moreover, Johnson and others point out that portfolios require the involvement of faculty in evaluation, suggesting the conversational or consensual nature of effective assessment (p. 414; see also Cargile Cook & Zachary, 2010, p. 77). A common method of evaluating portfolios is the rubric (Allen, 2004; Johnson, 2006).

The literature on assessment in technical communication suggests, based on the larger body of scholarship and theory of assessment represented by groups such as the Accreditation Board of Engineering and Technology, that assessment should not only follow the principle of being situated in a specific instructional environment (as we have seen) but that it should also use multiple measures and be recursive (Carter, 2010). Recursive means that the results of the measures are used to improve the program, either by revision of the outcomes or revision of the courses that lead to them, the actual mechanism of instruction (Jablonski & Nagelhout, 2010). Consideration of the mechanisms for maintaining and revising outcomes, then, is an important element in profiling the instructional validity in our programs. Our next question attempts to uncover best practices in this area.

Maintenance and Revision of Outcomes

The CPTSC Outcomes Survey contained three questions that directly relate to the maintenance and revision of outcomes. The first asked about the frequency of outcome revision.

Frequency of Revision of Outcomes

In the pilot survey, we wanted to know how often outcomes were revised, resulting in the following question:

> Tell how often you revise your outcomes. (Choices: Every term; Once an academic year; Every other academic year; As requested or required; Other, please specify)

Results of the pilot survey indicated three primary revision times: yearly (as part of institutional cycles of assessment), every five years (also as part of accreditation cycles), and "as the need arises." However, the most common answer was "as requested or required," suggesting that faculty view assessment from a reactive posture. Johnson (2006) reported that at her institution the "culture of assessment ebbs and flows as the need arises" without specifying the specific need beyond revision of courses (p. 416). Coppola and Elliot (2007) used collaborative evaluation and quantitative analysis of scores to adjust outcomes yearly (p. 461). They mentioned a variety of methods of examining outcomes: hallway chats, Web-based discussions, and formal meetings (p. 464).

It may be that program outcomes evolve gradually as a result of what is known in higher education as a narrative of continuous improvement (Banta, 1993, p. 47). That is, improvement of outcomes and the student achievements they measure should be "a part of everything that is done in the name of postsecondary education" (Banta, 1993, p. 55). As it appears from the pilot survey, the narrative of continuous improvement in technical communication is currently something of a shaggy-dog story, marked by good beginnings and intentions but not fully developed. Nevertheless, subsequent revisions of the survey need to include more focused attention to the degree to which outcomes revision is systematic and "closes the loop" in implementing assessment results in the classroom. That said, the survey asks two more questions that can help shape the picture of the relationship of assessment to instructional delivery.

Course Outcomes Versus Program Outcomes

In the pilot survey, we were interested in learning how program outcomes affect course outcomes, and vice versa, and the relationship they have to each other, giving rise to the following question:

> What role do course outcomes play in your program outcomes? (Choices: Course outcomes and program outcomes are closely and consciously tied together. We give ourselves an "A." Course outcomes and program outcomes could be tied together more than they are now. We give ourselves a "B." We can do a better job at connecting course outcomes to program outcomes. We give ourselves a "C." Other, please specify)

Here, we didn't ask a *how* question but rather a question aimed at self-evaluation. The survey respondents seemed split between seeing their outcomes and courses closely tied (48%) and seeing their outcomes not so closely tied (44%). No "other" condition was specified, and a small percentage (8%) thought they could do better. From one perspective, this information is somewhat inconclusive because it does not reveal whether the respondents actually thought that a close tie between courses and outcomes was in fact desirable. It could be that some considered an incidental relationship sufficient. Thus, the question is, how important is it to tie outcomes to curriculum design?

Most scholars agree that a close and effective tie between outcomes and curriculum design is essential to effective assessment. In assessment literature, this connection is referred to as "closing the loop." (Allen, 2004; Maxim, 2004) Assessment thus becomes, as Cargile Cook and Zachary (2010) proclaimed, "a perpetual or evolutionary programmatic task that loops us annually through the activities of measuring, analyzing, and recommending program improvements" (p. 77). Johnson (2006) noted that, in the work of her institution, administrators extended the research potential of assessment and "wanted to use the outcomes assessment to look for trend information and patterns in student learning that could inform curricular change" (p. 417). Allen (2004) noted that effective outcome evaluation begins with identifying "points in the students' education where those criteria should have been introduced and honed" (pp. 102–103). A curriculum matrix (table of program outcomes and course outcomes) can help evaluators do this by showing where skills (e.g., genre development, skills development) that form the basis of the outcomes appear in actual classes (Allen, p. 103). A matrix not only tells what courses supplied instruction on a specific skill, but also when in the curriculum such as skill was developed.

Reshaping this question might improve its ability to determine whether administrators and faculty actually did close the loop and what analytical mechanisms (identification of trends in student learning or a curriculum matrix) allowed them to do that. Closely associated with this question is another asked in the survey about factors that influence program outcomes.

What factors shape program outcomes?

In an attempt to identify factors that influenced program outcomes, the survey asked the following question:

> What factors shape program outcomes? Select as many as necessary. (Choices: Faculty capabilities; Market factors; Institutional requirements; Existing literature; Service-teaching requirements; Other, please specify)

The core of this question is what makes assessment meaningful. Results from the pilot survey pointed to faculty capabilities (used by 85% of respondents) and market factors (used by 88% of respondents). This indicates that, for many programs, who they have as faculty and where their students will work play a large role in determining program outcomes. Notably, "service-teaching requirements" had little to do with shaping outcomes (used by 12%). The "other" category mentioned things like alumni feedback, ABET accreditation requirements, and both coordination with and differentiation from other programs. The suggestion here, I think, is that program outcomes are a defining characteristic of a program, but that they should reflect a program within the context of a specific institution.

Allen (2004) discussed the situated nature of assessment, observing that "the focus of program assessment must be on the learning that occurs as a result of the curricular and co-curricular experiences of the students" (p. 95). Allen further asserted that not only courses in a program but all aspects of a student's educational experience can contribute to the totality of a student's learning and may be included in outcomes (pp. 96–97). "As many will argue, everything counts in constructing the total picture of educational impact and intellectual growth" (p. 97). A corollary to this notion is that outcomes can accomplish a number of goals: course improvement, program improvement, teaching improvement, student employability and program reputation, faculty hiring or budget (p. 98). Outcomes can situate a program within its institutional setting. Even more broadly, programs can be situated, as Carnegie (2007) detailed, within the context of governmental and bureaucratic stakeholders. She noted that "the results of a contextual review can facilitate strategically persuasive and effective responses to the political, economic, and organizational pressures expressed in these external discourses" (p. 450). Carnegie described criteria of accessibility, affordability, quality, and accountability that an assessment might need to address and that might shape programmatic outcomes. Additionally, Doreen Starke-Meyerring and Deborah Andrews (2010) suggested that programs might include outcomes for faculty as well as students; out-

comes aimed at improving programmatic effectiveness by building team teaching and other pedagogical skills (p. 216).

As a focus, then, for the revised CPTSC Outcomes Survey, the question of what shapes program outcomes might, on the one hand, take a more focused approach by asking: "What factors shape student learning outcomes for a program?" Such a refocusing would help respondents identify those factors specific to their faculty and employment markets that they rely on as sources of criteria. Such a focus would help create internal consistency by providing useful information for a program to communicate its outcomes to students. On the other hand, the survey might take a broader approach, perhaps in an additional question that inquires about federal, state, or institutional factors as well as faculty growth goals that influence the writing and assessment of outcomes.

Communication of Outcomes

The issue of communicating outcomes to students gave rise to the following question in the CPTSC Outcomes Survey:

> Tell the methods you use to make students aware of the program outcomes. (Choices: Program or department web site; Programmatic literature (such as brochures or handouts); Classroom syllabus or policy statements; Student advising conferences; Institution catalog; Other, please specify)

Most respondents used a combination of these methods to communicate, as indicated in Table 2.

These preliminary results indicate that faculty use a variety of methods to help students become aware of the learning goals of the program. Universities are increasingly aware of program outcomes and have begun making them prominent in catalogs and on websites. And, as Johnson (2006) noted, assessment "creates a sense of community and knowledge is created through interactions, from student to student, from student to instructor and from instruction to student" (p. 417). A capstone course might be another way to communicate outcomes to students.

Table 2: Methods of Communicating Program Outcomes to Students

Method	Response Total	Response %
Classroom syllabus or policy statements	19	73%
Program or department web site	18	69%
Programmatic literature (such as brochures or handouts)	16	62%
Institutional catalog	12	46%
Student advising conferences	11	42%

Communicating outcomes, as Johnson suggests, has to do with the creation of a culture of assessment, something valuable to both the academic endeavor and the profession of technical communication. According to Salvo and Ren (2007), "engaging students as programmatic partners encourages their involvement and commitment" (p. 434). Allen asserted that "we might consider how advantageous it would be to publicize that information [well-articulated goals for students' educational outcomes] in the websites and marketing brochures" (p. 107). Such publicizing of goals speaks to a crucial element of outcomes, which, as we saw earlier, speaks to the connection between academic programs and workplace proficiency.

Conclusion

This discussion of programmatic outcomes began with a look at the reasons for collecting and analyzing outcomes as key elements of program definition. Attempts at describing program goals, courses, and emphases can show how programs respond to trends in professional and institutional contexts, and analytical approaches to outcomes and assessments can help program administrators, through the CPTSC Outcomes Survey, understand the state of assessment concepts in our field. This inquiry has shown that the pilot version of the survey has a consistent focus on assessment mechanisms in our field, but that it could also be revised to reflect elements that contribute to the culture of assessment and a greater awareness of how our programs meet workplace needs.

Summary of Findings

Overall, and in summary, the survey areas, as presented in this study, provide a clear picture of how to approach the roll of outcomes in programmatic assessment. The following list of results for each section highlights how each part contributes to an effective research method.

- **Demographics.** Identifying program characteristics allows for grouping to reflect individual program types.
- **Program level.** Collecting data about levels allows us to identify the influence of multiple administrators of programs and to evaluate outcomes at each level.
- **Program Outcomes Statements.** Knowing the wording and frequency data about these statements not only provides a fascinating look at outcomes but also serve as the basis for inter-rater reliability.
- **Assessment of Outcomes.** Asking about this aspect of performance outcomes brings the survey more in line with the analyti-

cal approach to assessment by providing answers that reflect on multiple assessment measures.

- **Maintenance of Outcomes.** Asking about how outcomes are written and revised further contextualizes the outcomes assessment process within individual programs.
- **Communication of Outcomes.** Providing information about how outcomes are communicated, as research shows, tells how administrators close the loop in using assessment data to improve student writing.

New Directions for Survey Revision

A significant area of inquiry not covered in the pilot survey, but strongly suggested by this review of literature, is that program assessment may exist on a continuum from robust and meaningful to pro-forma and superficial. In the kind of assessment suggested by Salvo and Ren (2007) and others, assessment is participative, recursive, regular, informed by scholarship and theory, supported by technology, and, above all, inclusive of a willing faculty who value the feedback from stakeholders and each other on how to improve instructional delivery. On the other hand, assessment may be the obsession of a small portion of the faculty, or of administrators, imposed as a burden on teachers, done routinely and superficially with little real impact on courses, extra-curricular experiences, and, ultimately, on student learning. Sometimes, when quality control measures are imposed on faculty by ambitious university administrators, issues of assessment, like its imposing cousin, strategic planning, is unsupported by theory, workshops, technology, and funding. Perhaps, too, faculty at specific institutions have not made the transition from the individualistic culture of productive scholarship and teaching that may characterize the department in which they teach, to a participatory culture of engaged, self-reflective scholarship and teaching in which assessment is relished. This continuum suggests that a question that attempts to measure a program's location on a continuum of the culture of assessment might provide a valuable key to understanding characteristics revealed in other questions.

Finally, to return to the challenge of aligning program goals for individual student competency with the core competencies in STC's CPTC Certification Program, an investigation of program outcomes, based on the revisions suggested in this analysis, can help faculty assess the degree to which programs prepare students to achieve in the workplace as well as in the academy. Programs that demonstrate an awareness of outcomes, how to maintain and revise them, and how to communicate them and close the

loop by improving teaching, can serve as exemplars for other programs that may be struggling with unrealized potential and unmet workplace demands. Such a goal can only improve our instruction and contribute to increased professionalism.

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The Swiss Army Knife Approach

The Challenges of the ePortfolio as a Multidisciplinary Assessment Instrument

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Abstract. This article presents a case study of the ePortfolio being used for programmatic and professional development assessment of senior-level undergraduates in a diverse professional writing program. It describes the evaluation methodologies used to assess professional writing students' preparation for graduation and for the workplace as well as the challenges of maintaining "best practices" for assessment. An investigation of these methodologies also reveals the challenges faced by smaller programs that attempt to use a single assessment instrument to measure student work in fields as diverse as public relations, technical communication, print journalism, and convergent media studies, particularly in a climate of shrinking budgets and shifting assessment and portfolio technologies.

Keywords. assessment; programmatic assessment; multidisciplinary assessment; portfolios; eportfolios

Teachers interested in the ePortfolio as a tool for assessment may face challenges when only this one tool is used to measure student learning outcomes across a diverse set of degree programs. This case study illustrates how one undergraduate department adopted the ePortfolio for programmatic assessment of their senior-level professional writing majors. Starting with a discussion of how this portfolio system was developed in light of current research into portfolio assessment, it offers suggestions for ways an assessment instrument can be shaped to address professional and disciplinary diversity, including the importance of external evaluation and revising portfolio rubrics to reflect desired student learning outcomes. Of particular concern are budget issues in an era when programmatic assessment is both increasingly mandated and largely unsupported by systemic funding.

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Background for the Portfolio System

The portfolio system of assessment is well established in writing studies. Kathleen Yancey (2009) has argued that "because e-portfolios link curriculum and assessment in ways that acknowledge and build on students' experiences, they provide new sites for learning about how we assess, about how we teach, and perhaps most importantly, about how we all learn" (p. 32). Portfolio research is "both wide and culturally complex" and allows students and faculty to reflect on both their own work and work across the discipline (p. 32). Crucial to the ePortfolio is the idea of contexts and understanding how, where, and why writing and communication take place; the ePortfolio's ability to include multiple contexts is one of its great strengths (p. 31). Yet for all their opportunities, ePortfolios also pose challenges both unique to the medium and common to assessment in professional writing.

Assessment has been a central topic of debate in the field. As Norbert Elliot (2010) has eloquently argued, assessment is an especially vexing and crucial issue in a field faced with both internal and external pressures: "The pressure of institutional and communal forces is enormous where accountability is concerned, and it is time to understand these forces, identify our traditions, and make up our minds about the directions we need to take in the assessment of technical communication" (p. 18). The need to assess our pedagogical, programmatic, and disciplinary successes and failures has taken many directions, with some adopting this call to interrogate larger social and theoretical paradigms and the institutional history of the discipline. Nancy Coppola and Norbert Elliot (2010) extended these concerns to the discussion of portfolio assessment as part of a "relational" model that ties together the core competencies of the discipline with "measurable student performance" through faculty evaluation of student work (p. 131). The relational model was envisioned as a model that did not so much reject as supplement an "auditing" model focused on demographics, grades, and other more quantitative measures (p. 128). Jeffrey Jablonski and Ed Nagelhout (2010) have suggested that one major focus of programmatic assessment must be located in technology because the field is necessarily a part of the information culture, and "stakeholders," including both faculty and students, play roles in the technological products and processes of programs (p. 171). Challenges to the core competencies model include Gerald Savage's (2010) question about whether the field in fact has an "agreed-upon body of professional knowledge" that would "necessarily be manifested as core competencies" (p. 164). As the field continues to change and grow, this is a challenge worth posing again and again, as the expectations of the workplace and the public sphere cause realignments and reconceptions in the academy.

Miles Kimball's (2003) *The Web Portfolio Guide* begins by arguing that portfolios are "a natural fit with the rapidly proliferating web courses and programs" (p. xvii). Reflecting how academic curricula and pedagogies have expanded to include developing information technologies, including instruction rooted in those technologies, the ePortfolio uses the same linked, "hypertext" approach as other web-based texts: "By creating web portfolios, which include not only implicit links but active hyperlinks between artifacts and reflections, authors in effect synthesize the products of their learning" (p. xvii). Students who have been asked to create websites for their coursework can reflect on that exercise within a similar framework rather than in the outmoded, paper-based portfolio. As Kimball noted, other advantages to the Web portfolio include their creation of a "definite audience" for the portfolio; the ease of posting and archiving; and the ability to access and evaluate the ePortfolio from multiple locations, making them a potential tool not only for faculty evaluators but also for potential employers (p. xvii). The modality of the ePortfolio remains one of its great strengths. It is able to encompass and present works in a variety of audio, visual, and interactive formats. Writing technologies themselves have become a crucial context for program assessment. According to Carol Siri Johnson (2006), students benefit from the ePortfolios because "they are not only learning to write, but they are learning to communicate in the medium they use the most—electronic communication on the internet" (p. 283).

Darren Cambridge (2008) argued that the ePortfolio has been seen as a central avenue for assessment on both the course and programmatic levels: "They have the potential to provide multidimensional assessment data while remaining firmly grounded in the diversity of learning activities and their products with which faculty and students engage in the classroom" (p. 51). The ePortfolios provide "quality assurance" for the program as a whole by providing a tool for reviewing student achievement (variously described as outcomes, competencies, objectives, and so on) across a range of classes through submission of and reflection on work done in those classes (p. 51). Assessment data can be used not only to track individual progress but also to determine the success of the curriculum in preparing students to meet outcomes. "Program improvement" has been one of the major proposed benefits of the ePortfolio system, in that it creates trace evidence that can be used for everything from accreditation to curricular revision (Wilhelm et al., 2006). The ePortfolio also offers pragmatic benefits. Depending on the software used, electronic portfolios can be a cost effective means of collecting and archiving data about a broad range

of students (Burnett & Williams, 2009). However, considering the conflict between a growing desire for assessment and shrinking operating and research budgets, cost is a serious issue.

Beyond their usefulness as tools for programmatic assessment, ePortfolios are designed to be helpful to students reflecting on their academic progress and their professionalization. Diane Goldsmith (2007) noted that this process is not only about internal "quality assurance" but also about the student's growth: "Students have access to a virtual platform for sharing their goals, achievements, and insights with advisers and counselors to ensure that they are meeting their career and educational goals" (p. 31). A portfolio system should be designed for internal, institutional validation as well as for students' personal reflection and the opportunity to prepare for the job market. Marjorie Davis, Gominda Ponnamperuma, and Jean Ker's (2009) research in medical schools, where such portfolio-based evaluation has become increasingly common, suggests that student resistance and even negativity towards constructing the portfolio can be assuaged by focusing on "their understanding of the exit learning outcomes" and "reflection on their work" (p. 89). Students can be helped to understand the portfolio not as "paperwork" or busy work but as connected to their preparation for professional practice. Maryl Gearhart and Ellen Osmundson (2009) argued that teaching portfolios helped to increase portfolio writers' awareness of the need for assessment practices and their ability to assess the professional competence of their own work. Yao-Ting Sung, Kuo-En Chang, Wen-Cheng Yu, and T. H. Chang (2009) came to a similar conclusion about how portfolios increased writers' awareness of the need for reflection and assessment and extended this to digital portfolios, arguing that the multiple types of texts included in digital portfolios make them even more useful for reflection and assessment. The portfolio can also teach students about professional expectations. As Zubin Austin, Anthony Marini, and Bernie Desroches (2005) put it, "in the 21st century, all professionals will need to produce evidence of their continuous professional development activities" and the portfolio acclimates students to creating a "concrete paper-trail" for this process of growth (p. 176).

Jo Allen (2010) has stressed that, while "determining appropriate assessment strategies," it is crucial to ground that assessment in "institutional values…the defining characteristics of a particular institution's approach to education" (p. 40). Rather than seeing assessment as a "one-size-fits-all" process, Allen contended that assessment should be framed as a highly individualized process that responds to the program's history as well as the history and "core values" of the college or university (p. 39). At the

most basic level, this would include the type of institution being assessed (research-oriented, teaching-oriented, undergraduate, and so on) but also "desired outcomes" for students (p. 40). Institutional goals should be reflected in the more specific programmatic goals, largely on a curricular basis. If the school desires to produce effective policy makers, then degree programs within the school and individual courses within the degree programs should promote this focus in desired student outcomes. Institutional outcomes are reflected in programmatic outcomes, which are reflected in course and curricular outcomes. When grounded in the specific exigency of the particular university and program, assessment tools such as portfolios can "help articulate or stabilize the priorities of the program" (p. 53). Testing students for mastery of concepts drawn from this specific exigency can indicate whether students are being given the curricular and pedagogical support to learn these concepts and apply them in an appropriate context. The results of testing can then be used for programmatic change. For example, if the program decides on "mastery of basic web design" as an outcome but finds through assessment that students are not achieving the desired mastery, courses can be created or syllabi rewritten to reflect the need for pedagogical improvements in this specific area. In broader terms, the program can use the assessment data on "mastery of basic web design" to show the university how it is either supporting or challenging a larger institutional outcome, such as "increased communication skills" for all students. To function properly, assessment must start with clear and specific learning outcomes and these learning outcomes must come from an active investigation of the program itself. Assessment strategies imposed from without can strike programs as "alien to their needs," weakening the amount and quality of internal assessment and casting doubts on the reliability of the scores themselves (Minelli, Rebora, & Turri, 2008, p. 170).

In his response to Allen's contention that programmatic goals be grounded in institutional goals, Paul Anderson (2010) praised the focus on outcomes and context but questions the ease of assessing institutional values in these terms. As he pointed out, it is relatively easy to determine how a professional writing program would assess students' "communication skills" and other outcomes generally shared between the program and the institution, but it is more difficult to see how an institutional value such as "moral conduct" could be translated into concrete disciplinary terms (p. 61). Such concepts are highly variable in meaning and application, as well as subject to changes in funding, emphasis, and administration. Although Allen's rubric is useful in stressing the need for internal inquiry and articulating outcomes, some tension remains between institutional and

programmatic emphases, as well as an awareness that institutional values and priorities can shift and change over time. A further tension, which this case study will illuminate, is the possibility that programs within a single academic department might not always share the same values and priorities. Though in a broad sense, all are interested in the professionalization of students, programs might have differing ideas about desirable professional outcomes and might even face difficulties in how an outcome that might be clear to one program (e.g., "moral conduct") might seem nebulous to another. Thus, the consideration of how departmental and institutional values might not reflect each other should be extended to a consideration of competing programmatic values.

The ePortfolio system faces additional challenges, particularly in defining standards for student work and implementing a consistent process for portfolio assessment. Questions include whether all faculty will use a single unified standard or develop their own, whether the portfolio is assessed as a whole or broken up into component parts and assessed by different faculty at different times, whether external evaluators will be brought in, and whether these external evaluators should be faculty or workplace practitioners (Bowers, 2005). Charles Secolsky and Ellen Wentland (2010) have noted that something as seemingly neutral as topic selection can affect the scoring of a portfolio in that certain writing topics may be more conducive to a scoring rubric's criteria (e.g., organization) than others. The formulation of rubrics is important when considering how students will be guided in the selection of representative documents for portfolios and whether the writing topics assigned in courses are actually reflected in the rubric. The use of external evaluators to score portfolios has been questioned, as some might argue that "familiarity with the learning and assessment context" can actually contribute to the validity of scores; others argue that familiarity (in this case, professors within the department grading portfolios) might produce a bias for higher scoring (Johnston, 2004, p. 403). Any rubric system is open to question in terms of scoring validity, including how the evaluators' "expectations" for students can affect how they apply and "adapt" the rubric's categories in different ways for different students (Osbourn Popp, Ryan, & Thompson, 2009, p. 267).

In the next section, I provide a case study of how one midwestern university implemented the ePorfolio system.

Programmatic Background

Missouri Western State University (MWSU) is an open-admission state university forty miles north of Kansas City. It enrolls approximately 6,000

students annually and is predominantly an undergraduate institution, having gained the university designation and a handful of small graduate programs within the past decade. MWSU's professional writing degrees are located within the English, foreign languages, and journalism department. Approximately seven tenured or tenure-track professors, all of whom hold terminal degrees in relevant fields, share the responsibility for undergraduate majors in technical communication, public relations, journalism, and convergent media. Convergent media is the newest of these degree programs, with its first graduates in the fall of 2009 and the only program designated as a BS rather than a BA. In recent years, the professional writing degrees have faced pressure from the state department of higher education due to budget constrictions, enrollments, and the cost of maintaining and updating equipment and software required by the curriculum.

Students in these four degree programs are required to enroll in the one-credit senior portfolio course the semester before they graduate. Responsibility for teaching the course rotates among the professional writing faculty as load allows. Enrollment in the course varies widely. Average enrollment over the past ten semesters was approximately seven students, with a high of twelve students in a semester and a low of one, when the course was taught as an independent study. Most sections of the course have used the same textbook (Miles Kimball's *The Web Portfolio Guide*). To further ensure some continuity in how the course is taught, professional writing faculty also developed an internal instructor's guide and a student handbook.

Since 2005, students have constructed and presented their portfolios electronically using server space provided by the university. These ePortfolios are built as websites meant to represent the student's best and most representative work as a major in the department. All these websites share the same basic architecture. An indexed homepage contains links to the student's current resume, a reflective essay, and several cover pages for their representative documents. The resume is meant to stress the portfolio as a measure of preparation for the job search and for holding a professional position in the student's chosen field. Reflective essays focus on a self-evaluation of the student's development as a writer, including a discussion of how the chosen representative documents demonstrate the skills and abilities necessary to be a professional writer. Cover pages for the representative documents provide further context for and reflection on these texts, with discussions of what assignment and/or course prompted the text, what composing skills and equipment were used in the creation of the text, how the text was received and evaluated, and how the text was revised before its inclusion in the portfolio.

Students in the course use the first half of the semester to construct their portfolios, with feedback provided by the professor, peers, and occasionally evaluators from outside the classroom (for example, many professors require their students to submit a draft of their resumes to the university's career services coordinator). After revisions based on this feedback and a final usability study to determine whether the ePortfolio is functioning properly (for example, all links are active, all video can run from the website, and so on), students submit their final portfolio at midsemester.

The professor e-mails the URLs for these ePortfolios to that semester's external evaluators to begin the scoring process. Two evaluators are chosen from a pool of professional writing instructors at other universities (for example, past evaluators have come from programs at Texas Tech University and Grand Valley State University) and are paid a nominal fee to review that semester's portfolios. After receiving the links, evaluators are given four to five weeks to view the ePortfolios, to score each according to a rubric provided by the department, and to return their final scores and comments to the professor. Portfolio students, who have meanwhile been working on application materials such as cover letters and converting the ePortfolio to a tool for the job search, are given a single rubric with averaged scores and comments from both evaluators. Students receiving a passing score have essentially completed the course. Students receiving a failing score may be asked to revise and resubmit the portfolio or to retake the course.

Portfolios are archived to disk to preserve them, to provide examples for future portfolio students, and to serve as an assessment tool for the professional writing programs. The total number of students in each of four broad scoring categories (Polished, Competent, Developing, and Unacceptable) is e-mailed to the entire department. Scores from external evaluators are also used in annual assessment reports created by the professional writing faculty to measure student achievement according to key criteria for the degree.

The website-based portfolio has in recent years been supplanted by a growing number of Web entities, such as ProSite, dedicated to portfolio development. These are meant to be professional outreach resources for novice and experienced writers and designers. The predetermined or template-based architecture of these sites have made the portfolio building process simpler for many graduating students. Yet these entities also present challenges. First, the very simplicity of constructing a portfolio in these sites may work against curricular goals. Students in professional writing are being evaluated partly on their ability to construct appropri-

ate frameworks for presenting their sample works. Templates negate the need for thoughtful reflection on what frameworks would be rhetorically appropriate given the audience and context. In fact, ProSite's homepage boasts that people can build their sites "without touching a line of code"; a program that requires courses in website design and architecture is unlikely to see the benefit of this approach. Second, many sites of this nature require subscription fees for "live" or publicly available sites. Taking the cost for subscriptions out of course technology fees may require considerable administrative wrangling, and although administrations often request assessment data, funding such assessment is rarely a priority in times of departmental budget tightening. Students facing greater uncertainty in the job market and record student loans may also appreciate less expensive alternatives to subscription-based services, such as the website based on university server space. Third, the broadness of the program can make it difficult to find one universally appropriate portfolio system, as many such subscription services are organized by discipline or job field. Certainly instructors involved in portfolio courses should introduce students to alternatives such as ProSite, though cost effectiveness and accessibility should not be left out of "best practices" discussions.

Crafting the Rubric

The portfolio-scoring rubric was developed by the department's professional writing committee in consultation with alumni and experienced faculty from other universities. Because the portfolios were always meant as a tool for programmatic as well as individual assessment, the rubric was designed to focus on student learning outcomes. Thus, feedback from external evaluators would indicate not only the student's level of preparation for the professional writing workplace but also the level to which the program is functioning to prepare students. Because portfolio feedback is used by professors teaching the senior portfolio course and the professional writing committee as well as to construct annual assessment reports on programmatic outcomes, the rubric must focus on measuring the key skills inherent in the practice of these disciplines.

The rubric also became a tool for curricular and pedagogical change. For example, it could be used as a partial justification for requiring further prerequisites or even for the creation of new courses (such as developing a technical editing course to focus on consistent problems in editing, proofreading, and polishing in the senior portfolios for technical communication students). For that reason, it was essential that the portfolio serve not as a single, one-size-fits-all tool, but rather as a diverse, Swiss Army knife of

assessment. Although programmatic size and pragmatic concerns, such as budget and teaching load, dictated that four diverse professional writing programs are taught with a singular portfolio course and result in similar ePortfolio architectures, the assessment must recognize the differences and distinctions among these programs if student outcome information is to be reliable and useful.

Recognizing these differences began by differentiating among the types of documents submitted by students in these programs. Students in each program are given a list of six criteria for the portfolio (for a complete list of criteria for each program, please see Appendix A). These criteria, which had been developed by the professional writing committee in consultation with the faculty in each program, represented six distinct student learning outcomes expected of every student in these programs. Students would prove their success in meeting these academic and professional expectations by submitting a representative document for each criterion. The reflective essay and the cover page, in combination with the document, demonstrate whether the student has achieved the desired outcome.

The three professional writing programs in place at the creation of the ePortfolio system shared two common criteria and thus two student-learning outcomes expected of every professional writing student:

- Ability to conduct research and present the results in appropriate written form
- Ability to create documents with an awareness of expectations of "real world" discourse communities

Students in public relations, technical communication, and journalism were all expected to submit a traditional research paper appropriate to a college context, because this requirement was seen as a mutual goal of all these programs as well as a general expectation for any English major. The second shared criterion, which stressed those "real world" audiences, required that students submit work created for a client outside the university setting. Usually, students presented the document generated during their mandated internship experience.

Unlike the research paper, the focus on "real world" audiences and clients separated professional writing majors from typical English literature or English education majors. Again, the distinction primarily focused on student learning outcomes and programmatic assessment. Because one of the central components of a professional writing program is preparing students for professional writing outside an academic setting, requiring students to reflect on their internships seemed not only to help students

focus on how their internship might be used as a tool for professional development (and as a potential positive in job applications and interviews) but also to help professors gauge how well the internship was contributing to student learning outcomes focused on professional development. Even with this shared criterion, the documents submitted varied widely according to discipline and the types of documents professionals in these disciplines create. Whereas public relations majors might submit press releases, journalists might submit articles, and technical communicators might submit process documentation. Thus even the selection of documents could be used to reinforce programmatic expectations and help students develop a professional identity. Reviewing their peers' portfolios, students could see how a single criterion could result in an exciting plurality of genres.

Four criteria were unique to each program and reflected how one relatively small department could work to gear assessment and outcomes to very diverse and distinct disciplines even when working with a single assessment tool of the ePortfolio. For example, the journalism portfolio included the following criteria:

- Mastery of traditional journalism conventions such as the inverted pyramid.
- Ability to write extended journalism stories for specific target audiences.
- Mastery of layout and design principles.
- Understanding of ethical and legal issues for journalists.

The first criterion stressed the importance of field-specific terminology, as well as the importance of applying journalistic concepts such as the "inverted pyramid" to representative documents such as a news article. The second criterion stressed the importance of audience as well as how the structure and language of representative documents such as feature stories mirror the concerns and expectations of possible readers. The third criterion stressed the importance of visual language, illustrating the professional's mastery of style and aesthetics as they contribute to the reception of representative documents such as magazine spreads. The final criterion stressed the importance of the social implications of professional writing, with students presenting an assignment in media law and ethics as evidence of their preparation for addressing such ethical and legal issues as writers in the workplace.

In many ways, the criteria for public relations and technical communication portfolios were closer to each other than to the criteria for journal-

ism portfolios. The similarity may be expected, as in many ways the written genres, audiences, and purposes of these two professions are closer to each other than to journalism. Both sets of criteria stressed the importance of written genres, just as the language used ("mastery") stressed the importance of growth, professionalization, and student learning outcomes:

- Mastery of public relations and business writing genres.
- Mastery of technical and business writing genres.

Both sets of criteria also included a criterion focused on using "technical tools" available to professionals in the field "to create documents that are visually effective," as well as a criterion focused on the "ability to work in teams to create written projects." The final criterion for the portfolio was quite distinct. Whereas public relations majors were asked to show the "ability to write persuasively," technical communicators were asked to show the "ability to guide users through processes and procedures."

Even given the similarities in many of the requirements for the public relations and technical communication portfolios, the portfolio criteria clearly showed a focus on differentiating between the programs to better assess student-learning outcomes in each and to prepare students for the distinctions between these two professions in the workplace. Clearly, the most obvious difference is between the request for persuasive writing on the one hand and procedural writing on the other. Whereas public relations majors needed to know how to write promotional material for a company to secure a job in their field, technical communication majors needed to know how to write instructions and process explanations to secure a job in their field. The former could be used to assess a course in advanced public relations writing and the latter could be used to assess a course in documentation. Suggestions for representative documents often reveal these types of disciplinary differences. For example, when discussing *tools* for creating *visually effective* texts, many of the tools (computer programs) mentioned for public relations and technical communication majors were the same (e.g., PAGEMAKER). Other suggestions for representative documents reflected the separate curricular and degree plans. Technical communication majors were expected to produce texts using ROBOHELP; public relations majors were not. Public relations majors proved their "mastery" of genre through proposals and correspondence. Technical communication majors proved similar competence through formal reports. In this way, by fine-tuning criteria where necessary and suggesting different types of representative documents where applicable, the same basic framework for assessment could be used for these very different student writers.

As mentioned before, external evaluators are sent a rubric to score students' ePortfolios and to gauge how well students are meeting the learning outcomes stated in the criteria. Evaluators review the websites (resume, reflective essay, cover pages, representative documents) and grade students in a number of different categories. These categories were meant to reflect the focus on genre, audience, style, and visual appeal found in the criteria (see Appendix B for the complete convergent media rubric and Appendix C for the complete journalism, public relations, and technical communication rubric). For each of the six categories, students can receive a score from "Unacceptable" (the lowest, worth 0 points) to "Polished" (the highest, worth 3 points). Their total for all six categories will determine their overall score, also ranked from "Unacceptable" (failing) through to "Polished." In addition to creating this scoring system and the rubric's categories, the programs crafted definitions for levels of achievements in each category. For example, evaluators are told that a rating of "Polished" in the "Rhetorical Strategies/Audience" category signifies that the student has a "mastery of understanding of context, sense of purpose, appeal to audience, and promotion of ethos or image." A rating of "Unacceptable" in the same category signifies that the document shows "little evidence of understanding of context, sense of purpose, appeal to audience, and promotion of ethos or image." A "Polished" document is exemplified by "language (vocabulary, reading level) and detail…appropriate to reading level and professional context;" by contrast, an "Unacceptable" document is exemplified by "language (vocabulary, reading level) and detail…inappropriate to reading level and professional context."

The rubric, in many ways, is the most "one-size-fits-all" part of this process. Majors in public relations, technical communication, and journalism are given diverse sets of criteria and even more diverse sets of representative documents and software programs from which to draw but are given their final evaluation with a single instrument of the scoring rubric. This singular rubric is a product of necessity. Given the relative smallness of the programs, the need for a programmatic assessment tool to measure professional writing studies as a whole, and the stresses puts on external evaluators (including nominal rewards and a comparatively short time to review all of the portfolios), the singular rubric simplifies the process. The single rubric also makes it possible to teach the portfolio course as multidisciplinary, which is a budgetary and staffing necessity. A rainbow of rubrics might hopelessly complicate in-class activities such as peer review, in which students are attempting to assess each other's portfolios during the drafting stages.

Safety guards are also built into the portfolio system. Because evaluators are chosen largely because they are familiar with all the disciplines in question, individual evaluators have the experience to interpret the rubric in terms of disciplinary difference. For example, an evaluator familiar with public relations and technical communication would understand how the rubric's call for "skillful use of sentence variety, figurative language, cohesion, and voice" means quite different things in these differing contexts. Though a press release might skillfully use an extended metaphor, figurative language is less appropriate in a document such as operating instructions. The fact that external evaluators are encouraged to add written comments also allows them to give context to their scores. Evaluators can comment not only on student texts but also on the rubric itself, as demonstrated in the case of convergent media, discussed in the next section. Figure 1 reproduces an example scoring rubric with evaluator's comments for a graduating journalism student.

Of course, there can be discrepancies in scoring between the external evaluators. Tables 1 through 3 illustrate this discrepancies by showing how the three students evaluated in fall 2009 (two journalism students and one convergent media student) fared in each rubric category with both evaluators. Although Table 2 might demonstrate inter-reader reliability, in that the scores for both evaluators in each category are identical, Tables 1 and

Category	Rating	Comments
Whole Document	3	The documents are coherently organized and remain focused on the topic at hand.
Genre Conventions	2	You make good use of generic conventions such as the inverted pyramid in your feature stories. Work on citation conventions, as there is a faulty paraphrase on page 3 of your research paper.
Rhetorical Strategies	3	Your small business website in particular shows a knowledge of the expected users of this information.
Style	2	Work on varying the sentence structure in your writing. Your overuse of complex sentences can grow confusing for readers.
Visual Design	2	Your brochure shows a poor use of contrast, with dark red text being used against a black background.
Surface Correctness	3	The documents are well proofread throughout the portfolio.
Overall Rating (sum)	15	Your awareness of audience and journalistic conventions is admirable. Work on introducing variety from sentence to sentence in your writing.

Figure 1: Example Scoring Rubric for Journalism Student

3 raise red flags. In a system with only eighteen points possible, a five-point discrepancy separates the two evaluators in Table 1, with the second evaluator consistently rating the student higher. Though less glaring, Table 3 notably shows one evaluator giving the highest possible score to the student in four out of six categories though the other evaluator never gives the highest possible score in any category.

Standard departmental practice of splitting the difference between evaluators to arrive at the final overall score would give both the first and

Table 1: Evaluator Scores for Journalism Student #1 (Fall 2009)

Rubric Category	Evaluator 1	Evaluator 2
Whole Document	2	3
Genre Conventions	2	3
Rhetorical Strategies	2	3
Style	2	3
Visual Design	2	2
Surface Correctness	1	2
Overall Rating	11 ("Competent")	16 ("Polished")

Table 2: Evaluator Scores for Journalism Student #2 (Fall 2009)

Rubric Category	Evaluator 1	Evaluator 2
Whole Document	2	2
Genre Conventions	2	2
Rhetorical Strategies	2	2
Style	2	2
Visual Design	2	2
Surface Correctness	2	2
Overall Rating	12 ("Competent")	12 ("Competent")

Table 3: Evaluator Scores for Convergent Media Student (Fall 2009)

Rubric Category	Evaluator 1	Evaluator 2
Whole Document	2	3
Genre Conventions	2	3
Rhetorical Strategies	2	3
Style	2	1
Visual Design	2	2
Surface Correctness	2	3
Overall Rating	12 ("Competent")	15 ("Competent")

third students a final rating of 13.5 ("competent"), though the adjusted score does not really reflect the differences between evaluators in both cases and the differences in category scores between the two students. Despite an admittedly small sample size in one semester, a cursory examination of differences between evaluators over several semesters indicates that such discrepancies are more common than anecdotal evidence has suggested. A detailed statistical comparison is suggested as a precursor to changes in the training and instructions given to evaluators, as insuring inter-reader reliability requires immediate attention and overhaul.

Because the assessments are used both for individual students and for the program as a whole, reliability is an important question and an area in which the program could stand to improve. Anecdotally, members of the department can cite few examples of wide discrepancies between scores (for example, a portfolio rated as "polished" by one scorer but "unacceptable" by another), but few attempts have been made to study scoring distributions and determine the actual level of variation between evaluators. In the case of varying scores, standard practice has been to take the mean as the final score, which clearly presents major problems. The program has placed faith in the process of developing the criteria and rubrics in the first place, with feedback from professionals both inside and outside the university. Yet, largely due to problems of distance and budgetary constraints, few measures such as norming sessions have been implemented to determine whether the criteria and rubrics are as transparent and normative as hoped and whether evaluators are interpreting and applying the rubrics in comparable and consistent ways. Traditionally, evaluators have not been provided with examples of previous portfolios and their accompanying scoring rubrics that demonstrate levels of achievement and standards for rating. Scoring using the rubric is an area in which programmatic changes are obviously necessary.

Programmatic Challenges to Assessment

Convergent media is the most distinct of the professional writing programs. It is by far the most recent, the only BS, and the least traditional in terms of genres and documents. Though the curriculum and the degree plan tie it in many ways to journalism, with shared classes in subjects such as publication design, convergent media is conceived as far more cutting edge than the print-focused journalism BA Incorporating aspects of video and multimedia production, convergent media is in some respects more interdisciplinary than the three other, more established programs. Graduates of the program are prepared for innovative careers in diverse fields

ranging from digital photography to web design. Unfortunately, in many ways, the senior portfolio course proved to be unprepared for them.

By the fall of 2009, when the first convergent media seniors entered the portfolio course, the department had been using the ePortfolio system, the criteria for each program, and the scoring rubric for four years. However, in a programmatic oversight, criteria had never been developed and approved for convergent media majors. Convergent media students were forced to wait to select their documents and create the basic architecture for their portfolio websites while students in the other programs forged ahead. An emergency meeting of the professional writing committee and later conferences with convergent media faculty led to criteria being developed within the space of one week. The urgency of the process meant that the criteria had to be approved and handed to students quickly, without much of the discussion and external review that had preceded approval of the criteria for the other programs. A statewide call for greater assessment in higher education added pressure that meant these hastily developed criteria and the resulting rubric scores would be used to draft programmatic assessments before the new criteria could be revised.

Two major changes stood out in these new guidelines. The first was that the number of portfolio criteria for convergent media (and thus, the number of representative documents to be included) dropped from six to five. The second major change resulted from the first. Previously, all the programs had shared criteria that asked for a research paper and an internship document. Convergent media guidelines retained the internship document but dropped the research paper.

The elimination of the research paper probably should have signaled the need for a deeper investigation of the ePortfolio as an assessment tool because, until its exclusion from the convergent media portfolio requirements, the research paper had served as the cornerstone for all professional writing portfolios. It was the one document whose features, such as constructing logical arguments and locating and citing relevant sources, united the student learning outcomes across technical communication, public relations, and journalism. The scoring rubric had been written with the assumption that a research paper, as well as the student learning outcomes embodied in the research paper, stood front and center in the portfolio.

Other signals indicated that the ePortfolio required revision. Some of the criteria for convergent media were familiar, as they had been drawn from journalism. For example, students were required to submit news stories, magazine spreads, and an assignment on media law and ethics. The major new criterion called for a "mastery of convergent media prin-

ciples." In itself, this indicated a shift away from the essay- and article-heavy portfolios of the other programs and toward the more innovative new media students were expected to utilize as part of their professionalization. Websites had long been listed as an example representative document for other portfolios; suddenly they were joined by newer beasts such as video packages, flash videos, and interactive graphics.

Despite these challenges, students in convergent media completed their portfolios and submitted them to the external evaluators. At that point, the ePortfolio as programmatic assessment tool went into virtual meltdown for one of the most familiar, if frustrating, of reasons: technology. Because the ePortfolios had been designed as largely text-heavy, if also containing to some degree interactivity, visual appeal, and the occasional audiovisual document, the school's server had never been thoroughly tested for the types of materials convergent media students were now required to submit. The student server would not run videos and, in some cases, would not allow them to be uploaded in the first place. Compatibility issues between computers and the sheer size of media files proved disastrous. Problems caused by the server seizing up after view requests led to some shutdowns of student portfolios. Students whose degrees were meant to ensure their success as multimedia experts and website designers could not share their work because facilities simply did not allow for it. The assessment tool had not kept up with the texts it was meant to assess, largely due to a lack of funds to improve system functionality. Suddenly ePortfolios were being burned to disk and snail-mailed to evaluators so that they could score a portfolio offline.

Though all the convergent media students passed, comments from external evaluators over e-mail and even on the scoring rubrics themselves expressed concern with how the addition of convergent media had made the portfolio system more problematic. Technological issues were in some sense the least of the problems and could be solved in the future with slight changes to architecture and a greater focus on usability testing before the final portfolios were submitted. The larger question was whether the systematic combination of the differing criteria and the shared scoring rubric, which had proven successful in the past in addressing the three older professional writing programs, was simply stretched too far with the addition of a program as different as convergent media. Was this assessment tool expected to do too much? As evaluators noted, the program description posted on the department's website stressed interactivity and multimedia but these were largely absent from the criteria and completely absent from the rubric. The advertised student learning outcomes were not reflected in this final evaluation.

The professional writing committee took these concerns seriously, meeting as a whole and then as a smaller group of the convergent media faculty to discuss the criteria and the rubric for the ePortfolio. The faculty first decided that the convergent media criteria needed to be expanded to six, both to bring them in line with the number of criteria for the other programs and to better represent the program's learning outcomes. A singular criterion covering "mastery of convergent media principles" was subdivided into two criteria, with the first focusing on multimedia production and design and the second focusing on website production and design. This distinction would allow students a clearer picture of the program's main goals and the types of documents a graduate would be expected to create. It also clarified the difference among convergent media, with its emphasis on interactivity and multimodal artifacts, and the other programs, with their emphases on writing.

A more fundamental shift occurred as convergent media was given a separate scoring rubric. Though this rubric would retain some of the categories from the original, it would add a major new category. Convergent media's rubric would contain both visual design and multimedia whereas the old rubric had lumped these concepts into a broad "visual design" category. Again, this change would reinforce the program's move away from traditional, print-based texts and provide clearer data on programmatic outcomes in creating multimedia products. Tables 4 and 5 illustrate this change with two students from spring 2011. Table 4 is the rubric for a journalism student scored using the traditional categories. Table 5 is the rubric for a convergent media student, where the "visual design" category has been divided into the two separate rubric categories of "visual design" and "multimedia," and the "rhetorical strategies" category has been eliminated. Note the continuing problem of inter-rater reliability in the divergent overall ratings.

Table 4: Evaluator Scores for Journalism Student (Spring 2011)

Rubric Category	Evaluator 1	Evaluator 2
Whole Document	3	3
Genre Conventions	3	2
Rhetorical Strategies	3	3
Style	3	3
Visual Design	2	1
Surface Correctness	2	2
Overall Rating	16 ("Polished")	14 ("Competent")

Table 5: Evaluator Scores for Convergent Media Student (Spring 2011)

Rubric Category	Evaluator 1	Evaluator 2
Whole Document	2	3
Genre Conventions	2	3
Style	2	2
Visual Design	2	2
Multimedia	2	2
Surface Correctness	2	2
Overall Rating	12 ("Competent")	14 ("Competent")

The changes in the rubric have been a success. Portfolio guidelines are now in line with the program description and students are given clear and immediate guidance in their criteria and selection of representative documents. Technological issues of access and accessibility have been minimized. Most importantly, the single instrument of the ePortfolio now provides useful data for outcomes it is meant to measure. Portfolio scores and comments continue to be used internally for annual programmatic assessment reports and the revised rubric and criteria guarantee that a more meaningful set of data emerges from convergent media. For example, Appendix D reproduces an excerpt from the student learning outcomes report for spring 2012. This report, which is compiled from the category scores in the senior portfolio rubrics, is submitted both to the university and to the state as a measurement of how well students in each of the professional writing programs are meeting key learning outcomes for that program. Deficiencies in any category (for example, a number of students rating below "competent" in graphic design principles) would be considered grounds for reassessment of curriculum and instruction in that area. The department also compiles data on overall scoring trends for each program to determine whether student portfolios compare favorably over time and across the four professional writing degrees. For example, Tables 6 and 7 list overall scores for the spring and fall 2011 semesters.

If the overall scores had shifted notably (for example, a sharp trend away from "competent" and "polished" to "unacceptable" or "developing" in one or more programs), this would also be considered grounds for reassessment of curriculum and instruction.

Conclusion

In many ways, the MWSU professional writing programs portfolio can be seen as a mixed case in terms of "best practices" for ePortfolio assessment.

Table 6: Overall Scores for Each Program (Spring 2011)

	Unacceptable	Developing	Competent	Polished
Convergent Media	0	0	1	1
Journalism	0	0	1	0
Public Relations	0	0	0	1
Tech Comm	0	0	2	0
Total	0	0	4	2
Percentage of Total Portfolios	0%	0%	66.6%	33.3%

Table 7: Overall Scores for Each Program (Fall 2011)

	Unacceptable	Developing	Competent	Polished
Convergent Media	0	0	0	0
Journalism	0	0	1	0
Public Relations	0	0	1	0
Tech Comm	0	0	1	0
Total	0	0	3	0
Percentage of Total Portfolios	0%	0%	100%	0%

Its approach is indebted to the existing research, including facets such as gearing criteria and rubrics toward individual disciplines, making sure assessment tools reflect desired student learning outcomes, using the ePortfolio as a means of both individual and programmatic evaluation, and using portfolio data to make curricular changes. The assessment tool was designed with feedback and critique built into the system. Not only the professional writing faculty but also alumni, evaluators, and even the students constructing the portfolios were allowed to test the system for its effectiveness.

As with all assessment systems, the ePortfolio has flaws and oversights. Budgetary and curricular constraints have kept the department from fully embracing more recent developments in ePortfolio systems. Cursory reviews of inter-reader reliability measures have raised cause for concern and further investigation. Internally, the department did not adjust to the changing nature of its programs and the consequent need for revisions to rubrics, criteria, and even the technology used to support and publish the ePortfolios. However, this failure ultimately illustrated the strengths of the system. Once fundamental problems became evident, faculty could adjust the assessment tool to align it with programmatic goals. In many ways,

changes were facilitated by the presence of external evaluators, whose position outside the department allowed them to grasp emerging problems in a way an insider might not have been available to do. Assessment tools require vigilance. Essentially, the measurement itself must be measured and recut to fit new situations, including shifts in professional expectations and technology.

Overall, this case study demonstrates the usefulness of a single assessment tool for small, diverse programs. Because these programs may lack the resources to do much longitudinal and large-scale assessment, they are left with few options in terms of how the evaluation of student work is used to track and adjust their guidance in professionalization. The ePortfolio is an inexpensive, accessible method for presenting student work and for soliciting programmatic feedback from external evaluators. This single tool, if properly adjusted to meet the needs of programs with different goals and desired student learning outcomes, can prove to be an essential asset.

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Appendix A: Criteria for All Programs

[Note: * indicates suggested documents for meeting the above criterion]

Convergent Media

1) Mastery of traditional journalism conventions and genres

   *News stories (2–3)

*Feature story

*Investigative/in-depth story

2) Create documents with an awareness of expectations of "real world" discourse communities.

*Anything created for an internship

OR

*Document/project created for a client or organization

3) Mastery of layout and design principles

*Newspaper spread

AND/OR

*Magazine spread

AND/OR

*Website (journalistic or non-journalistic)

4) Mastery of multimedia production and design principles

*Video package (1–5 minutes)

*Journalistic slideshow

*Flash video

*Interactive graphics

5) Mastery of web site content creation and design

*Web site

6) Understanding of ethical and legal issues for journalists

*Major assignment addressing issues of media law and ethics

Journalism

1) Ability to conduct research and present the results in appropriate written form

*Any research paper (any paper with a bibliography or works cited) for any course 200-level or higher

2) Mastery of traditional journalism conventions such as the inverted pyramid

*News articles (4–5 items, no longer than 10 pages total)

3) Create documents with an awareness of expectations of "real world" discourse communities.

*Anything created for an internship

*Document/project created for a client or organization

4) Ability to write extended journalism stories for specific target audiences

*Feature story

*Investigative story

*In depth report

6) Mastery of layout and design principles

*Newspaper spread

*Magazine spread

7) Understanding of ethical and legal issues for journalists

*Major assignment addressing issues of media law and ethics

Public Relations

1) Ability to conduct research and present the results in appropriate written form

*Any research paper (any paper with a bibliography or works cited) for any course 200-level or higher

2) Mastery of public relations and business writing genres

*Example of a longer form such as a backgrounder or proposal

*Collection of news releases (4–5 items, no longer than 10 pages total)

*Collection of correspondence (4–5 items, no longer than 10 pages total)

3) Create documents with an awareness of expectations of "real world" discourse communities.

*Anything created for an internship

*Document/project created for a client or organization

4) Use the technical tools available to public relations professionals to create documents that are visually effective (include description of tools used, i.e. HTML, PAGEMAKER)

*Brochures, newsletters created with QUARK, PAGEMAKER, and so on

*POWERPOINT presentation—include text of presentation

*Web site/pages

5) Ability to work in teams to create written projects

*Collaborative project—include information about contribution and thoughts on working in teams in cover sheet

6) Ability to write persuasively

*Promotional material for an organization, department, or business

* Proposal

* Persuasive essay or research paper

Technical Communication

1) Ability to conduct research and present the results in appropriate written form

   * Any research paper (any paper with a bibliography or works cited) for any course 200-level or higher

2) Mastery of technical and business writing genres

   *Formal report

   *Collection of correspondence (4–5 items, no longer than 10 pages total)

   *Proposal

   *Case study

3) Create documents with an awareness of expectations of "real world" discourse communities.

   *Anything created for an internship

   *Document/project created for a client or organization

4) Use the technical tools available to technical communicators to create documents that are visually effective (include description of tools used, i.e. HTML, FRAMEMAKER, ROBOHELP)

   *Brochure or document created with QUARK, FRAMEMAKER, and so on

   *Web site/pages

   *Index/help file created with ROBOHELP

5) Ability to work in teams to create written projects

   *Collaborative project—include information about contribution and thoughts on working in teams in cover sheet

6) Ability to guide users through processes or procedures

   *Instructions

   *Procedure guide

   *Explanation of a process

Appendix B: Convergent Media Rubric

Whole document issues

Polished (3 points): Displays mastery of organization, coherence, focus, and unity.
Competent (2 points): General control of organization, coherence, focus, and unity.
Developing (1 point): Some major breaks in organization, coherence, focus, and unity.

Unacceptable (0 points): Lacks competence in organization, coherence, focus, and unity.

Genre Conventions

Polished (3 points): Generic conventions (inverted pyramid, press release format, consistent headings, etc.) and attributions of information and quotations are used effectively and appropriately in the documents. Cover essays clearly explain conventions of the genre.
Competent (2 points): Generic conventions (inverted pyramid, press release format, consistent headings, etc.) are used somewhat effectively and appropriately in the documents. Cover essays inadequately explain conventions of the genre.
Developing (1 point): Generic conventions (inverted pyramid, press release format, consistent headings, etc.) are used occasionally in the documents. Cover essays' descriptions of conventions of the genre are incomplete.
Unacceptable (0 points): Generic conventions (inverted pyramid, press release format, consistent headings, etc.) are not used in the documents. Cover essay fails to explain conventions of the genre.

Style

Polished (3 points): Skillful use of sentence variety, figurative language, cohesion, and voice as appropriate to document. Follows correct Associated Press style conventions.
Competent (2 points): Somewhat strong use of sentence variety, figurative language, cohesion, and voice as appropriate to document.
Developing (1 point): Some use of sentence variety, figurative language, cohesion, and voice as appropriate to document.
Unacceptable (0 points): Inadequate use of sentence variety, figurative language, cohesion, and voice as appropriate to document.

Visual Design

Polished (3 points): Excellent use of layout, design, illustrations, fonts, color, and white space, as appropriate.
Competent (2 points): Some use of appropriate layout, design, illustrations, fonts, color, and white space.
Developing (1 point): Inadequate use of layout, design, illustrations, fonts, color, and white space.
Unacceptable (0 points): Little evidence of an understanding of layout, design, illustrations, fonts, color, and white space.

Multimedia

Polished (3 points) Multimedia integrates multiple media to effectively tell a story. Where appropriate, combines quality sound, video, photos, graphics and text seamlessly to present information in an appealing way.
Competent (2 points): Uses multimedia effectively, but may have some weaknesses in the acquisition, editing or integration of the multiple media.
Developing (1 point): Some integration of different media, but may have significant weaknesses in the acquisition, editing or integration of the multiple media.
Unacceptable (0 points): Little evidence of an understanding of how to acquire, edit and integrate multiple media.

"Surface" Correctness

Polished (3 points): Displays mastery of spelling, grammar, mechanics, and standard usage.
Competent (2 points): Minor proofreading errors in spelling, grammar, mechanics, and standard usage.
Developing (1 point): Some serious errors in spelling, grammar, mechanics, and standard usage.
Unacceptable (0 points): Lacks competence in spelling, grammar, mechanics, and standard usage.

Overall Score (Add the points scored in the above categories. Assign the appropriate rating, as indicated below.):

Rating Point Range

Polished 16–18 (*and* no "1" or "0" in any category)

Any portfolio scoring a "1" or "0" in *any* category may not be rated as "Polished/Professional," regardless of the overall score.

Competent 11–15 (*and* no "1" or "0" in "Whole document" or "Surface")

Any portfolio scoring a "1" or "0" in "Whole Document" or "Surface" may not be rated as "Competent/Maturing," regardless of the overall score.

Developing 5–10 (*or* a "0" in "Whole document" *or* "Surface")

Any portfolio scoring a "0" in "Whole Document" *or* a "0" in "Surface" must be rated overall as "Marginal/Developing," regardless of the overall score.

Unacceptable 0–4 (*or* a "0" in "Whole document" *and* "Surface")
Any portfolio scoring a "0" in "Whole Document" *and* a "0" in "Surface" must be rated overall as "Lacks Competency," regardless of the overall score.

Appendix C: Journalism, Public Relations, and Technical Communication Rubric

Whole Document Issues

Polished (3 points): Displays mastery of organization, coherence, focus, and unity.
Competent (2 points): General control of organization, coherence, focus, and unity.
Developing (1 point): Some major breaks in organization, coherence, focus, and unity.
Unacceptable (0 points): Lacks competence in organization, coherence, focus, and unity.

Genre Conventions

Polished (3 points): Generic conventions (inverted pyramid, press release format, consistent headings, etc.) are used effectively and appropriately in the documents. Displays appropriate documentation forms (MLA, APA, etc.). Cover essays clearly explain conventions of the genre.
Competent (2 points): Generic conventions (inverted pyramid, press release format, consistent headings, etc.) are used somewhat effectively and appropriately in the documents. General control of documentation forms (MLA, APA, etc.). Cover essays inadequately explain conventions of the genre.
Developing (1 point): Generic conventions (inverted pyramid, press release format, consistent headings, etc.) are used occasionally in the documents. Incorrect or incomplete use of documentation forms (MLA, APA, etc.). Cover essays' descriptions of conventions of the genre are incomplete.
Unacceptable (0 points): Generic conventions (inverted pyramid, press release format, consistent headings, etc.) are not used in the documents. Does not display appropriate documentation forms (MLA, APA, etc.). Cover essay fails to explain conventions of the genre.

Rhetorical Strategies/Audience

Polished (3 points): Mastery of understanding of context, sense of purpose, appeal to audience, and promotion of ethos or image. Language (vocabulary, reading level) and detail is appropriate to reading level and professional context. Cover essays demonstrate a clear understanding of audiences' needs and expectations.
Competent (2 points): Evidence of understanding of context, sense of purpose, appeal to audience, and promotion of ethos or image. Language

(vocabulary, reading level) and detail demonstrates some awareness of reading level and professional context. Cover essays demonstrate some understanding of audiences' needs and expectations.
Developing (1 point): Some evidence of understanding of context, sense of purpose, appeal to audience, and promotion of ethos or image. Language (vocabulary, reading level) and detail demonstrates some awareness of reading level. Cover essays demonstrate an unclear understanding of audiences' needs and expectations.
Unacceptable (0 points): Little evidence of understanding of context, sense of purpose, appeal to audience, and promotion of ethos or image. Language (vocabulary, reading level) and detail is inappropriate to reading level and professional context. Cover essays demonstrate a lack of understanding of audiences' needs and expectations.

Style

Polished (3 points): Skillful use of sentence variety, figurative language, cohesion, and voice as appropriate to document.
Competent (2 points): Somewhat strong use of sentence variety, figurative language, cohesion, and voice as appropriate to document.
Developing (1 point): Some use of sentence variety, figurative language, cohesion, and voice as appropriate to document.
Unacceptable (0 points): Inadequate use of sentence variety, figurative language, cohesion, and voice as appropriate to document.

Visual Design

Polished (3 points): Excellent use of layout, design, illustrations, fonts, color, and white space, as appropriate.
Competent (2 points): Some use of appropriate layout, design, illustrations, fonts, color, and white space.
Developing (1 point): Inadequate use of layout, design, illustrations, fonts, color, and white space.
Unacceptable (0 points): Little evidence of an understanding of layout, design, illustrations, fonts, color, and white space.

"Surface" Correctness

Polished (3 points): Displays mastery of spelling, grammar, mechanics, and standard usage.
Competent (2 points): Minor proofreading errors in spelling, grammar, mechanics, and standard usage.
Developing (1 point): Some serious errors in spelling, grammar, mechanics, and standard usage.

Unacceptable (0 points): Lacks competence in spelling, grammar, mechanics, and standard usage.

Overall Score (Add the points scored in the above categories. Assign the appropriate rating, as indicated below.):

Rating Point Range

Polished 16–18 (and no "1" or "0" in any category)

Any portfolio scoring a "1" or "0" in any category may not be rated as "Polished/Professional," regardless of the overall score.

Competent 11–15 (and no "1" or "0" in "Whole document" or "Surface")

Any portfolio scoring a "1" or "0" in "Whole Document" or "Surface" may not be rated as "Competent/Maturing," regardless of the overall score.

Developing 5–10 (or a "0" in "Whole document" or "Surface")

Any portfolio scoring a "0" in "Whole Document" or a "0" in "Surface" must be rated overall as "Marginal/Developing," regardless of the overall score.

Unacceptable 0–4 (or a "0" in "Whole document" and "Surface")

Any portfolio scoring a "0" in "Whole Document" and a "0" in "Surface" must be rated overall as "Lacks Competency," regardless of the overall score.

Appendix D: Student Learning Outcomes Report for Spring 2012 (Excerpt)

Student Learning Outcome **Students will . . .**	**Results for AY**
1. Use graphic design principles and tools to create effective print layouts. (BA-Journalism; BA-Public Relations)	1 student rated "Competent" [Some use of appropriate layout, design, illustrations, fonts, color, and white space.]
2. Master traditional journalism conventions and design principles (BA-Journalism, BS Convergent Media)	5 students rated "Polished" [Generic conventions (inverted pyramid, AP style, etc.) are used effectively and appropriately in the documents. Displays appropriate documentation forms (MLA, APA, etc.). Cover essays clearly explain conventions of the genre.]

3. Use of clear, correct sentence style adhering to AP requirements as appropriate (BA-Journalism)	Not Applicable – No BA – Journalism graduates in group
4. Effective use of rhetorical strategies to establish ethos and persuade audiences (BA—Public Relations)	1 student rated "Polished." [Mastery of understanding of context, sense of purpose, appeal to audience, and promotion of ethos or image. Language (vocabulary, reading level) and detail is appropriate to reading level and professional context. Cover essays demonstrate a clear understanding of audiences' needs and expectations.]
5. Master public relations and business writing genres (BA-Public Relations)	1 student rated "Polished" [Generic conventions (inverted pyramid, press release format, consistent headings, etc.) are used effectively and appropriately in the documents. Displays appropriate documentation forms (MLA, APA, etc.). Cover essays clearly explain conventions of the genre.]

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Revising the Technical Communication Service Course

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Abstract. This article describes our process for revising the technical communication service course at UMass Dartmouth, using Robert Reich's (1991) description of the symbolic analyst. Reich's framework helped us identify our curricular needs, providing a rhetorical ground for defining our course and its objectives. This framework also placed rhetorical principles at the center of our curriculum, creating a space for active student learning.

Keywords. program assessment, curriculum design, learning objectives, rhetorical theory, technical communication

As a new faculty member in the fall of 2009, I was placed on the committee to revise our technical communication service course for undergraduates. In general, our needs mirror those that many established programs in technical communication face: a first-generation service course that needs to be revised to accommodate change—changes in technology, in the majors we serve, and in our expectations for students. Admittedly, the program needs a major upgrade. When meeting with other faculty about how to revise the curriculum, our first response was to ask, "Do we have the right textbook?" But responding to that question turned into an unsatisfactory exercise, seeming to offer a simple solution without first understanding our curricular needs. Subsequently, in the fall of 2010, the university approved a new University Studies curriculum, revising learning outcomes, curricular structures, and assessment processes. Every course in the new curriculum, including technical communication, needs approval by the University Studies Committee. This approval process gave us an opportunity to assess our needs and to look at how the course is rhetorically grounded.

Indeed, the most significant part of the revision process was to figure out our goals and assumptions, asking, "What should we be teaching?

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What is our domain?" In this article, I describe how Robert Reich's (1991) description of the symbolic analyst helped us to define our curricular needs, providing a rhetorical ground for defining our course and its objectives. In the literature, many have referenced the potential value of Reich's framework, including Greg Wilson (2001), William Hart Davidson (2001), and Johndan Johnson-Eilola (1996), each arguing that Reich's framework provides a ground for articulating the value of technical communication. My goal is to extend these arguments by analyzing how this framework also places rhetorical principles at the center of our curriculum.

The Need for Revision

As Teresa Kynell (2000) pointed out, the technical communication course came about in the early 20th century in response to the need to make composition courses more relevant to engineering students and their need to describe abstract thought and complex objects to different audiences. Since then, technical communication has aligned itself more closely to the needs of industry, developing curricula based on workplace genres—our course included. Developed in the 1990s, our technical communication course reflects the programmatic needs of the time. As Dan Riordan (1999) remarked, the 1990s represented a "new world" that was "wondrous and refreshingly challenging" (p. 248). But, in the literature, three challenges characterized the field's discussions: the need to move beyond teaching the template, to situate learning, and to prepare students for the workplace. For example, Natasha Artemeva, Susan Logie, and Jennie St-Martin (1999) expressed the need to move beyond formats and templates to "the development of a particular perspective on audience" (p. 302). And Nancy Coppola (1999) argued against the information transfer model (p. 258) and for models that privilege students as active participants in learning, stating that the "new" technical communication course should follow "a model of effective technical communication embedded in social structures" (p. 262) and include concepts such as collaboration, context-based activities and assignments, and feedback and iteration.

But the literature is also marked by the need to both situate learning without simulating a learning experience and to transition students into the workplace. Hence assignments focused on the engineering curriculum were privileged based on the rationale that writing assignments should be "connected to the subject matter courses students are taking concurrently with the communication course" to allow for "authentic exigencies;" to create a "dialogic environment" (Artemeva et al., 1999, p. 313); to tap into the "'polyphonic' conversation among members of a community or communi-

ties to understand how knowledge is 'shaped' and 'situated'" (Nagelhout, 1999, p. 287); and "to engage in discipline-specific research and discursive practices in order to develop effective strategies for exploration" (Nagelhout, 1999, p. 287). As Artemeva et al. (1999) argued, the design of the course should "encourage the kind of learning situations common in the workplace" (p. 313).

Our technical communication course exemplifies this model of thinking about the curriculum. In our syllabus, we explicitly make those connections to the workplace: "We will cover the major communication issues affecting today's workplace, with real world examples and extensive role-playing." Our learning objectives reference audience and purpose and introduce the concept of collaboration:

- Utilize techniques for communicating clearly and concisely for specified audiences and purposes in a variety of formats; write with confidence.
- Research a technically-oriented topic and integrate findings in both oral and written work (analytical report).
- Understand the dynamics of group work in technical fields and work effectively as a leader and a member of your group (you will take turns as weekly leader in your assigned group).
- Develop independent proofreading skills through multiple drafts to create clear, concise, and error-free documents (you will proofread, edit, and critique your own as well as peer work).

But these objectives also define good communication as clear and concise, research oriented and error-free. As we revise the curriculum, we have to question whether these categories still do the rhetorical work we need them to do.

More importantly, our learning objectives and the program as a whole are based on an assignment known as the Formal Analytical Report, or FAR, a ten-week long assignment in which students research and write a report analyzing a problem in their field of study—an assignment that has typified the technical communication course at the University of Massachusetts Dartmouth (UMass Dartmouth) as well as at other institutions. Many have described the value of this kind of assignment in terms of critical thinking and the need to teach students problem solving. For Ed Nagelhout (1998), the critical thinking part is the portable part, the takeaway to the professions. But encouraging critical thinking also meant teaching technical communication by researching and writing about problems in a student's major: "Students who think critically about language and writing

in terms of their own lives and their major fields of study retain more information and better understand how concepts learned in technical writing might be applied to their own needs and goals as future professionals" (p. 298). Carol David and Donna Kienzler (1999) make a similar argument: "Instead of asking students to listen, make calculations, or repeat back on tests, professors are asking students to analyze, synthesize, and evaluate parametric problems" (p. 281).

However, in our case, the FAR has become problematic. In a focus group, our teaching assistants (TA) questioned its value, noting several problems. As one TA said, an "awful lot of time" is spent on the FAR, "drawing it out" over most of the semester (UMass Dartmouth, focus group). The TAs also questioned whether students had the "resources to complete the assignment well. They are not in the workplace. It's a made up situation so how do they know if the solution is feasible?" (UMass Dartmouth, focus group). A second TA agreed, adding the following:

> They don't have analytical skills at this stage to complete the longer report. They can figure out how to do the research but can't figure out how to analyze the research in a business context. One of the problems is that they repeat the same info again and again. They get frustrated. The longer report was a lot of filler stuff, not analytical. (UMass Dartmouth, focus group)

During this exchange, one TA defended the FAR, saying, "The FAR is a good assignment, but it's the varying range of commitment to the assignment." He elaborated that those who are committed will do well and those who aren't committed to the class fall behind (UMass Dartmouth, focus group).

As these comments suggest, we are hanging on to an assignment that sets up the possibility for students to fail. Because the assignment is so long, if a student doesn't engage at the beginning, can he or she engage midpoint? Can we just leave students behind? Furthermore, we have to ask whether this assignment undermines the authority and expertise of our instructors. Without knowing the subject, to what extent can our instructors direct the research and analysis of technical problems in civil, mechanical, electrical, or computer engineering? Without some level of expertise in subjects about which student write, instructors are left with the more formal elements of teaching report writing: Guiding students through the form with little opportunity to deepen student engagement.

A Proposal to Revise

In revising our course, we also need to keep in mind a couple of constraints. First, this class is taught primarily by graduate student teaching

assistants. In most cases, our TAs are also learning about the discipline as they teach. Second, classes are conducted in traditional "talk and chalk" classrooms supported by digital projectors and, with a few exceptions, have yet to incorporate a course management system and other online tools, such as wikis, blogs, or discussion forums to enhance student learning. As W. J. Williamson and Philip Sweany (2004) found, institutional resources and the expertise of faculty are integral to the process of reimagining courses (p. 60). Any revisions to our curriculum have to be enacted with these factors in mind.

On a broader level, we also must consider the knowledge and skills our students need. In the media, current discussions about the future technological needs in the United States have focused on the implications of "big data," or datasets whose size moves beyond typical software tools' ability to capture, store, manage, and analyze. Big data have become "a torrent flowing into every area of the global economy" (Manyika et al., 2011, p. 1). Recent studies suggest a shortage of the analytical and managerial talent needed to interpret and use big data as well as to recognize and manage its value and to prevent its misuse. For instance, James Manyika et al. (2011) found that the projected demand for analytical talent could be 50 to 60% greater than the projected supply by 2018 (p. 11). Referred to as the "next frontier" for innovation, competition, and productivity, big data is seen as playing a significant economic role in both the public and private sectors.

As a concept, big data also demonstrates the centrality of rhetoric and the need to teach the skills students need to participate in what is often called the *new economy*, an economy in which knowledge production is no longer contained within localized economic structures, but is vast and diffuse. In the new economy, as Sheila Slaughter and Gary Rhoades (2004) argued, knowledge is a commodity: "The new economy treats advanced knowledge as raw material that can be claimed through legal devices, owned, and marketed as products or services" (p. 15), adding that the knowledge is "often heavily technologized and/or digitized" (p. 17). Furthermore, in the new economy, what is traded is "the manipulation of symbols—data, words, oral and visual representations" (Reich, 1991, p. 177). In other words, knowledge is negotiated, necessitating a skill set grounded in rhetorical principles—skills for interpreting knowledge within networks of varying, and often competing, interests. Reich (1991) categorized this skill set as "symbolic analytic services," which include "all the problem-solving, problem-identifying, and strategic-brokering activities" of many people, including engineers, scientists, lawyers, and public relations executives

(p. 177). For Reich, "symbolic analysts solve, identify, and broker problems by manipulating symbols. They simplify reality into abstract images that can be rearranged, juggled, experimented with, communicated to other specialists, and then, eventually, transformed back into reality" (p. 178). In Richard Lanham's (2006) words, in the oscillation between "fluff" and "stuff," "fluff" is now the center of gravity: "The devices that regulate attention are stylistic devices" (p. xi). In the new economy, the ability to make sense of it all for others is the core service/product.

In his work, Reich (1991) identified four competencies that characterize the symbolic analyst: abstraction, systems thinking, experimentation, and collaboration. These competencies can also frame a set of learning objectives that can move discussions about technical communication from writing to clarify to communicating as an act of interpreting and participating in the values and interests of a community. As Miller (1979) argued, to write is "to participate in a community; to write well is to understand the conditions of one's own participation—the concepts, value, traditions, and style which permit identification with that community and determine the success or failure of communication" (p. 617). Reich's competencies give us a way to talk in concrete terms about writing as fully rhetorical endeavor.

Abstraction

As a concept, abstraction is about the capacity to discover patterns and meanings to create something new. Given the demands of big data and the new economy, the ability to wield "equations, formulae, analogies, models, constructs, categories, and metaphors in order to create possibilities for reinterpreting, and then rearranging, the chaos of data that are already swirling around us" is critical (Reich, p. 229). Data hold little value without a structure such as an equation, an analogy, or a metaphor. The writer's imposition of structure is what gives the swirling chaos shape and meaning. In many ways, abstraction is another term for *figuration*—a key concept in rhetorical theory pertaining to the relationship between style and substance.

From classical rhetorical theory, we can begin to understand style as inseparable from substance. Quintilian (1856/2006) identified two definitions of *figures:*

> The first signifies the form of words, of whatever it may be, just as our bodies, of whatever they be composed, have a certain shape. The other, which is properly termed a figure, is any deviation, either in thought or expression, from the ordinary and simple method of speaking, just as our bodies assume different postures when we sit, lie, or look back (9.1.10).

In the first definition, figures are the form itself; in the second, the form is postured—"a form of speech artfully varied from common usage" (9.1.14). Quintilian seemed to favor the second of the two views. Like tropes, figures take a turn or deviate from direct language. They artfully shape ideas to give what Quintilian called "force" and "grace" to our speech. But he also stated that figures of speech are not to be taken as mere ornamentation, making what we say more attractive. As Quintilian (1856/2006) said, "Though figures may seem of little importance in establishing a proof by which our arguments are advanced, they make what we say probable and penetrate imperceptibly into the mind of the judge" (9.1.19). The "force" and "grace" of figures get their power by making an impression on the mind of the audience.

In his definition of figures, Quintilian highlights an important and continuing problem: A divide between the literal and tropic. Central to scientific and technical authority is the idea of a literal language. As Michael Halloran and Annette Bradford (1984) pointed out, the ambiguity of figures, particularly tropes, runs counter to the scientific enterprise: "Modern science has been slow to acknowledge its use of figurative expression, probably due to the long-standing tradition which contends that the figures are not suitable for scientific and technical discourse" (Halloran & Bradford, 1984, p. 180). They traced the reaction against figurative language to the emerging sciences in the seventeenth century, which opted for a plain style over the ornate Renaissance style, a "confusing verbal smoke screen, a cloak of mystical gibberish with the antithetical goals of expression and obscurity" (p. 181). As they stated, Francis Bacon and others sought to uproot the view that science was little more than witchcraft or verbal smoke screens of gibberish. The plain style tradition advocated in the 17th century is still valued. While figures add up to comprehension, they also violate "correctness" when they embellish the facts.

In technical communication, students often have difficulty with the shapes and forms of ideas. As Michael Salvo and Jingfang Ren (2007) found, "Technical Writing students—future engineers, scientists, pilots, and technicians—prioritize brevity, clarity, and above all, accuracy. These students see language as a problem to be solved rather than a potentially powerful tool of communication" (p. 427–428). But to ask whether a piece of writing is clear is also to ask whether the shape and form make sense for the given situation, realizing that multiple solutions and answers exist and can take different shapes or forms. Our assignments and activities should encourage students to analyze multiple types of documents, their own included, for the ways in which ideas are figured. For instance, one assign-

ment might ask students to compare and contrast explanations of a complex idea, such as Higgs boson particles, for the devices used to explain it. Then students can apply what they have learned by writing a description about a complex idea in their own fields, reflecting on the constructs they used to gain the interest of an audience.

Systems Thinking

This idea of figuration also extends to Reich's second category—systems thinking. In Reich's definition, systems thinking is about "seeing the whole" and "understanding the processes by which parts of reality are linked together" (p. 231). Rather than learning discrete bits of data, students learn to examine why a problem exists and how it relates to other problems. "The symbolic analyst must constantly try to discern larger causes, consequences, and relationships" (p. 231). Doing so dispels the notion that clarity is based on correct sentence structures and on the formalistic aspects of writing alone. A systems thinking-based competency would draw instead on the idea that rhetorical figures give voice to interests and principles within an historical and cultural context. In the rhetoric of science and technology, Donna Haraway (1997) called this work *figuration*: "Performative images that can be inhabited" (p. 11). In other words, figuration constructs the identities and roles that various actors in the process play. The rhetorical style is the substance of the discourse.

In technical communication, systems thinking encourages students not only to analyze documents and writing practices in relation to their audience, context, and purpose but also to examine their larger contextual network and the reasons for one response or set of arguments rather than another. For technical communicators, systems thinking is not just finding patterns and meaning, but understanding how those patterns and meanings are part of a larger contextual fabric of relationships. This fabric shapes and is shaped by interests and motives that also stand in relation to one another, each wanting attention in the marketplace of ideas. As Wilson (2001) suggested, mapping exercises, in which students identify and analyze systems, can push students' thinking: "Asking students to identify the elements in a system (be that a company or a waste treatment plant or a wetland) and the multiple interactive relationships at play empowers them to reimagine how to accomplish communication about and/or within that system" (p. 88). To encourage systems thinking, exercises might also include reverse engineering documents to understand the ways in which they are constituted by actions and interests.

Experimentation

For Reich (1991), "to learn the higher forms of abstraction and systems thinking, one must learn to experiment" (p. 231). But students in techni-

cal communication tend to resist trial and error—once they've written a draft, they often consider it done save for minor revision. Experimentation, however, is about exploring different points of view, finding and applying new patterns of arrangement, and visualizing possibilities and choices. Through usability testing and collaborative learning strategies, students are encouraged to see the ways in which others interact with and interpret texts. Such activities can help students learn new ways to revise their texts beyond proofreading.

Collaboration

In technical communication curricula, collaboration and teamwork are often seen as key skills students will need in the workplace. We often think of teamwork, however, as working in groups, assigning a team project to help students learn strategies for working in teams. But collaboration is also about building consensus around an idea. As Reich (1991) argued, "symbolic analysts also spend much of their time communicating concepts—through oral presentations, reports, designs, memoranda, layouts, scripts, and projections—and then seeking a consensus to go forward with the plan" (p. 233). To collaborate means to learn from each other. Incorporating a team project into the semester is not the only way to foster collaborative learning strategies. Our goal is to design individual and team assignments and activities that encourage students to learn from each other. Writing tools, such as wikis, blogs, and discussion boards, as well as in-class discussions create spaces for students to share their work. As a result, students can see multiple ways of responding to the same assignment, giving them the chance to critically analyze the work of the class and to reflect on their own contribution.

Reich's framework gives us a way to talk about technical communication. With these competencies in mind, we are proposing the following learning outcomes to the University Studies Committee:

1. Analyze and discuss the ways in which specific documents meet the needs of its audience, the context, and its purpose.
2. Accomplish your purpose by stating your position and supporting that position with logical points/sub-points, insightful reasoning, and/or persuasive examples.
3. Find and apply new patterns of arrangement in texts to establish the desired relationship with your audience and to motivate the desired outcome.
4. Assess audience needs, creating user-based documents that are well organized, easy to follow, and include appropriate head-

ings, bullets, lists, and visuals. Demonstrate facility with standard English conventions (grammar, usage, mechanics).

5. Manage writing and review processes, using effective collaboration and revision strategies to meet the needs of your audience.

This framework also sets the stage for the assignments, the texts, and the activities in the classroom. It provides what Kenneth Burke (1969) called *substance*—"literally, a standing under" and "metaphorically, that which lies at the bottom of a thing" (p. 23). As a starting point, this framework constitutes a rhetorical ground for action—in other words, a space for people to identify and organize their interests, ideas, and attitudes into material practices.

The advantage of such a model is threefold. First, this kind of framework strengthens the role of instructors, providing a set of actionable goals based on writing skills. Rather than teaching students how to do a long report, we can create a series of shorter assignments that support our learning outcomes, shifting the emphasis in the classroom from learning a genre to learning the skills writers use as they work within different genres to accomplish a purpose. A series of shorter assignments also allows our instructors to give feedback at multiple entry points rather than on a single draft and then on the final product. In doing so, feedback occurs earlier and can focus on a broader range of skills.

Second, this framework helps us talk about what we do with other university faculty and administrators—people who tend to understand the complexity and difficulties of writing, but have difficulty expressing what students need. In discussions about student writing, clarity is often a shorthand term for "something is wrong, but I'm not sure how to talk about it." If we can discuss writing as a set of competencies, then we can direct ways of thinking about student writing in more productive ways. For instance, to talk about writing in terms of abstraction can shift conceptions of writing from the question of whether it is clear to discussions about the skills that writers use to make meaning.

Finally, the framework gives us a way to frame assignments and activities that create a role for writers as problem solvers, experimenting to find solutions to meet the needs of a given audience. Such a conceptualization makes the communication event authentic in ways that asking students to write about their field of study does not. Although placing the curriculum within workplace genres and content areas lends authenticity to our assignments, the authenticity comes from the actions that writers use to accomplish their goals and the experience students should take away from the course. As a technology, this framework gives us a new way to organize

and classify our priorities and goals. From there, we can choose a textbook or even a set of texts to support our goals, moving our discussions from which text we should use to what we need from a text.

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The Enterprise of Brokering

Program Administrators as Brokers

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Technical communication[1] faculty often find themselves overseeing certain departmental or university activities (such as coordinating internships), if not administering overall programs (for example, serving as director of a technical communication program). As a result, whenever members of the field meet to discuss programmatic issues, they come together in what the authors of this editorial consider to be a *community of practice* (CoP).Though technical communication faculty may regularly participate in multiple academic groups or communities on and off campuses (teaching circles, research triangles, professional organizations, and so on), the enterprise of program administration is at the core of the CoP we discussed here.

This perception is based upon Etienne Wenger's (1998) idea that a CoP is a group of individuals who interact to better pursue a shared understanding that binds members (*enterprise*) through a particular set of actions or activities (*practice*) connected to a certain body of knowledge (*domain*). For Wenger, enterprise, the strong common interest that holds a CoP together, in particular, goes beyond a simple, shared interest. Rather, when Wenger uses the term enterprise, he emphasizes the values a group—the *community* part of a CoP—places on the common interest and the amount of energy group members are willing to expend to learn more about that topic of common interest.

Within this context, members of the community are willing to invest time and resources (*repertoire*) to engage with other community members

[1] We use technical communication (or technical communicators) as an encompassing term to include other names associated with our field such as professional, rhetorical, and scientific communication.

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and are willing to do so to learn more about the community and its repertoire. Such engagement, moreover, takes the form of doing something, of *practicing*. To become a member of a CoP of editors, for example, one must engage in the practice of editing to be viewed as a "member" by other participants in that CoP as well as demonstrate a willingness to learn more about editing and its enterprise (clarity of thought, for example, among others). In sum, if you can practice/do the task, then you are a practitioner/member of the community that practices that task, and especially, if you are willing to continuing learning about/contributing to the editorial process, then that membership becomes a more meaningful experience for members and their commitment to the enterprise. Through participation in such practice- and knowledge-based (i.e., knowing how to do, what to do, and why to do) communities, members further their expertise in ways that might be difficult, or impossible, to undertake as individuals. Or, to use the editor example, to become a better editor, you need to work with other editors, both novice and experienced, to do editing.

Communities of Practice and Identity

In the field of technical communication, the authors of this editorial see this CoP perspective as central to our identity as program administrators (PAs) and to the nature of our practice—program development and administration. That is, PAs in our field regularly interact with others interested in the topic of technical communication both to engage in the practices related to administration and to improve our practices as participants in and contributors to our professional community. Even a cursory look at the CPTSC conference proceedings[2] of the past three decades demonstrates a commitment to learning more about technical communication program administration. CPTSC's first decade (1974–1985) involved discussions that focused heavily on technical communication's difference from literature through such topics as curriculum, professional development, and the humanistic rationale. The organization's second decade (1985–1995) brought more fully into the discussion issues of identity, the role of technical communication PAs in departmental politics, the beginnings of the skills versus theory (or instrumental versus rhetorical) discussions, and differentiation of the kinds of research the field supported. CPTSC's third decade (1995–2005) shifted the discussion further into the theoretical arena, moving more fully toward assessment issues, and began more in earnest the topic

[2] This list comes from a 2008 CPTSC annual meeting poster presentation by Tracy Bridgeford. You can view this poster at ‹http://www.tracybridgeford.com/bridgeford-cptsc-2008-poster›.

of disciplinary identity. Although not over yet, the fourth decade (2005–) has brought about issues of globalization, internationalism, and distance education, and has continued discussions about identity through a professionalism lens.

In the 1985 CPTSC conference proceedings, Marilyn Samuels was quoted as saying what we, as members of the field, think is still true today: "Year after year, I have observed new members discover this special quality of our group—the sense that the minute you enter the room you are part of the dialogue, a participant in a team, a member of the family" (quoted in Bridgeford 2008, see footnote #2). From this standpoint, it is easy to see who we, as a community, are—not only program administrators but also teachers, advisors, and brokers—and what we, as a community, value—collaboration, multidisciplinarity, globalization, industry connections, and assessment. Even those new to the program administration CoP immediately recognize the enterprise that brings us together: It is one that focuses us on a common practice, research and teaching in the field, and around a central body of knowledge—that which technical communicators in academia and industry need to know to do their jobs effectively. The authors of this editoral see this enterprise as *brokering*.

Communities of Practice and Brokering

In "Communities of Practice and Social Learning Situations," Wenger (2000a) used the term *broker* to refer to how individuals who simultaneously belong to different CoPs "use of multimembership [in different CoPs] to transfer some element of practice [from one CoP] into another" (p. 109). Wenger identified enterprise as the "level of learning energy" (p. 230) that "allow[s] brokers to recognize one another, seek companionship, and perhaps develop shared practices around the enterprise of brokering" (p. 110). In this way, brokers know how to use their connections to, and understanding of, various groups to share ideas and information across those groups. Brokering among groups both locally (within the same CoP) and globally (across different CoPs) could provide program administrators with a potential source for developing a community of practice and a coherent identity as PAs within their institutions.

According to Wenger (2000b), an enterprise is one "source of coherence" of a community's identity (the other two include mutual engagement and a domain of knowledge) (p. 77), and an enterprise involves a joint, "sustained pursuit," or "shared ways of engaging in doing things together" (1998, p. 125–126). The enterprise is pursued jointly not because everyone agrees, but because individuals work together to negotiate its

meaning. The enterprise is, from Wenger's perspective, the "result of a collective process" that occurs in practice, creating "relations of mutual accountability" (p. 77). It is the thing that is both valued by the community and that depends on community members' "level of learning energy" (2000a, p. 230). This level is the power someone is willing to invest in learning more about the practice to do it better.

Thus, at its core, the enterprise of brokering values relationship building across communities and doing so in ways that encourage engagement in practice while also aligning ideas, perceptions, and perspectives. The brokering metaphor suits well Wenger's (1998) idea of how identity is constituted: It involves an interlinked process of identification and of negotiation that signifies members' investment in the community's enterprise (i.e., its practices). And through such enterprises/practices, members of a CoP make *proposals of meaning,* or points of entry, with the potential to affect the community's repertoire and the meaning of its enterprise. These entry points, or rhetorical constructions that reify the meanings negotiated in practice, offer members new ways of seeing practice, enhancing the value of the enterprise and the community's coherence—or identity. Such activities represent "the degree to which" a community "can make use of, affect, control, modify, or in general, assert as [theirs] the meanings" negotiated in practice (Wenger, 1998, p. 200). For example, in 1979 when Carolyn Miller offered a humanistic rationale for technical writing, the enterprise of the field shifted dramatically in our discussions of pedagogic, programmatic, and curricular topics, opening the way for multiple opportunities for research and teaching from a constructionist perspective.

To effect change, the members of a CoP work together across three concepts that Wenger (1998) identifies within his social ecology of learning, including engagement (actual practice), alignment (focused attention), and imagination (new ways of seeing). In this ecology, members mutually engaged in the practice align—or focus—their efforts with other members and communities. Through this approach/practice, members of the CoP imagine "new opportunities for learning" (p. 109) more about and enhancing the enterprise. In sum, these opportunities might include the discovery of a theory that could provide a different perspective on the meaning and significance of the practice, new ways of performing a task, or different methods for communicating learning. This three-part perspective (engagement, alignment, and imagination) has a great deal to offer technical communicators who serve as administrators in academic programs because these individuals must regularly share information across

different areas and look for cross-departmental or multidisciplinary opportunities for collaboration and identity-building.

Program Administrators as Brokers

For program administrators (PAs), the work of brokering can be applied to multiple areas in which they engage locally within their own CoP and globally with other CoPs. On a local level, PAs negotiate the meaning of what they do within their own

- departments (some of whom are still fighting the literature-technical communication struggle);
- colleges, especially in negotiating resources for tenure-track positions, technology, and faculty development;
- campuses, including campus-wide efforts such as Writing Across the Disciplines initiatives; and
- communities, undertaking community outreach for internships, job shadowing, and employment.

The broker role is useful for characterizing PAs' work within these contexts because, as boundary[3] watchers, PAs are continually scanning the horizon for points of entry to publicize their programs to the campus and to the greater local or regional community and to do so in ways that ensure partnership connections through activities such as internships. And, in searching out such opportunities that cross CoP boundaries, PAs are acting as brokers who seek to share information among different communities of practice.

In some cases, PAs might work to establish a particular course or cognate area (perhaps as a minor or certificate) with other departments. The creation and sustainability of *Programmatic Perspectives*, for example, reifies the discourses of our disciplinary conversations by encouraging the sort of cross-field discussions and examinations that seem absent from

[3] In CoP parlance, a boundary is a place where one field/discipline/CoP ends and another begins. In many cases, boundaries are gradated, transitional spaces of mutual overlap (e.g., the areas of overlap or boundaries between technical communication and instructional design); though in others, they are more strictly delineated (e.g., the boundary between licensed practitioner and un-licensed apprentice). When Wenger (2000b) uses the term *boundary*, he is not using it in a negative way. He uses boundary in reference to the productive tension that occurs between the experience of engaging in a practice and the competence being developed through participation. He is suggesting that CoPs need to achieve a "generative tension" to have "something to interact about," to "have open engagement with real differences as well as common ground, commitment to suspend judgment in order to see the competence of a community in its terms, and ways to translate between repertoires so that experience and competence actually interaction" (p. 233). Thus, he sees boundaries as "sources for new opportunities" (p. 233).

many existing journals' discussions that focus on topics such as assessment and diversity. More recently, making connections internationally has increased in our program administration conversations at conferences and in journals. Following the advice of Debby Andrews at the 2006 annual meeting, a concerted effort to host a CPTSC annual meeting in Denmark in 2009 was accomplished. We also have several members who have participated in international venues such as INTECOM FORUM.[4] PAs and other members of the field could, in theory, use Fulbrights both to share information with and learn from programs in other nations as well as establish collaborative educational and research partnerships that would encourage cross-cultural/cross-border interactions—and thus bridge cultural CoPs.

Although boundaries can sometimes seem to be used to block participation from outside a community, to "create true bridges across practices," communities not only need to "translate or suspend judgment" but also to "suspend who you are and open your identity," which is not an easy task (Wenger, 2000b, p. 12). This act of suspension means that when going into a shared space (for example, sitting in on system administrator meetings to learn more about the role IT specialists play in the maintenance of technology in classrooms), especially a shared discursive space (e.g., retreats, meetings, or even a content management system such as WIKIs), members of a CoP need "to bring who they are, but be prepared to negotiate a new, shared identity" (p. 12). So, when entering these spaces, PAs need to come to their identity of technical communicators and be prepared to negotiate a new, shared identity (e.g., become members of a greater and more diverse department or college) to more effectively interact in such spaces.

This new identity can create a bridge "across practices" in many forms (Wenger, 2000b, p. 12), including

- people who act a knowledge brokers, such as executive committee members and organizational leaders;
- boundary objects, such as position and outcome statements from CPTSC;[5] and
- boundary activities, such as workshops, blogs, and listserv discussions, all of which can serve to ignite learning opportunities through discussion and boundary activities.

[4] Readers can find more information about the international initiatives at ‹http://www.cptsc.org/initiatives.html. Thanks to Bruce Maylath, North Dakota State University, for this information›.

[5] K. Alex Ilyasova and Tracy Bridgeford call for CPTSC to adopt theirs or a revised version of an outcome statement they offer for consideration in manuscript for a forthcoming edited collection called *Sharing Our Intellectual Traces*. Ilyasova (2008) has also argued for the need for position statements.

Interestingly, the Society for Technical Communication's (STC) Body of Knowledge (BOK) project is a good example of a "boundary object" that seems to both prevent and open boundaries at the same time. Whereas industry seeks professional-level status through certification of knowledge, academia worries about creating curriculum as a "wish-list for industry"—a situation Johndan Johnson-Eilola warned about back in 1996. Within this context, the members of a more general field of technical communication CoP behave as two different CoPs—an industry CoP and an academic CoP—which affects information sharing within and across the field.

In a first attempt to create a shared space with its own community's enterprise, practice, and domain, the STC Academic Special Interest Group (SIG) hosted a pre-conference workshop, or boundary activity. This "Partnerships for Professionalism" event was held the day before CPTSC's 2011 annual meeting at James Madison University. The academics involved in organizing this effort, Pam Brewer, Craig Baehr, Thomas Barker, and Sally Henschel (knowledge brokers) wrote in a summary report[6] (boundary object) noting that their goal for this event was "to promote an active exchange of information between industry and the academy and to facilitate cross-boundary collaborations" (2012, p. 2). As a boundary object, this report describes a conference "hybrid model" consisting of five panels that each included physically present participants as well as virtual participants who represented both academia and industry. By bringing together these segments of the field, this event acted as a bridge for discussions about issues relevant to both academy and industry—including certification, virtual mentoring, social networking, to name a few. In such contexts, brokers from both sides, or multiple sides, can come together in what Stephen Bernhardt (2002) called *active practice*, "an approach that involves educators and practitioners working together through project-based activities" (p. 82). The 2011 pre-conference workshop is a prime example of such a brokering undertaking because it engendered and facilitated collaborations based around activities.

Participating in a CoP

Despite the suggestion of comprehensiveness, full participation in a given CoP does not mean that a member engages in the community's practice all the time. Technical writers, for example, do more than write, and they often work with nontechnical communicators on different projects. Rather, participation means that members of a CoP

[6] This report is available at ‹http://www.cptsc.org/partnership-prof-preconference.pdf›.

- understand what constitutes competence for that community;
- understand how to participate, are committed to the community's enterprise, and are willing to learn more about it; and
- can demonstrate an understanding of the community's domain[7] and the community's rules for negotiating meaning in practice.

From a CoP perspective, both novice and expert members experience full participation because they are afforded access to the community's resources. Such access, moreover, is granted even if, like graduate students, individuals do not necessarily have an all-inclusive understanding of everything about how to participate in the community. For example, a range of individuals in a field—from new graduate students to senior faculty—can attend a conference in a field, submit presentation proposals for review and consideration, and participate in the formal question and answer sessions and the informal hallway discussions that take place at a conference.

To maintain the access granted to potentially full-fledged members, participants in a field/CoP need to demonstrate that they know and can develop the practices that the community considers when endorsing competent membership. To do so, individuals in our field can participate in the more requisite activities—such as obtaining a tenure-track position, achieving tenure, and publishing—that demonstrate their understanding of the academic context and conversations in the field. On a more informal level, members can participate in local and national organizations (e.g., local STC chapters), participate in research triangles with members from other disciplines, or visit classes outside technical communication—all of which indicate members' understanding of what constitutes *competency* in our community, that they know how to translate theory/ideas important to the community into practices valued by the community. According to this approach, full participation in a CoP refers to a member's ability to achieve a level of competency or the potential for identity-building "recognize[d] as competent" by more experienced members of the community (Wenger, 1998, p. 137). Thus, the publications that result from a peer- or an editor-review process indicate that the competency of the author has been recognized by experienced members of a community.

For program administrators, competency, from an institutional perspective, is constituted by the development of an appropriate program that addresses the local conditions, achieves increasing enrollment numbers, garners awards, and so on to meet the expectations of the individu-

[7] Because the domain is constituted by the accumulation of stories about the practice, Tracy Bridgeford (2006) referred to this domain as a *narrative accrual*.

al's home institution. Such accomplishments represent tangible evidence of a viable program. But a PA's competence isn't really measured by explicit knowledge concerned with numbers. Rather, it is what they know implicitly, what they are able to accomplish on the margins, the periphery of their contexts, that they use to demonstrate their ability to negotiate meaning in and across CoPs. These are the very factors or abilities that allow PAs to enhance their programs in ways that ensure success. For example, negotiating with another department's program director to require a specific technical communication course for their majors can ensure higher enrollment numbers as well as a meshing of disciplinary goals. It is in this implicit realm that program administrators can act most like brokers as they use their understanding of different CoPs to help members of these CoPs collaborate to achieve goals of mutual interest.

Becoming Brokers

So what can technical communicators in academia do to become such brokers? Program administrators experience new opportunities through exposure to information via conferences, articles, workshops, and books as well as through those more interactive encounters such as hallway and dinner discussions. The information and opportunities present in all of these situations create points of entry for learning more about the enterprise of brokering. Classifying these trajectories within the language of belonging, Wenger (1998) characterized them as sources that give rise to identity-building experiences. Three modes of belonging for developing as brokers include engagement, alignment, and imagination.

- *Engagement* refers to the ways practice is accomplished and the structures of relationships that develop into a social ecology resulting from individuals participating in (engaging in) a particular process, for example, presenting at a conference. For CPTSC, conference presentations involve members writing position statements that are provided before the annual meeting, reviewed and vetted by recognized experts/reviewers in the field, and thus recognized as competent by experts in the community. At conference sessions, three or four participants present their statements in five minutes each, using most of the allotted session time for discussion. Because CPTSC values discussion, individuals have a chance to hear more directly, and for an extended time (in comparison to larger, more standardized conferences such as CCCCs and ATTW), from program administrators.

- A*lignment* focuses one's attention by directing energy around certain constructions about what the enterprise means. For example, when publishing in a journal or writing a book, authors consider past conversations; explain how their own, new argument fits into this previous work; and indicate how this new work furthers, shifts, or debunks other contributions to the existing conversations in the field/CoP.

- *Imagination* enables members of the field to see themselves in a CoP, to create images of that world in ways that make sense to the enterprise, and to locate themselves within the local and global (i.e., outside the CoP) contexts in which the practice occurs. Like the pre-conference workshop, such activities could involve collaborating on a project, consulting, guest speaking in classes, and conducting site visits.

Although these modes happen simultaneously, it is *imagination* that suits best the brokering role related to technical communicators and program administrators. The role of imagination in program administration enables directors to see opportunities everywhere inside and outside the department and university, and even farther, internationally. When considered together, these modes of belonging lend themselves to the work of PAs and to the enterprise of brokering because all three modes center on identity building and what constitutes membership in a CoP, which gives members the space to develop as a "learning community" (1998, p. 187).

Brokers make connections between those who need knowledge and those who have it (Davenport & Prusak, 1998, p. 29). Consequently, the work of PAs requires moving between multiple and varied communities and situating ourselves as brokers within other CoPs as represented by the readers of this journal. The role of brokering can sometimes be overlooked because, for one reason, it could fall within what Wenger (1998) characterized as nonparticipation. Unlike full participation, nonparticipation encourages boundary jumping—in other words, becoming a member of another CoP, but without trying to connect the different CoPs. (Such boundary jumping, however, is never done at the expense of the primary CoP.)

Negotiating on the boundaries makes our jobs as PAs easier, and the enterprise of brokering is all about peripheral engagements. Crossing boundaries creates what Wenger (1998) called "peripheral wisdom" (p. 216), a concept perfectly situated for brokering. For example, when PAs in technical communication negotiate with program directors from other disciplines about required curriculum, those technical communicators are

brokering an exchange that has the potential not only to increase student credit hours, but also to increase the diversity in the classroom as well as to establish a potential long-term relationship. On the periphery, brokers can see possibilities that might be lost to full participants because they are sometimes too close to the practice to see the edges, including "paths not taken, connections overlooked" or choices taken for granted (p. 216). For example, when PAs seek to create cognate areas (e.g., information design or instructional writing), they may very well focus on the standard minor or certificate models, when, in fact, other programs may consider adopting technical communication as a cognate area. This is, Wenger says, the "wisdom of peripheriality"—it enables one to see new ways of doing, which plays a significant role in imagination.

It is the role of broker that makes it possible for PAs to create an *identity of nonparticipation*. Such an identity of nonparticipation is what Wenger (1998) sees as a companion process to the *identity of participation* (see Chapters 7–9) . That is, unlike an identity of participation, which shows us who we are in a particular community, an identity of nonparticipation allows us to see who we are not, what practices we don't undertake. It also allows us to see what we don't value, such as ideas or theories we don't use, in terms of the enterprise characteristics of our primary CoPs—an important part of building an identity of nonparticipation—an identity that is "as much a source of identity as full participation" (Wenger, p. 164). Such a binary relationship, in turn, enables the possibility for boundary encounters. For example, PAs could offer a specialized class for another department, which allows them to show what competency looks like in the technical communication field while learning themselves what constitutes competency in another field. In the case of, for example, teaching computer science majors to write user manuals, technical communication instructors would not, or even need to, develop an identity of participation to do so because they are not seeking full membership as a computer scientist. But because of that instructor's possible peripheral interest in computer science, she or he would more likely develop an identity of nonparticipation.

Recognizing Opportunities for Brokering

On our local campuses, the community of practice involves a variety of people from across various offices and disciplines. These individuals, moreover, are generally not familiar with the domain knowledge or the related practices of technical communication, its theory, its pedagogy, or its administration. This lack of familiarity on the part of *outsiders* (e.g., outside

program directors, administrators, teachers, and/or community organizers) is not necessarily a lack of interest. Rather, it is often a matter of what Wenger (1998) called an *experience of identity*—that is, members experience moments in which they identify with the practices and understand their participation in relationship to the community—whether the experience is part of the development of either or both an identity of participation and nonparticipation.

Like us, the "outsiders" with whom we as PAs interact have their own commitments to primary CoPs with their own enterprises, domains, practices, and identities. Moreover, members of these other communities often have a distinct interest in technical communication. This interest, however, only goes so far as to provide these outsiders and the members of their primary CoPs with the ability to "introduce elements of one practice into another"—elements that improve or enhance the practices of their CoPs (Wenger, 1998, p. 105). It is in this realm among different CoPs that the potential for synergy or for confusion and conflict can take place.

Within our primary CoP of technical communicators, we engage with each other as full members in direct meaning-making activities that add value to its enterprise. That is, we use our shared interest in a topic to find better ways of applying ideas to practices valued by our group/community. But the seemingly makeshift CoPs we cobble together locally (i.e., at the school, college, university, and/or community level) to accomplish the goals of our individual programs often operate without a clearly articulated enterprise. This lack of clarity means it is often difficult for the members of such a local CoP to determine what foundation of knowledge and what related practices are needed to achieve a common community goal (e.g., the various disciplines in an English department needing to work together to address a departmental mission or objective). However, we believe that what members of these makeshift CoPs do engage in is the enterprise of *brokering*.

By virtue of their roles within a department, PAs are brokers—mediators negotiating among the ideas and perspectives of different groups to identify, label/name, and share information and ideas especially important for our purposes and our practices. In so doing, these PAs must often convey information across different disciplines, levels of administrative hierarchy, and stakeholder groups involved with oversight. Moreover, they must do so in ways that enable the members of these various groups to understand the importance of such information as it relates to the practices of those disparate groups.

As brokers, PAs are already situated on the periphery, or the boundary, of multiple and varied communities in an effort to coordinate and align

elements among various stakeholders, including students, faculty, administration, and community. In so doing, these PAs must also address various positions in which they have a stake as program administrators—areas such as internships, job shadowing, advisory boards, and teacher training and evaluation. Within this complicated context, PAs in technical communication work deliberately to ensure stable, negotiating positions on the periphery of various communities both locally and globally with others also playing the role of broker. We think it is fair to say that PAs engage in and support an enterprise of brokering. By recognizing and acting on brokering opportunities along various boundaries, PAs can more effectively serve their programs while helping to elevate the value of those programs in the eyes of other CoPs and stakeholder groups on their campuses and in their local and regional communities. Thus, by recognizing, understanding, and embracing the role of broker, PAs can benefit their programs and their field through a perspective that encourages collaboration and communication over protectionist perspectives and disciplinary isolation.

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Book Review Editor

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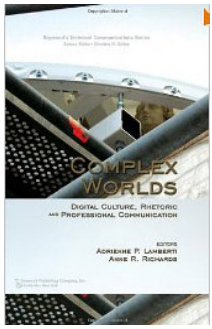

Complex Worlds: Digital Culture, Rhetoric, and Professional Communication

Editors
Adrienne P. Lamberti and Anne R. Richards

Baywood Publishing Company
2011. 250 pp.

Reviewed by Cassandra Branham
University of South Florida

Published as a part of Baywood's Technical Communication series, *Complex Worlds: Digital Culture, Rhetoric, and Professional Communication* offers theoretical and practical perspectives aimed at helping professional writing instructors and program administrators better prepare graduates to work with increasingly complex technologies in increasingly globalized workplaces. Each essay in this edited collection addresses the role of the digital in relation to advocacy and agency and many also provide both pedagogical and programmatic suggestions. In addition, many of the essays address concerns about enhancing student agency through the process of better preparing them to make the transition from student to professional. The collection is logically divided into four sections—"Transforming Advocacy," "Shaping the Profession," "Building Communities," and "Informing Pedagogies"—categorizations both flexible and fluid. To highlight connections among the essays, I discuss the text thematically, focusing on how the collection addresses themes of agency, pedagogy, programmatic development, and globalization.

Two essays in Part 1, "Transforming Advocacy," identify potential benefits of digital technology in terms of enhancing student agency. Covering the topics of citizen journalism and the effects of digital *dispositio* (arrangement) on author authority, these essays reveal innovative possibilities for educators in-

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terested in accessing the collective power of the digital world. In "Retracing the Footprints from Print to Digital: An Assessment of Textual Structure" (Chapter 2), Adrienne Lamberti theorizes that the fragmented nature of online texts both widens authority (for those with access) via polyvocality and potentially limits authority through the process of homogenization. "The Fourth Estate in an Era of Digitally Mediated Democracy" (Chapter 3) explores the transformation from print journalism to citizen journalism. In this essay, Leonard Witt provides an explanatory framework for this transition that enables readers to consider the benefits and risks involved with incorporating opportunities for peer production within technical communication programs in an effort to produce agential, critical citizens of the digital world. Also concerned with the concept of collective agency, Huiling Ding discusses the WPA listserv in "A Case Study of the Impact of Digital Documentation on Professional Change: The WPA Electronic Mailing List, Knowledge Network, and Community Outreach" (Chapter 6), highlighting the ways collaboration enhances user agency and results in knowledge making. Ding's essay focuses on the advancement of the profession via the increased user agency enabled by the listserv and examines the benefits of collaborative agency in knowledge-making practices important for our pedagogies. Jason Farman, in "Gertrude Stein in QuickTime: Documenting Performance in the Digital Age" (Chapter 4), is concerned with the ways digital technologies affect writer authority. Farman discusses how digital documentation both limits agency, by limiting textual authority, and enhances agency through interactivity.

Many of the essays will be useful for readers interested in clear and accessible pedagogical suggestions for incorporating digital literacies into the technical communication classroom. In "Cyberactivism, Viral Flash Activism, and Critical Literacy Pedagogy in the Age of *The Meatrix*" (Chapter 1), Eileen Schell discusses cyberactivism and critical literacy pedagogy and describes a classroom activity designed to increase students' agency and enhance critical thinking through the use of viral Flash activism. John Killoran's essay, "Digital Cultural Capital: Anticipations of Profit in the Web Market (Chapter 5), presents an examination of self-published Web resumes, determining that digital documentation and the prospect of digital remediation of texts allow for new possibilities in the field. Finding that professional websites are most useful for users who, like professional communication students, can easily produce digitizable cultural capital, Killoran recommends inclusion of a Web resume and portfolio project in the professional writing curricula. Killoran provides insightful pedagogical suggestions for the classroom and examines the ways production of Web resumes and additional digital cultural capital can increase students' agency by better preparing them to enter the job market. The final essay in the

collection, Aimee Kendall Roundtree's "Sizing Up Single-Sourcing: Rhetorical Interventions for XML Documentation" (Chapter 11), provides a specific discussion of the challenges technical communicators can face when working with content management systems and single-sourcing documentation created by designers rather than technical communicators. Although this essay is specific to a certain technology, XML, Roundtree brings to light topics important in teaching technical communicators to act as negotiators and leaders who can influence design choices that will ultimately affect their work.

The essays in Part IV, "Informing Pedagogies," provide clear pedagogical frameworks for introducing new technologies into the technical communication classroom. Laura McGrath's "Teaching Effective Technology Use in Technical and Professional Communication Programs Based in Colleges of the Humanities" (Chapter 9) and Rudy McDaniel and Sherry Steward's "Technical Communication and the Broadband Divide: Academic and Industrial Perspectives" (Chapter 10) will also be of interest to program administrators reevaluating program curricula to move toward more integrative and multidisciplinary models of technical communication instruction. Like Killoran, these authors are interested in increasing student agency through programs and pedagogies that increase students' preparedness to compete in the digital world. McGrath opens the section by stressing the need to develop technical communication pedagogies and programs that reflect a critical and rhetorical understanding of the technological needs of technical communication students. The importance of program assessment is a focal point of her essay and McGrath provides an assessment framework for program administrators to gauge the effectiveness of technical communication programs, curricula, pedagogy, textbooks, instructional materials, instructional spaces, and faculty. McGrath concludes by providing useful strategies that can be used to better prepare professional communicators for the workplace. In the following chapter, McDaniel and Steward propose revamping the traditional technical communication curriculum to make better connections between technical communication practices in academia and industry.

Program administrators interested in developing global partnerships should find Part III, "Building Communities," a useful resource. The essays in this section address globalization issues, identifying the need for professional communication programs to develop global partnerships and discussing the importance of understanding cultural differences in communication. In "A North-South Online Collaboration between Professional Writing Students in Tunisia and the United States" (Chapter 7), Faiza Derbel and Anne Richards describe an international collaborative effort between Tunisian and US professional writing students. They provide a useful list of five components for

program administrators to consider when developing global partnerships. Program administrators interested in developing such collaborations, but unsure of the challenges involved, will find the framework informative. Heeman Kim and William Faux also address important concerns for program administrators interested in developing global partnerships that will increase students' cultural awareness and expose them to cultural differences in communication to increase their agency in the global workplace. Their study, "Meeting Online Friends Offline: A Comparison of South Korean and US College Students' Differences in Self-Construal and Computer-Mediated Communication Preferences" (Chapter 8), explores cultural differences in Internet use, determining that collectivist and individualistic societies use the Internet in different ways for different purposes, and highlights important issues in intercultural communication.

With its concern for developing uses of digital technologies to enhance the agency of students and authors, *Complex Worlds* is an excellent resource for program administrators interested in developing technical communication programs that effectively prepare students for the digitized, global workplace. The collection's essays offer exposure to new and unique technologies useful for technical communication students as well as detailed pedagogical applications and programmatic suggestions for implementing these technologies in the technical communication classroom.

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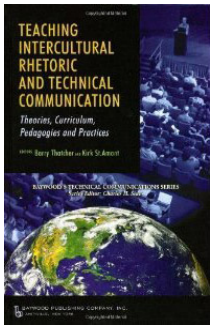

Teaching Intercultural Rhetoric and Technical Communication: Theories, Curriculum, Pedagogies and Practices

Editors
Barry Thatcher and Kirk St. Amant

Baywood Publishing Company
2011. 288 pp.

Reviewed by Laura A. Ewing
University of South Florida

As students in technical communication programs around the world prepare to enter an ever-globalizing marketplace, it is the responsibility of educators in technical communication to provide tools applicable to intercultural and international relations. The collection of essays in *Teaching Intercultural Rhetoric and Technical Communication: Theories, Curriculum, Pedagogies and Practices*, compiled by Barry Thatcher and Kirk St. Amant, offers valuable opportunities to incorporate interculturally relevant strategies into the classroom and provides a theoretical basis for this implementation.

The text echoes and further examines the work of understanding global communication methods (Canagarajah, 2006; Muchiri et al., 1995) and hands-on approaches to cross-cultural interactions (Herrington, 2010; Starke-Meyerring, 2010). As we develop programs in technical communication, we must address the need to integrate interculturally relevant practices and to provide students with a clear comprehension of the global market they will inhabit. Thatcher and St. Amant's collection offers readers insights into the theories surrounding the practice of intercultural technical communication, but also delineates a direction for practical applications of the methodologies suggested. In their introduction, the editors suggest that the field of technical communication is shifting and growing in international sectors and, therefore, American

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programs must follow suit. The purpose of the collection is to offer a framework for creating globalized curricula. The essays focus on direct implementation and incorporation of international and intercultural practices in the classroom to help students recognize their roles as global communicators.

The collection is divided into three distinct sections, each detailing a specific angle for developing intercultural technical communication education: approaches to introducing intercultural technical communication (ITC) into the classroom, program design initiatives, and the connection of these applications to the workplace.

The key segments of this collection focus directly on implementation of program changes that encourage intercultural interaction. The takeaway for the reader is a clear and varied set of plans ranging from study abroad to classroom resources. The ideas of immersion and experiential learning pervade the essays. Charles Kostelnick suggests using visual rhetoric, demonstrating visual cues to students to help bridge the "chasm" that language differences may create. In this manner, students are exposed to cultural nuances through imagery. Emily Thrush and Angela Thevenot's considerations of globalizing the US classroom acknowledge that without immersion, many intercultural contexts cannot be taught. Their case study asserts that international and native students can work together to address each other's communication goals, thereby recognizing high and low culture concerns through experience.

Readers will likely be most interested in the second section, "Curricular Perspectives: Designing and Developing Courses and Programs in Intercultural Communication," which specifically addresses the implementation of intercultural curricula program-wide and considers how international factors influence the development of new practices in technical communication. Shelley Smith and Victoria Mikelonis suggest the need to "internationalize" curricula to give students the ability to practice intercultural technical communication in a home campus immersion setting. The program incorporates "experiential learning strategies, uses case studies, simulations and role-plays that induce awareness of the implicit cultural assumptions that we all hold" (Smith & Mikelonis, 2011, p. 98). The goal of this program, it seems, is to help students confront the discomfort that comes with attempting to interpret other cultures and to acknowledge cultural differences. Smith and Mikelonis close by presenting strategies for educating teachers about how to develop and run programs in their institutions such as the one the authors describe. They acknowledge the necessity of teacher training in successfully employing this unique curriculum design.

James Melton discusses possible reconsiderations for the field's view of teaching technical communication and presents ideas for reframing technical communication curricula and recognizing students' needs outside the class-

room. Melton stresses the importance of building relationships across cultures to create successful business connections beyond the classroom. Recognizing how relationships are built in the United States and abroad allows students and teachers to see the relevance of their work outside the university. The collection closes with a discussion of technical communication programs in Israel and New Zealand. These chapters describe differences in the approaches educators in other countries take to technical communication, providing readers insight into the practices and goals of international programs.

The essays as a whole illustrate the need to bring technical communication into the international sphere and to expose students to the world that lies beyond cultural and political borders. One theme raised repeatedly throughout the essays is that of educating teachers about how to effectively provide these lessons. Although changes in the classroom to daily lesson planning are certainly a step in this direction, the collaborators agree that program-wide curricular changes are needed to enact solid change. The contributors reflect on the need to use teacher-training techniques and emphasize the necessity for continual consideration of how programs can evolve as the workplace requirements for students change.

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Programmatic Perspectives **Logo Contest**

Winner Announced

We are pleased to announce a winner in the *Programmatic Perspectives* logo contest—John Slaughter, University of Arkansa Little Rock. Kara Sordelett, James Madison University, received an honorable mention. Evaluators felt that John's entry captured the essence of the journal. The new logo is posted below and in use at ‹http://www.cptsc./pp/›.

Make Your Writing Research Count: Register with the Research Exchange Index (REx)

DEADLINE: May 1, 2013

Help make sure scientific, technical, and professional writing research is well represented in the Research Exchange Index, or REx. This new resource recognizes local, national, and international writing researchers by periodically collecting and publishing information about the research they have conducted. REx also addresses longstanding problems in writing studies by providing timely access to information about ongoing and recently completed research, making it possible to easily aggregate research information across conventional professional categories (e.g., technical and scientific communication, composition studies), and more.

Until May 1, 2013, REx editors are collecting descriptions of research projects begun in or after 2000, whether completed or ongoing, published or unpublished. All researchers, including mentored undergraduates, graduate students, program administrators, and professional practitioners, are encouraged to contribute. REx asks only for summary statements about research questions, methods and findings and should not conflict with IRB or extant/future publisher agreements. Prior to digital publication, however, REx editors will review all entries for clarity and completeness of information. The final digital publication will include a framing essay that offers scholarly context for REx along with general analysis of REx contents and suggestions for its future use.

To make your research count—and make sure it is counted—visit the REx acquisitions site at ‹researchexchange.colostate.edu›, set up an account, and complete a short form for each of your research projects. Contact editors Jenn Fishman (‹jenn.fishman@marquette.edu›) and Joan Mullin (‹jmullin@ilstu.edu›) with questions and comments.

CALL FOR PROPOSALS:

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March 13, 2013 from 9AM–5PM
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Proposal Deadline: Wednesday, October 31, 2012
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Questions?

Email Co-Chairs Risa P. Gorelick or Gina M. Merys: ‹chairs@rnfonline.com›

CFP: Please join the Research Network Forum as a Work-in-Progress Presenter and/or serve as a Discussion Leader and/or Editor.

The Research Network Forum, founded in 1987, is a pre-convention workshop at CCCC which provides an opportunity for published researchers, new researchers, and graduate students to discuss their current projects and receive mentoring from colleagues in the discipline. The forum is free to CCCC convention participants. As in past years, the 2013 session features morning plenary addresses focusing on "The Public Work of Composition," the 2013 CCCC theme. The RNF welcomes Work-in-Progress Presenters (WIPPs) at any stage of their research and at any position in the composition/rhetoric field (graduate student, junior faculty, tenured faculty, administrator, and/or independent scholar). During roundtable discussions, WIPPs are grouped by thematic clusters where they discuss their current projects in *an eight-minute presentation* and benefit from the responses of other researchers. Additionally, WIPPs bring a prepared a handout with their name, contact info (email/phone/snail mail), a brief abstract of their research project, and a list of questions they hope to explore during

their roundtable discussion (15 copies for the two sessions). WIPPs present their research at separate morning and afternoon session roundtables.

Discussion Leaders lead thematic roundtables and mentor WIPPs; this role is key to the RNF. We ask that Discussion Leaders are experienced, established researchers. They are welcome to also serve as WIPPs (please fill out two forms—one for Work-in-Progress and one for Discussion Leader roles). Serving as a Discussion Leader provides a valuable service to the composition/rhetoric community. Discussion Leaders may serve at the morning session, afternoon session, or all day.

Participants also include Editors of printed and electronic composition/rhetoric journals who discuss publishing opportunities for completed works-in-progress in an open, roundtable format. We encourage Editors to bring copies of the journals they edit/publish, any other publications, or announcements for display at the RNF meeting. Editors may also serve as WIPPs and Discussion Leaders.

Electronic proposal forms are available at our Google sites webpage, ‹https://sites.google.com/site/researchnetworkforum/›, where you can click on "submit a proposal" for the roles of Work-in-Progress Presenter, Discussion Leader, and/or Editor. The link goes live from August 30–October 31 to accept e-proposals. You may appear on the RNF Program in addition to having a speaking role at the Conference on College Composition & Communication.

What Happens in Las Vegas RNF Won't Stay in Las Vegas RNF!

MAKING SPACE

Call For Papers

Making Space

Writing Instruction, Infrastructure, and Multiliteracies

Writing studies scholarship has attended to a broad range of complex infrastructural issues (a la Star and Ruhleder, 1996; DeVoss, Cushman, & Grabill, 2005): Issues of physical, material objects in space (such as tables, computers, etc.), and also of institutional policies and pedagogical values that inform the practices within that space (Carter, Adkins & Dunbar-Odom, 2010–2011; Leibensperger, 2006; Sheridan, 2006; Sheridan & Inman, 2010; Vee, Shapiro, & Hughes, 2009). Writing center scholars have long explored the role of computers in writing center work, from early work on OWLs and online writing labs to more recent work on audio–visual enhanced digital consulting (e.g., Blythe, 1996, 1997; Coogan, 1999; Hobson, 1998; Inman & Sewell, 2000; McKinney, 2010; Yergeau, Wozniak, & Vandenberg, 2008). Composition teachers invested in computer-mediated spaces have interrogated the influence of space design on pedagogy (e.g., Bernhardt, 1989; Dinan, Gagnon, & Taylor, 1986; Hawisher & C. Selfe,1991; C. Selfe, 1987, 1989; R. Selfe, 2005).

One of the most important infrastructural elements for writing is space. The purpose of this collection is to situate space design and digital technologies as deliberate, infrastructural practice. We seek chapters by writing teachers; writing program administrators; and writing center directors, staff, and consultants that address how architectural and technological needs (articulated as architexture at Computers and Writing 2012) are addressed and how they are rationalized within their institutional contexts. We seek chapters that address the ways in which new and existing spaces are designed and renovated to make best use of digital tools and physical spaces for multimodal, digitally mediated instruction and research-related work. We invite chapters that describe the processes and challenges involved in doing so as well as the pedagogical and programmatic implications of infrastructural needs and implementations. Specific questions we hope chapters will address include, but are not limited to:

1. What furniture, technologies, tools, policies, people, and other infrastructural elements are essential for writing spaces?

2. What new writing spaces have you proposed and/or worked in? What challenges and successes have you encountered? In what ways have these spaces met the needs of students and teachers? In what ways have they not?
3. What sort of methodologies and methods inform the study of space and space design for writing? How can space planning best be undertaken in/for writing?
4. What would your ideal writing space (e.g., center, classroom, studio) look/sound/feel like? What are some of the pedagogical, institutional, infrastructural, etc. variables that shape your ideal?
5. What is the relationship between online and face-to-face consulting in the writing center of the future? In what ways should the spaces that support these consulting interfaces interact?
6. What are the particular infrastructural needs of writing programs that embrace multiliteracies and/or offer online classes?
7. How should we understand the mission of writing centers or writing programs in a digital age? In what ways does space design and use inform the mission? In what ways does the mission inform space design and use?

The deadline for 500-word proposals for webtexts is November 1, 2012 (with notification to authors by December 15, 2012 and draft chapters due by March 15, 2013). Please explain in your proposal how your project will take advantage of digital affordances (audio, video, etc.). Feel free to include mock-ups or wire-frames. Queries are welcome.

ATTW 2013—Call for Proposals

Technical Communication Beyond Belief

Las Vegas, NV
March 13, 2013

The Association of Teachers of Technical Writing (ATTW) invites proposals for papers, posters, and workshops to be given at its annual conference immediately preceding the Conference on College Composition and Communication (CCCC). The sixteenth annual ATTW conference will be held in Las Vegas, NV, on Wednesday, March 13, 2013. The full-day event includes concurrent sessions, poster presentations, workshops, book exhibits, and opportunities for exchanging ideas and networking in an academic environment.

Conference Theme

The theme for this year's conference is "Beyond Belief." It is prompted in part by Peter Cardon's (*JBTC* 2008) critique of Edward Hall's distinction between high- and low-context cultures. Cardon documented the extent to which our field relies upon this distinction, going so far as to call it "the most important communication theory" in international business and technical communication. And yet, as Cardon demonstrated, numerous studies "nearly all fail to support [the] relationship" between low-context, high-context, and communication. Moreover, Cardon found that Hall "provided no explanation of the method or analysis he used in creating his contexting model." It turns out that a widely cited distinction may not explain much at all.

Consider another example: Geoff Hart (*Technical Communication* 2000) examined ten commonly held beliefs held by technical communicators. Among them, he examined one propagated by George Miller's 1956 discovery of the "magic number 7." Generations of technical communicators have relied on this magic number to determine the optimum number of steps in a procedure to be five to nine (seven, plus or minus two) without examining Miller's actual thesis. Miller's original thesis suggested that the magic number 7 actually represented "the number of cognitive tools typical readers can hold in their mind's hand (so to speak) and use to attack a problem" rather than the number of discrete steps that they can process in a procedure.

Issues to Explore at ATTW 2012

Studies by scholars such as Cardon and Hart demonstrate that we sometimes base practices on theories, beliefs, or habits that deserve to be examined. This

ATTW conference, we hope, will provide teachers and researchers in our field with a venue to explore diverse perspectives on these issues. More specifically, proposals for conference presentations and poster sessions are encouraged to explore the following:

- What misunderstood or untested myths do we rely upon as a field? What are the origins of these myths and how might we test them?
- Why do we find these beliefs, myths, and habits so compelling? Why do we rely on them in our classrooms? Will they stand up to scrutiny?
- What kinds of evidence are used to support theories, beliefs, and habits common to professional and technical writing? Why do we assume these kinds of evidence are valid?
- Are there beliefs that we hold as teachers that our students do not? What is the nature of this discrepancy?

By calling for an examination of theories, beliefs, and assumptions, we do not intend to privilege empirical studies exclusively. Although we certainly welcome empirical evidence, we also welcome papers regarding theoretical discrepancies. Such papers might explore the following:

- Does our field espouse seemingly incompatible theories?
- Does a relatively new theory (actor-network theory or activity theory, for example) throw other theories or practices into doubt? Why?
- Is there a place for anecdotal evidence in our field? If so, what is that place?

Proposal Format

Proposals that explore these and related issues are welcome, although we also may accept proposals that address issues that fall within the broad category of technical communication. All submissions must specify one of the following three formats for their proposals:

1. **Regular Session**: Individuals may submit proposals for 15-minute talks on panels created by the conference organizers. *These proposals should be no more than 300 words.* Groups may submit proposals for 75-minute panel presentations. *These proposals should be no more than 200 words per presentation plus a 150-word contextualization/justification of the panel (800 words max).*

2. **Poster Presentation**: Posters will be on display throughout the day with special times dedicated for conversations about this work. *Proposals for poster presentations should be no more than 300 words.*
3. **Workshop Sessions**: The conference will include two 90-minute workshops concurrent with the regular sessions. Workshops that would help newcomers enter the field are especially welcome. *Workshop proposals should be no more than 1500 words.*

Proposals should remove all identifying information from the proposal itself, including the names and institutions of presenters. Proposers will have the opportunity to include this information when they register on the conference website.

Deadline for Submission

Proposals should be submitted no later than **October 1, 2012,** at the link for proposal submission available at ‹http://www.attw.org/?q=node/add/conference-proposal›. All proposals will be peer reviewed.

Intended Audiences

All teachers and researchers interested in technical communication are welcome. New teachers of technical communication, as well as graduate students, are especially encouraged to attend the conference.

Contact

For any additional information concerning this CFP and the conference, please contact the conference co-chairs, Stuart Blythe at Michigan State University at ‹blythes@msu.edu› and Ryan Moeller at Utah State University at ‹rylish.moeller@usu.edu›.

Technical Communication Quarterly: Search for Editor and Host Institution

The Association of Teachers of Technical Writing is seeking an editor and institutional home for Technical Communication Quarterly for a five-year, renewable commitment to begin September 1, 2013. The first issue for the new editor(s) will be January 2014, but the appointed editor should be available to work with the current editor between June 1 and September 1, 2013. TCQ is published as a print journal four times per year by Taylor & Francis, LLC. The journal is also published online, and it is now included in the publisher's iFirst workflow, which means that pre-print versions of forthcoming articles are published throughout the year on the journal's website, changing the traditionally structured concrete deadlines to a more continuous workflow.

The new editor should be an accomplished scholar, a tenured member of the faculty, and a member of ATTW who is conversant with and committed to its goals. A successful proposal must demonstrate both the prospective editor's credentials and institutional support for publishing the journal.

Taylor & Francis, as well as ATTW, will provide some annual financial support for the journal. Taylor & Francis produces, promotes, and distributes the journal and thus is responsible for subscriptions, marketing, and advertising. The new editor will likely need an editorial team, especially for copyediting manuscripts, to ensure the high quality of final articles. Again, applicants should be sure to discuss the financial contribution of the proposed host institution.

The prospective editor will solicit articles, arrange for blind reviews, provide feedback to authors, deliver manuscripts to Taylor &Francis according to the schedule they have set, provide an annual report of the state of the journal, chair the editorial board, and meet annually with the ATTW Executive Committee at the ATTW conference.

Please submit a proposal by January 15, 2013. We hope to make a decision about the placement of the journal by April.

The completed, brief proposal (2-3 pages) must include the following:

- name of editor(s) and rank
- current vita of editor(s)
- statement of vision for the journal
- projected annual budget , highlighting institutional commitment
- letters of support from institution's administration

Proposals should be sent to ATTW Vice President Michele Simmons by January 15, 2013. Following discussion and consideration with the executive committee of ATTW, the announcement of the editor will be made by April. For more information, contact Michele at ‹simmonwm@muohio.edu› or 513.529.1395.