

Volume 6 Issue 1

pr::grammatic

P E R S P E C T I V E S

Editors

Tracy Bridgeford

Kirk St. Amant

CPTSC

Issue Preview

Tracy Bridgeford

University of Nebraska at Omaha

Kirk St. Amant

East Carolina University

We're pleased to present the first issue of 2014! The articles it contains bring together diverse perspectives on skills, research and service-learning pedagogy, and entrepreneurialism within the context of how such factors can affect programs in our field.

The issue begins with Sally Henschel and Lisa Meloncon's discussion of a comprehensive technical and professional communication approach to our curricula. By combining Robert Reich's symbolic analytic discussion of 21st century skills and Kelli Cargile Cook's layered literacies, Henschel and Meloncon offer a program-focused method of assessment that can help administrators create, shape, and revise curricula.

In the issue's next entry, Kelli Cargile Cook argues for a deeper connection between research skills and service learning pedagogies. In so doing she discusses how students use a combination of primary and secondary research skills while working on authentic projects—a link she sees as missing from current conversations in the field. To explore this idea, Cargile Cook describes assignments designed to facilitate critical research skills, and they include biographies, special issues report, agency profiles—all of which help students transition to the workplace.

Ryan Weber and John M. Spartz's article continues this discussion of service learning by calling for an educational model that engages technical communication students with ideas and practices associated with entrepreneurship. For Weber and Spartz, this connection is key, for they view entrepreneurship as a "holistic mindset" that allows people to recognize opportunities, initiate change, unite people, and contribute to create something new. This social perspective of entrepreneur-based, service-learning projects can thus increase the entire focus of technical communication

courses and help students develop both a career-ready ethos and a keener audience awareness while also improving their professional communication skills.

This issue's program showcase comes from Edward A. Malone, David Wright, and Elizabeth M. Roberson who describe both their BS and MS Technical Communication programs at Missouri S&T. In their description, the authors discuss the challenges they have faced given the newness of their program, the small number of faculty and majors, and the context of their program's institutional awareness.

In this issue's Curriculum Showcase, Erin Frost describes the "apparent feminism" approach she uses when teaching technical communication courses, which she explains as response to a lack of feministic discussions in the field. Frost also explains how the "apparent feminism" approach to pedagogy provides a way to question the supposedly objective nature documents and thus helps students be more critical of such documents.

In this issue's editorial, Natasha Jones, Gerald Savage, and Han Yu consider the status of diversity in Technical and Professional Communication programs and examine initiatives that have been undertaken to examine diversity and social justice issues within the field and in relation to our programs. Jones, Savage, and Yu also discuss how discussions related to those initiatives are shaping technical communication programs as well as posit what the future will bring to these discussions.

Finally, Adam Breckenridge offers his review of TyAnna Herrington's recent book *Intellectual Property on Campus: Students' Rights and Responsibilities*. In his review, Breckenridge notes how the text is an "invaluable guide" for administrators, students, and instructors with Section 4 on "Authorship, Plagiarism and Copyright" being particularly valuable for administrators in the field.

We hope you all enjoy the issue, and we look forward to the conversations arising from the ideas presented here.

Tracy and Kirk

Of Horsemen and Layered Literacies

Assessment Instruments for Aligning Technical and Professional Communication Undergraduate Curricula with Professional Expectations

Sally Henschel

Midwestern State University

Lisa Meloncon

University of Cincinnati

Abstract. In this study, we attempt to answer the following questions: What conceptual and practical skills are deemed important by academics and practitioners, and how can they be summarized, illustrated, and applied to course development and program assessment? We review the scholarship on conceptual and practical skills and visualize our analysis in an explanatory matrix. Then we place the conceptual and practical skills into instruments for use in assessing individual courses and inventorying program curricula in technical and professional communication. Finally, we apply the inventory instrument to the top or “core” courses in technical and professional communication (Meloncon and Henschel 2013).

Keywords. Undergraduate curricula, course assessment, program assessment, conceptual skills, practical skills, professional expectations, workplace skills

[A]s educators, we need to regularly question why we teach students the skills we do and determine whether or not we are preparing our students in the best possible way for the demands of the current and future profession. (Kim & Tolley, 2004, p. 385)

In this study, we approach Loel Kim and Christie Tolley’s challenge to educators to question “why we teach the skills we do” from a slightly different perspective. We provide assessment and inventory instruments to examine *what* we do, as evidenced in the courses that comprise the Technical and Professional Communication (TPC) curricula, alongside the growing body of scholarship that theorizes and classifies the concep-

tual and practical skills one needs to acquire to be a successful technical communicator (e.g., Allen & Benninghoff, 2004; Cargile Cook, 2002; Clark & Anderson, 2005; Hart-Davidson, 2001; Johnson-Eilola, 1996; Lanier, 2009; Pringle & Williams, 2005; Rainey, Turner, & Dayton, 2005; Reich, 1992; Slatery, 2005; Society for Technical Communication, 2012; Society of Technical Communication Certification Commission (2013); Thomas & McShane, 2007; Whiteside, 2003; and Wilson, 2001). In doing so, we add another dimension to the growing body of literature about program assessment (e.g., Carter, Anson, & Miller, 2003; Hundleby & Allen, 2010; Salvo & Ren, 2007; Thomas & McShane, 2007; and Yu, 2008).

This article explores the following questions:

1. What conceptual and practical skills are deemed important by academics and practitioners?
2. How can these conceptual and practical concepts be visually represented?
3. How can the identified conceptual and practical skills be used in or applied to course development and program assessment?

Specifically, our guiding research question is as follows: If the field has articulated and acknowledged the conceptual and practical skills students need to acquire in order to be successful and effective professionals, what assessment and inventory instruments can be used to align these expectations with the courses required by TPC programs?

We review the scholarship on conceptual and practical skills, and following our analysis of the literature, create an explanatory matrix to organize and visually display these skills. Then we offer course assessment and program inventory instruments for faculty and program administrators to use to access their curricula for the inclusion of conceptual and practical skills. Through the placement of existing scholarship, the *why*, alongside current curricular data, the *what*, we capture, illustrate, and offer for examination and discussion instruments the field can use to help determine “whether or not we are preparing students in the best possible way for the demands of the current and future profession” (Kim & Tolley, 2004, p. 385).

Toward an Explanatory Matrix: A Review of the Literature on Conceptual and Practical Skills

Scholarship frequently categorizes the skills necessary for students to be successful in the profession by two identifiable types: conceptual and practical. Even though the term *skill* often is associated with basic training or a mechanistic process devoid of creativity or critical thinking, we opted

to use and define *skill* as “a particular ability and/or expertise.” We recognize that skilled technical communicators will, in many cases, seamlessly integrate the conceptual with the practical to achieve a desired outcome; however, our distinction between the two skill areas derives from the different focus taken in published scholarship on what skills are needed to be a successful professional technical communicator.

Conceptual skills encompass critical thinking and problem solving, the high-order knowledge and literacies a technical communicator needs to be successful and remain flexible in the ever-changing workplace. In contrast, practical skills usually are described in less abstract terms and include specific, identifiable skills needed by a technical communicator, e.g., audience analysis, writing, editing, information and document design, and technology/tool knowledge. Michael Carter (2007) articulated this distinction in his discussion regarding different ways to conceive the relationship between writing and knowing (or “ways of knowing”) in the discipline: “Some psychologists describe this distinction as declarative or conceptual knowledge on the one hand and procedural or process knowledge on the other, the difference between knowing that and knowing how (e.g., Anderson)” (Carter, 2007, p. 387).

Because TPC is an applied field, students who possess both conceptual and practical skills are better prepared to succeed in the workplace, a success based, as Greg Wilson (2001) pointed out, on the ability “to interpret and negotiate both complex information and complex work contexts” (p. 97).

Conceptual Skills: “Four Horsemen” and “Six-layered Literacies”

Our literature review began with the work of Johndan Johnson-Eilola (1996), who argued that in the post-industrial workplace, technical communicators need to “rearticulate” their value, by shifting the emphasis from their practical, immediately useful skill set to an emphasis on their broader analytical and communication skills. To describe these skills, Johnson-Eilola, as well as other scholars, pointed to Robert Reich’s *The Work of Nations* (1992), in which Reich discussed the transformations taking place in the postmodern workforce. Reich identified three broad job classifications into which future jobs would fall: routine-production services, those involving repetitive tasks that are easily out-sourced; in-person services, those involving face-to-face services that often are low-paying; and symbolic-analytic services, those requiring skills in “problem solving, problem-identifying, and strategic brokering” (Reich, pp. 174-177). Johnson-Eilola (1996) made clear the parallel between the skill set and work requirements of Reich’s symbolic-analytic worker and those of the technical communicator:

Symbolic-analytic workers possess the abilities to identify, rearrange, circulate, abstract, and broker information. Their principle work materials are information and symbols, their principle products are reports, plans, and proposals. They frequently work online, either communicating with peers (they rarely have direct organizational supervision) or manipulating symbols with the help of various computer resources. (p. 255)

Reich noted that the attainment of symbolic-analytic skills requires a curriculum that “is fluid and interactive. Instead of emphasizing the transmission of information, the focus is on judgment and interpretation” (p. 230). Reich claimed, “the formal education of an incipient symbolic analyst thus entails refining four basic skills: *abstraction*, the capacity “for discovering patterns and meanings”; *system thinking*, the capability of “seeing the whole, and of understanding the processes by which parts of reality are linked together”; *experimentation*, the practice of “continuously experimenting”; and *collaboration*, the capacity to “collaborate, communicate abstract concepts, and achieve a consensus” (pp. 229-233). Wilson referred to the four basic conceptual skills as “the four horsemen of symbolic analysis” (2001, p. 86), and scholars repeatedly acknowledge these four conceptual skills as important ways to think about the work of technical communication (Hart-Davidson, 2001; Johnson-Eilola, 1996, 2004; Slattery, 2005; Thomas & McShane, 2007; and Wilson, 2001).

Concerned that technical communication pedagogy has focused “on a limited set of skills” (p. 75), Wilson (2001) argued, “We need to imbue our students with the agency to interpret and negotiate both complex information and complex work contexts” (p. 97). Kelli Cargile Cook (2002) responded to such concerns when she created a theoretical frame for technical communication pedagogy. Cargile Cook’s “layered literacies” address the increasing complexity of technical writing courses and the attendant complexity of their pedagogical goals (p. 5). Her theoretical, pedagogical frame is based on six key literacies—*basic*, *rhetorical*, *social*, *technological*, *ethical*, and *critical*—and allows instructors to “conceptualize technical communication pedagogy as layers of learning that move and flow over one another depending on the topic of the moment, hour, unit, or course” (p. 24). The strength of “layered literacies” lies in the “the fluidity of these categories . . . because it allows instructors to create activities that promote multiple literacies and develop many skills simultaneously” (p. 23). Although they can be introduced in a single course (e.g., a service course), they all cannot be adequately addressed in a single course. The layering or

integrating of all six literacies throughout the curricula will best prepare students for the future work they will be called upon to perform.

When Shelley Thomas and Becky Jo McShane (2007) assessed their undergraduate TPC program, they created a framework that included the conceptual skills of the symbolic-analytic worker and Cargile Cook’s literacies. Although this type of analysis is not presently possible at the field level, it led to our combining and visually modeling the conceptual skills. Reich’s and Cargile Cook’s conceptual skills share commonalities even though they were developed for different purposes: Reich’s from an industry standpoint and Cargile Cook’s from an educational one. We needed a common language that merged both viewpoints and could be integrated with practical skills, as we discuss in the next section. Table 1 illustrates Cargile Cook’s and Reich’s conceptual skills, which we later align and combine into five conceptual skills.

Table 1. Cargile Cook’s and Reich’s conceptual skills

Cargile Cook: Layered Literacies		Reich: Symbolic-Analytic Abilities	
basic	The capacity to make informed decisions about usage, grammar, mechanics, styles, and graphic representations based on knowledge of readers and writing situations	abstraction	The capacity for discovering patterns and meanings
rhetorical	The possession of multifaceted knowledge that allows writers to conceptualize and shape documents whatever their specific purpose or audience	collaboration	The capacity to collaborate, communicate abstract concepts, and achieve a consensus
social	The ability to collaborate, work within organization settings and handle conflicts	experimentation	The practice of continuously experimenting
technological	The possession of a working knowledge of technologies (an awareness of which promotes collaboration critique), and the ability to act upon how these technologies are used in the work place	system thinking	The ability to see the whole and understand the processes by which parts of reality are linked together
ethical	The possession of and commitment to professional ethical standards, and the ability to consider all stakeholders involved in an information development process		

critical	The ability to recognize and consider ideological stances and power structures, and the willingness to take action to assist those in need		
-----------------	--	--	--

We combined the two sets of conceptual skills through a four-step process: (1) combining several of Cargile Cook’s literacies, (2) comparing these combined literacies to Reich’s symbolic-analytic skills, (3) combining Cargile Cook’s and Reich’s categories into five conceptual skill categories, and (4) visually representing these conceptual skills in a matrix. Working first with Cargile Cook’s layered literacies, we combined several of the literacies: *basic* and *rhetorical* into *rhetorical* because we believe basic literacy is a necessary part of rhetorical literacy; and *ethical* and *critical* into *critical* because we find ethics to be embedded in and an integral part of Cargile Cook’s critical literacy.

We then compared Cargile Cook’s categories, including those we combined, to Reich’s. The category *rhetorical* had no immediate match. In light of its importance in scholarship and teaching practices in TPC, rhetorical became our first conceptual skill: **(1) rhetorical proficiency**. Reich’s concept of abstraction, “the capacity for discovering patterns and meanings,” did not find a counter part with Cargile Cook’s literacies, so it, too, became a stand alone skill and conceptual category: **(2) abstraction**. Reich and Cargile Cook both include the skill of collaboration, Cargile Cook as a social literacy and Reich as one of the four analytic abilities. We opted to use Cargile Cook’s term, and merged social literacy and collaboration into a third conceptual skill: **(3) social proficiency**. Examining Cargile Cook’s technological literacy and Reich’s experimentation, we realized that technological literacy is a key component of what Reich described as experimentation and decided Reich’s terminology was more all-encompassing and a better fit for our fourth conceptual skill: **(4) experimentation**. Finally, we concluded that Cargile Cook’s critical literacy and Reich’s system thinking skills were extensions of one another: to be able to recognize and consider ideological stances (Cargile Cook), one needed to be able to see the whole and how it was linked together (Reich). Combining the two, we arrived at our final conceptual skill: **(5) critical system thinking**. (See Figure 1).

While satisfied that we had adequately aligned and combined Cargile Cook’s and Reich’s conceptual skills, we found Figure 1 did not adequately visually represent how the conceptual skills related to each other. Influenced by the inquiries and approaches taken by Janet Emig (1982), Cindy Johaneck (2000), and others, we attempted to create an “explanatory

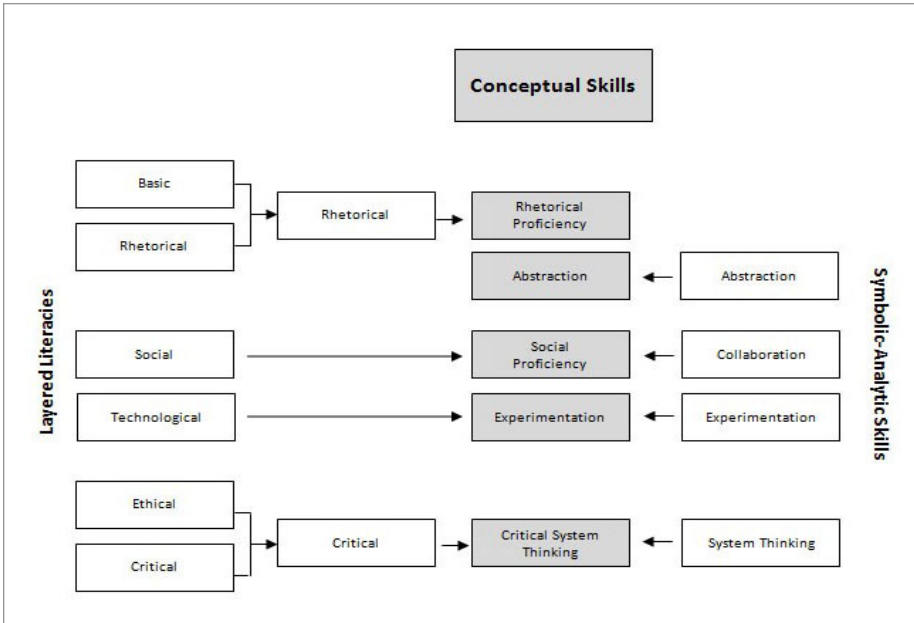


Figure 1. Merging layered literacies and symbolic-analytic skills into five conceptual skills

matrix,” first to visualize the relationship between the conceptual skills, and second, to visualize the relationship between the conceptual and practical skills. Emig borrowed the definition “explanatory matrix” from Thomas Kuhn: “An inquiry paradigm then is the explanatory matrix for any systematic investigation of phenomena” (Emig, 1982, p. 64). In trying to visualize the conceptual skills, we went through numerous iterations. We kept coming back to the idea of a matrix: a “surrounding medium or structure” (*Oxford Dictionaries*); “something within or from which something else originates, develops, or takes form” (*Merriam-Webster*). The concept of a surrounding structure led us to envision the matrix as a circle, within which are the conceptual skills necessary in a comprehensive TPC curriculum. (See Figure 2).

Our matrix is composed of five concepts, represented by four quadrants tethered at the center: *rhetorical proficiency*, *abstraction*, *experimentation*, and *social proficiency* are “linked” by *critical system thinking*. In Figure 2, we acknowledge the considerable overlap and complementary ideas of Reich and Cargile Cook, and attempt to combine complex, abstract thoughts into one representation. By tethering the quadrants together with critical system thinking, we acknowledge programmatic goals to help students become critical system thinkers who can deploy any one or a combination of the conceptual skills as needed to solve problems in the workplace. Or as Reich noted, “Rather than teach students how to solve a

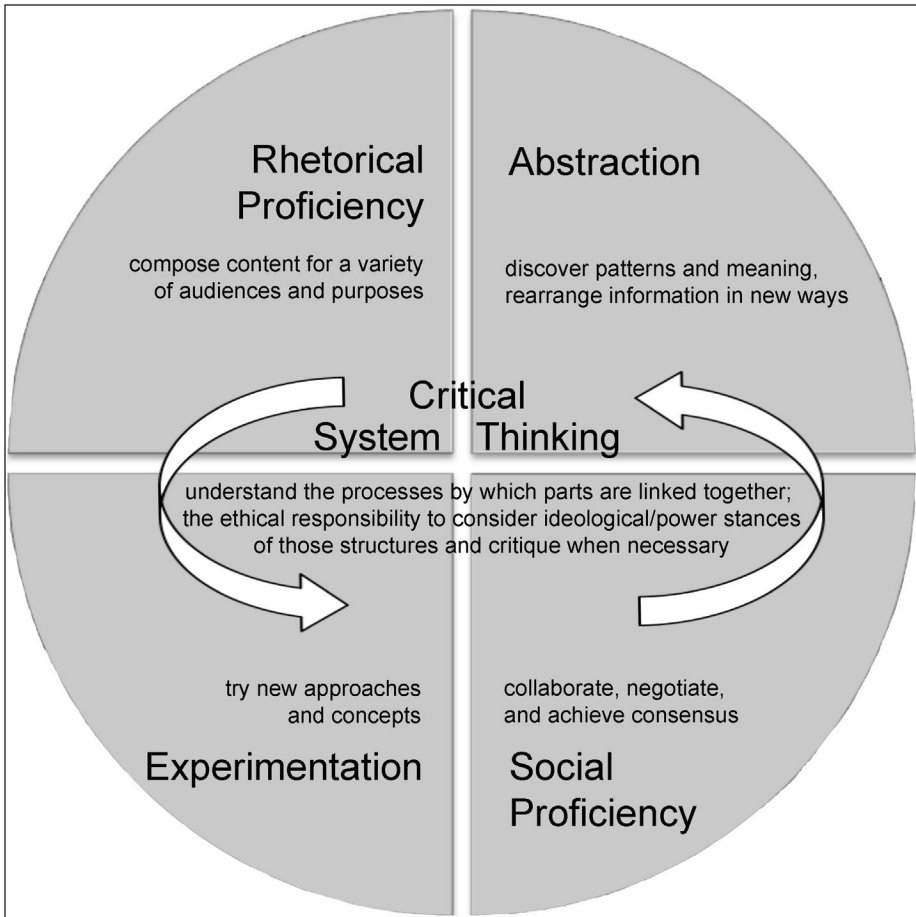


Figure 2. Explanatory matrix: conceptual skills based on Reich and Cargile Cook

problem that is presented to them, they are taught to examine why the problem arises and how it is connected to other problems” (p. 231).

Practical Skills

After reviewing the literature on conceptual skills, we examined how practical skills could fit into the matrix. We began by examining the literature that discussed the practical skills needed by technical communicators to succeed in the workplace. We then created Table 2 and organized our findings by author(s), skill, and perspective (i.e., academic or practitioner). At a quick glance, one could see what practical skills have been identified as important by academics and practitioners. (See Table 2).

In an effort to find and illustrate commonalities in these studies, we summarized selected sections of complex studies (as shown in the bullets in Table 2). We worked with the terminology used in the published litera-

Table 2. Practical skills taken from the published literature

Author	Skill	Perspective
Dayton & Bernhardt (2004)	<ul style="list-style-type: none"> • rhetorical skills • writing • editing skills • technology • personal traits and work skills • specialized expertise • document design • problem solving/thinking • collaboration and teamwork 	academics
Allen & Benninghoff (2004)	<ul style="list-style-type: none"> • rhetorical analysis • document design • genre writing • working with a team • editing 	academic program coordinators
Pringle & Williams (2005)	<ul style="list-style-type: none"> • audience analysis • communicating • writing • designing • editing • technology • managing • research 	practitioners
Rainey, Turner & Dayton (2005)	<ul style="list-style-type: none"> • collaborative skills • writing skills • technical skills (access, learn, design) • self-activation/evaluation 	practitioners /managers
Meloncon (2008)	<ul style="list-style-type: none"> • writing skills • audience analysis • technical skills • document design • basic business • project management 	practitioners
Lanier (2009)	<ul style="list-style-type: none"> • subject matter expertise • genre writing • technology (tools & software) • project management • workplace experience 	practitioners via job ads
Society of Technical Communication BOK project (2011)	<ul style="list-style-type: none"> • designing and developing information • using tools and technology • following TC standards • collaboration • managing groups 	practitioners and academics

Society of Technical Communication Certification Commission (2013)	<ul style="list-style-type: none"> • user, task, and experience analysis • information design • process management • information development • information production 	practitioners
--	--	---------------

ture to create the table. Not surprisingly, in the skills identified by practitioners, terms such as *rhetoric* were not employed. This term is academic in nature and, by many, could be considered theoretical. Although practitioners rarely use the term *rhetorical awareness*, they do use terms with similar denotations, such as *audience analysis* or *user and task analysis*, both of which many academics include under the more general term *rhetorical analysis*. The same is true for a term such as *genre*. It was not surprising to see *genre* omitted from practitioners’ lists, but at the same time, most practitioners would agree that knowing the differences of conventions, structures of proposals, and online help is important. Though academics and practitioners may be using different terminology, the actual skills are quite similar (see also, Coppola, 2011). What was striking about the information, however, was how the table helped us to identify what academics and practitioners *think* about the needed practical skills of technical communicators. Such information is key for our study on how to align professional expectations with what academics *do* via the curricula.

In order to visualize possible relationships between the earlier identified five conceptual skills and the practical skills, we identified the most often recommended practical skills in Table 2 and located them on the matrix, aligning them to the conceptual skills. (See Figure 3).

To determine where in the matrix to align the practical skills, we examined their individual descriptions in the literature. Then through the process of collaboration, we subjected Figure 3 to multiple iterations. We anticipate that many readers might not agree with the alignment of the practical skills to the conceptual categories because we did not. For example, it is highly likely some might immediately think that *writing* or *information design* should be aligned under *abstraction*, or that *information production* belongs under *rhetorical proficiency*, or any number of other possible combinations, all of which would have merit. However, keep in mind that we chose a circle for our matrix purposefully. The quadrants and corresponding practical skills illustrate the relationship between each part to the whole—a way of seeing what the discipline deems important, both a “knowing that” and “knowing how” (Carter’s 2007). Carter stated, “A greater awareness of the importance of ways of knowing in the [field] allows us to take a more perceptive approach to helping faculty create

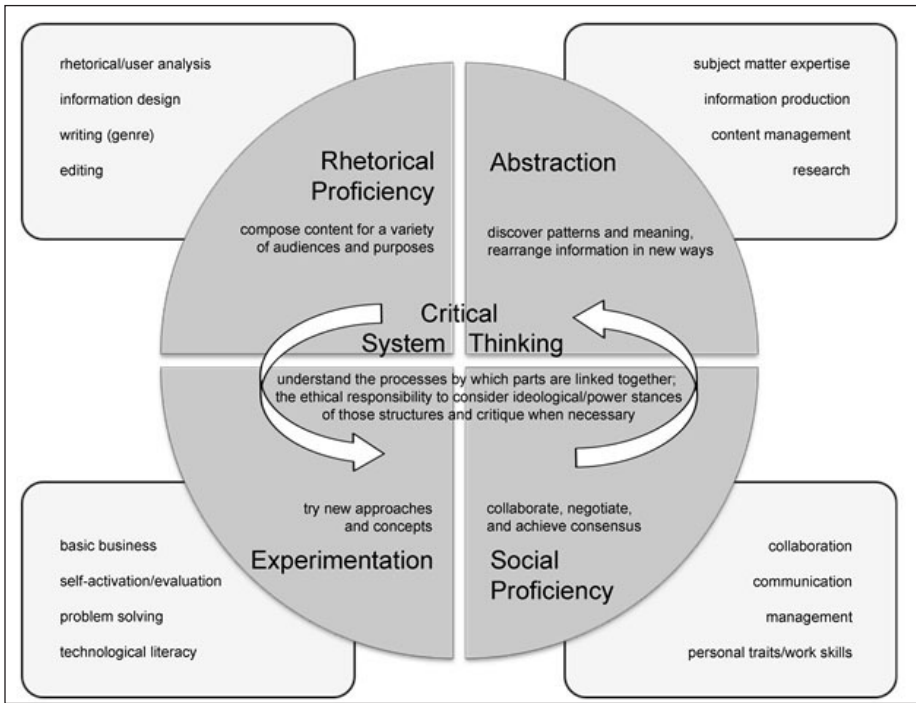


Figure 3. Explanatory matrix: conceptual and practical skills aligned

appropriate learning situations for their students” (Carter, p. 407). As a way of knowing, the matrix gives a structure to a large body of scholarship and provides a way for TPC administrators and faculty to evaluate their programs and the jobs they are doing.

The literature of conceptual and practical skills suggests what students should know and what they should learn in the classroom. In response to this research, our next task was to take the “ways of knowing”—the published scholarship—and visualize a programmatic “way of doing” that would help administrators and faculty create, shape, and revise curricula.

Instruments to Assess Conceptual and Practical Skills in the Curricula

At this point in our research, we returned to our primary research question: If the field has articulated and acknowledged the conceptual and practical skills students need to be successful and effective professionals, what assessment and inventory instruments can be used to align these expectations with the courses required by TPC programs? The need for curricula assessment instruments takes on an additional sense of importance and urgency when discussed in light of previous research that reported, “employers complain that there is no consistency among graduates and very

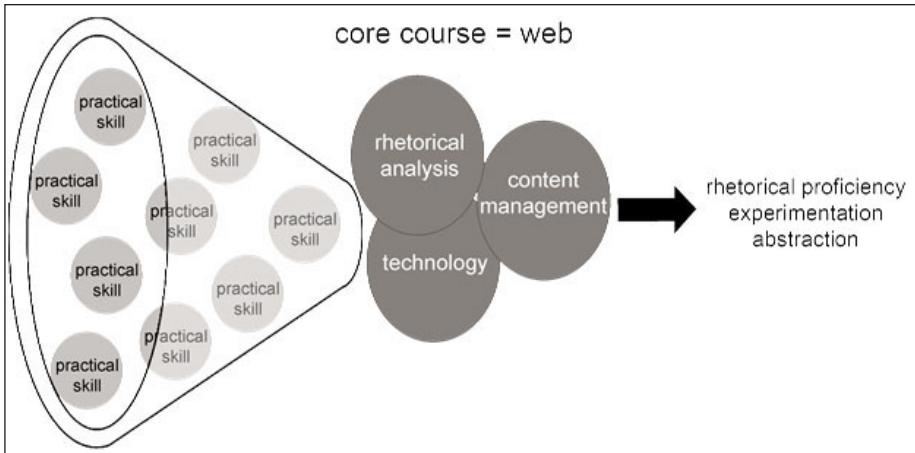


Figure 4. From selected practical and conceptual skills to course development

little assurance that a graduate has a minimum set of capabilities" (Davis, 2001, p. 143). As we began to apply the matrix to curricula, we realized that the matrix's usefulness was limited as a way of doing. In visualizing the field's way of knowing, the matrix worked well, but how could we begin to employ this information in specific, applied ways of doing within our programs? If the matrix represented the knowledge that an ideal student would possess when she graduated, then how could we assess whether or not courses required in the curriculum included these skills? In other words, how could the matrix be applied at the course and program level?

Figure 4 takes information from the matrix and applies it at the level of a specific course. In this example, we are using a web course. (See later discussion of course descriptions.) The funnel representation illustrates how TPC administrators and faculty could utilize the practical list of skills and the overarching conceptual skills that a web course could achieve to determine which are most important for a specific course (see Figure 4). This representation's primary benefit is that it allows us to see how the parts, practical and conceptual, can be integrated and considered at the course level. As an alternate, perhaps, more useful representation, we offer an assessment instrument for use at the course level. (See Table 3).

In Table 3, individual courses can be ranked for the various levels of inclusion of conceptual and practical skills. For example, program outcomes such as rhetorical proficiency are assessed throughout the curriculum for inclusion, but can be assessed on a scale of proficiency. The expectations in an introductory course would be different, of course, from the expectations in an advanced course. Working from the single course assessment instrument, we created a form to serve as a program inventory of concep-

Table 3. TPC course assessment for inclusion of conceptual and practical skills

Conceptual & Practical Outcomes	Course Number & Title			
	Level of inclusion or expected proficiency			
	High (4)	Moderate (3)	Low (2)	N/A (1)
Rhetorical Proficiency				
rhetorical/user analysis				
information design				
writing (genre)				
editing				
other				
Abstraction				
subject matter expertise				
information production				
content management				
research				
other				
Social Proficiency				
collaboration				
communication				
management				
personal traits/work skills				
other				
Experimentation				
basic business				
self activation/evaluation				
problem solving thinking				
technology literacy				
other				
System Thinking				
critical thinking				
ethical responsibility				
other				
Other Outcomes				

tual and practical skills as they appear—or are “layered”—throughout the curriculum. (See Table 4).

Table 4. TPC program course inventory for inclusion of conceptual and practical skills

Conceptual & Practical Outcomes	Course Numbers & Titles								
Rhetorical Proficiency									
rhetorical/user analysis									
information design									
writing (genre)									
editing									
other									
Abstraction									
subject matter expertise									
information production									
content management									
research									
other									
Social Proficiency									
collaboration									
communication									
management									
personal traits/work skills									
other									
Experimentation									
basic business									
self activation/evaluation									
problem solving									
technological literacy									
other									
System Thinking									
critical thinking									
ethical responsibility									
other									
Other Outcomes									

In the final step of our study, we applied the assessment and inventory features to 8 core courses in the TPC curricula. In a recent study that examines curricula of 65 undergraduate degree programs in TPC, Meloncon and Henschel (2013) assigned 636 required and 816 elective courses a code category based on each course title and accompanying course description (see Appendix). In Figure 5, we show the 8 most-often required courses identified in the study, courses which suggest a commonality in the TPC curricula. Following is a brief description of the core courses.

Basic Introductory courses to the practice of technical and professional writing and communication. In most cases, this course does double duty and also is the “service course” for other departments.

Capstone Courses that provide students the opportunity to bring together all their TPC courses into a singular cumulative experience. *Capstone* is used in the study as an umbrella term for all types of cumulative experiences.

Editing Courses in which the main focus is editing principles and practices.

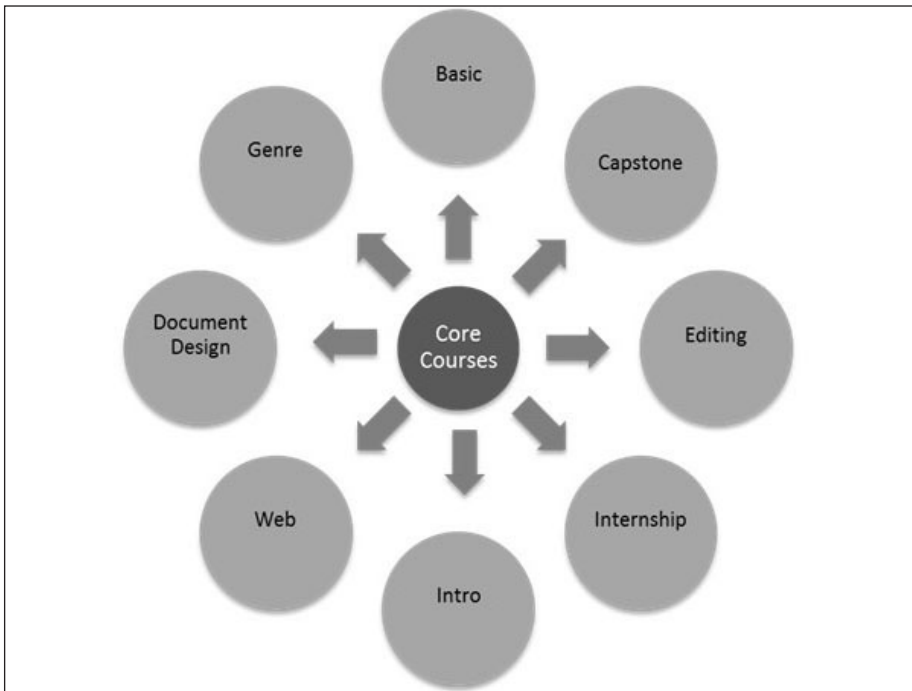


Figure 5. Top or core courses required by TPC programs (Adapted from Meloncon & Henschel, 2013)

Internships Courses that allow students to gain work experience.

Intro Introductory courses designed to introduce students to the field of TPC, to establish the history and theories of the field, and to prepare students to produce or create professional documents.

Web An umbrella term for courses that provide students a background in the creation and development of web sites and web content. This category includes sub-categories for courses focused on writing, production, multi-media, and content management.

Document design Courses that generally include a mix of theories of design principles and hands-on practice in the creation of different types of documents.

Genre Courses that focus on specific TPC genres such as instructions, proposals/grants, and reports, or specialized genres such as medical or environmental writing or business-oriented writing (Meloncon & Henschel, 2013, pp. 51-53).

In the next stage of our study, we examined how these courses could be aligned with the information from our matrix into a program inventory. In Table 5, we include generic course numbers so as to arrange the courses in the inventory from lower- to upper-level undergraduate courses. In our effort to provide a generic example using the top courses in undergraduate curricula, we hope to show the flexibility of examining curricula as it relates to conceptual and practical skills. In addition, in this example, we simply checked-off when a course included skills associated with a conceptual/practical category set. If a TPC program assesses and ranks individual courses on level of inclusion or expected proficiency, then the program inventory could include a ranking (e.g., 1-4) in the place of the x. (See Table 5.)

Table 5. TPC program inventory of core courses

Conceptual & Practical Outcomes	TPC Core Courses							
	2113	2213	3113	3213	3513	4113	4213	4513
	basic	intro	doc design	genre	web	edit	intern	capstone
Rhetorical Proficiency								
rhetorical/user analysis	x	x	x	x	x			x
information design			x	x	x	x		x
writing (genre)	x	x	x	x		x		x

Of Horsemen and Layered Literacies

editing	x	x	x	x		x		x
other								
Abstraction								
subject matter expertise			x	x	x	x	x	x
information production			x	x	x			x
content management			x	x	x	x	x	x
research	x	x	x	x				x
other								
Social Proficiency								
collaboration	x				x	x	x	
communication			x	x	x	x	x	
management	x		x		x		x	
personal traits/work skills			x		x	x	x	x
other								
Experimentation								
basic business				x	x		x	
self activation/evaluation			x	x	x	x	x	x
problem solving			x		x	x	x	x
technological literacy	x		x		x		x	x
other								
System Thinking								
critical thinking	x	x	x	x	x	x	x	x
ethical responsibility	x	x	x	x	x	x	x	x

Looking over a completed inventory of required courses, a TPC program could see how successful they are in the layering or integrating the conceptual and practical skills throughout the curricula.

To better understand how we worked through the sample program course inventory in Table 5, consider the conceptual skill *experimentation*. Under experimentation, we included the practical skills of basic business, self-activation/evaluation, problem solving, technological literacy, and other (to allow programs to adapt the inventory as needed). Two of the courses we indicated that included this skill set are internship and capstone, as the experiential nature of both encourages students to transfer skills and knowledge from their coursework into these experiences, and both courses require self-activation on the part of the students.

Under the experimentation skill set, one also finds technological literacy. The practical skills listed in Table 2 include many references to technology. In most of these instances, *technology* means a technological literacy and/or the ability to use specific tools. The tool versus technology debate has a long history in TPC. Michael Wojcik (2011) summarized the high points of this debate and provided a working bibliography of pertinent historical and recent scholarship. Through the use of course assessment instruments and program inventories, the field can examine the large number of required and elective courses that include technological literacy from different perspectives or for different objectives. For example, the field can use the collected information to continue to refine its definition of technological literacy, wherein students are incorporating the “multiliteracies” (Selber, 2004) related to performance (ability to use a computer), contextual factors (e.g., political, economic, social, or cultural), and linguistic activities (Breuch, 2002, p. 279). In addition, by examining the specialized technological experience that students gain in these courses, the field will be better positioned to discuss and question the technologies covered in these courses, and to ensure that students are learning more than simply how to use the most popular or recent technology (see also Clark & Andersen, 2005).

If one thinks of an undergraduate curriculum in the most basic of terms, one finds a natural progression of courses, beginning with foundational courses, moving to introductory and advanced courses in information creation, and “culminating” with courses that provide students a cumulative experience in which they practice what they have learned. Linn K. Bekins and Sean Williams (2006) suggested, “our students need to experience complex workplace situations that allow them to put theories into action, to see that our work has both utility and significance...” (p. 291). They also argued that programs need to be “creating young professionals equipped to manage people and projects, to work with subject matter experts, and to lead research and product development...” (p. 287). The course evaluation instrument and program course inventory provide a heuristic for TPC programs to assess course and program outcomes and visualize their alignment with professional expectations, both conceptual and practical.

Conclusion

Our study is an attempt at a “multi-dimensional, active reflection [that] is a part of a profession like technical communication” (Johnson, 2004, p. 102). One of the biggest findings from this research is that academic and practi-

tioner curricular discussions are not as far apart as one might think: we find the line between conceptual and practical skills becomes thin when the concepts are grouped in sets and placed in a matrix or heuristic. Brenton Faber and Johndan Johnson-Eilola (2002) observed, "If technical communication is to thrive in an information-age economy, our field as a whole must develop an entirely new way of understanding the relations between school and work and between knowledge production and knowledge use" (p. 137). By placing common courses in TPC degrees alongside an explanatory matrix of scholarship on conceptual and practical skills, we have attempted to describe and visualize these relationships between school and work, between knowledge production and use, between know *that* and knowing *how*.

We began this study with a series of questions, to which we have responded:

1. What conceptual and practical skills are deemed important by academics and practitioners? Based on the work of Reich, Cargile Cook, and others, we identified conceptual skills (Table 1 and Figure 1) and based on a literature review, we identified the practical skills (Table 2) deemed important by academics and practitioners.
2. How can these conceptual and practical concepts be visually represented? Using these findings, we first combined conceptual skills in a preliminary matrix (Figure 2), and then aligned the conceptual to the practical and visualized the results in a final matrix (Figure 3).
3. How can the identified conceptual and practical skills be used in or applied to course development and program assessment? We created a series of instruments (Tables 3 and 4) for use in assessing individual courses and inventorying program curricula. Finally, we provided an example of a program course inventory of the "core courses" in the TPC curricula.

The questions above arise in conversations about program development and assessment, and were addressed in this study as a response to calls that faculty and program administrators "carefully consider what a graduate from the program should know and be able to do" (Allen, 2004, p. 100).

The professional field of TPC is broad and diverse; however, no matter what jobs our students might take, they need certain knowledge and skills to do well. Connie Giordano (2011) posited, "successful technical communicators will bring to their organizations an integrated set of skills,

mastery of an integrated set of tools, and an integrated approach to identifying needs, designing solutions, and communicating those solutions to a wide range of audiences.” And in a discussion of certification for technical communication, Kenneth T. Rainey and Roy K. Turner (2004) claimed, “Although these standards do not mirror one another, they do reflect the fact that technical communicators look at themselves and their jobs in a manner familiar and recognizable across languages, borders, and cultures” (p. 222). Even though TPC programs maintain specific strengths tied to faculty expertise and to local situations, programs should be embracing common conceptual and practical skill sets that will prepare students to become successful professionals. We hope that the instruments we offer in this study will be helpful in such an undertaking. To ensure that programs are preparing students to be successful knowledge workers in the second decade of the 21st century, TPC programs—administrators, teachers, and other stakeholders alike—need to continue to examine course content, the knowing *that* and the knowing *how*, and to align that content with the professional expectations acknowledged by the field.

References

- Allen, Jo. (2004). The Impact of Student Learning Outcomes Assessment on Technical and Professional Communication Programs. *Technical Communication Quarterly*, 13(1), 93–108.
- Allen, Nancy, & Benninghoff, Steven T. (2004). TPC program snapshots: Developing curricula and addressing challenges. *Technical Communication Quarterly*, 13(2), 157–185.
- Bekins, Linn K., & Williams, Sean D. (2006). Positioning technical communication for the creative economy. *Technical Communication*, 53(3), 287–295.
- Brech, Lee-Ann Kastman. (2002). Thinking critically about technological literacy: Developing a framework to guide computer pedagogy in technical communication. *Technical Communication Quarterly*, 11(3), 267–288.
- Cargile Cook, Kelli. (2002). Layered literacies: A Theoretical frame for technical communication pedagogy. *Technical Communication Quarterly*, 11(1), 5–29.
- Carter, Michael. (2007). Ways of knowing, doing, and writing in the disciplines. *College Composition and Communication*, 58(3), 385–418.
- Carter, Michael, Anson, Chris. M., & Miller, Carolyn R. (2003). Assessing technical writing in institutional contexts: using outcomes-based assessment for programmatic thinking. *Technical Communication Quarterly*, 12(1), 101–114.
- Clark, Dave, & Andersen, Rebekka. (2005). Renegotiating with technology: Training towards more sustainable technical communication. *Technical Communication*, 52(3), 289–301.
- Coppola, Nancy W. (2011). Professionalization of technical communication: Zeitgeist for our age. Introduction to this Special Issue. *Technical Communication*, 58(4), 277–284.

- Davis, Marjorie T. (2001). Shaping the future of our profession. *Technical Communication*, 48(2), 139–144.
- Dayton, David, & Bernhardt, Stephen A. (2004). Results of a Survey of ATTW Members, 2003. *Technical Communication Quarterly*, 13(1), 13–43. Emig, Janet. (1982). Inquiry paradigms and writing. *College Composition and Communication*, 33, 64–75.
- Faber, Brenton, & Johnson-Eilola, Johndan. (2002). Migrations: Strategic thinking about the future(s) of technical communication. In Barbara Mirel & Rachel Spilka (Eds.), *Reshaping technical communication: New directions and challenges for the 21st century* (pp. 135–148). Mahwah, NJ: Lawrence Erlbaum Associates.
- Giordano, Connie. (2011). Mid-year checkpoint: Top five trends in technical writing. *Techwr-l*. Retrieved from <<http://www.techwr-l.com/content/mid-year-checkpoint-top-five-trends-technical-writing>>
- Hart-Davidson, William. (2001). On writing, technical communication, and information technology: The core competencies of technical communication. *Technical Communication*, 48(2), 145.
- Hundleby, Margaret, & Allen, Jo. (Eds.). (2010). *Assessment in technical and professional communication*. Amityville, NY: Baywood.
- Johanek, Cindy. (2000). *Composing research: A contextualist paradigm for rhetoric and composition*. Logan, UT: Utah State University Press.
- Johnson, Robert R. (2004). (Deeply) sustainable programs, sustainable cultures, sustainable selves: Essaying growth in technical communication. In Teresa Kynell-Hunt & Gerald. J. Savage (Eds.), *Power and legitimacy in technical communication Volume II: Strategies for professional status* (pp. 101–119). Amityville, NY: Baywood.
- Johnson-Eilola, Johndan. (2004). The database and the essay: Understanding composition as articulation. In A. F. Wysocki, J. Johnson-Eilola, C. L. Selfe & G. Sirc (Eds.), *Writing new media: Theory and applications for expanding the teaching of composition* (pp. 199–235). Logan, NJ: Utah University Press.
- Johnson-Eilola, Johndan. (1996). Relocating the value of work: Technical communication in a post-industrial age. *Technical Communication Quarterly*, 5(3), 245–270.
- Kim, Loel, & Tolley, Christie. (2004). Fitting academic programs to workplace marketability: Career paths of five technical communicators. *Technical Communication*, 51(3), 376–386.
- Lanier, Clinton, R. (2009). Analysis of the skills called for by technical communication employers in recruitment postings. *Technical Communication*, 56(1), 51–61.
- Meloncon, Lisa. (2008). Putting technical communication in its place(s): Mapping common strengths and common goals. Paper presented at the Association of Teachers of Technical Writing, New Orleans, LA.
- Meloncon, Lisa & Henschel, Sally. (2013). Current state of US undergraduate degree programs in technical and professional communication. *Technical Communication*, 60.1 (2013): 45–64.
- Pringle, Kathy, & Williams, Sean D. (2005). The future is the past: Has technical communication arrived as a profession? *Technical Communication*, 52(3), 361–370.

- Rainey, Kenneth T., & Turner, Roy K. (2004). Certification in technical communication. *Technical Communication Quarterly*, 13(2), 211–234.
- Rainey, Kenneth T., Turner, Roy K., & Dayton, David. (2005). Do curricula correspond to managerial expectations? Core competencies for technical communicators. *Technical Communication*, 52(3), 323–352.
- Reich, Robert. (1992). *The work of nations: Preparing ourselves for 21st century capitalism*. NY: First Vintage Books.
- Salvo, Michael J., & Ren, Jinfang. (2007). Participatory assessment: Negotiating engagement in a technical communication program. *Technical Communication*, 54(4), 424–439.
- Selber, Stuart. A. (2004). *Multiliteracies for the digital age*. Carbondale, ILL: Southern Illinois University Press.
- Slattery, Shaun. (2005). Technical writing as textual coordination: An argument for the value of writers' skill with information technology. *Technical Communication*, 52(3), 353–360.
- Society of Technical Communication (2012). About the STC BOK project. *Technical Communication Body of Knowledge Draft Portal*. Retrieved from <<http://stcbok.editme.com/AboutUs>>.
- Society of Technical Communication Certification Commission. (2013). Certified Professional Technical Communicator™. Retrieved from <<http://stccertification.org/>>
- Thomas, Shelley, & McShane, Becky Jo. (2007). Skills and literacies for the 21st century: Assessing an undergraduate professional and technical writing program. *Technical Communication*, 54(4), 412–423.
- Whiteside, Aimee L. (2003). The skills that technical communicators need: An investigation of technical communication graduates, managers, and curricula. *Journal of Technical Writing & Communication*, 33(4), 303–318.
- Wilson, Greg. (2001). Technical communication and late capitalism: Considering a postmodern technical communication pedagogy. *Journal of Business and Technical Communication*, 15(1), 72–99.
- Wojcik, Michael. (2011). Teach the tech or teach the tools?: An annotated bibliography. *Ideoplast*. Retrieved from: <<http://ideoplast.org/al841/tech-or-tools.php>>
- Yu, Han. (2008). Contextualize technical writing assessment to better prepare students for workplace writing: Student-centered assessment instruments. *Journal of Technical Writing and Communication*, 38(3), 265–284.

Appendix

List of required and elective courses. Gray shaded courses are core courses. (Meloncon & Henschel, 2013)

General Course Category	Required	Elective
advanced TPC	25%	12%
basic	57%	26%
capstone	57%	0%

Of Horsemen and Layered Literacies

collaboration	9%	15%
communication	17%	14%
creative writing	5%	26%
cultural	14%	38%
doc. design/info. design	40%	29%
editing	54%	18%
ethics/law	20%	17%
genre	40%	72%
independent study	3%	20%
intercultural/global	9%	18%
internship	51%	32%
intro. to the field of tech comm.	49%	0%
journalism	15%	35%
linguistics	29%	26%
literature	6%	15%
other	9%	23%
persuasion/argument	14%	17%
presentations/oral comm.	25%	12%
professional development	14%	3%
project management	12%	6%
publishing	3%	8%
research methods	23%	15%
rhetoric	32%	25%
style/prose	6%	6%
technology and tools	26%	26%
theory	23%	26%
topics	9%	48%
usability	11%	8%
video	6%	12%
visual rhetoric	34%	28%
web	45%	55%
writing	31%	22%

Author Information

Sally Henschel is an assistant professor of English and the online writing curriculum coordinator at Midwestern State University, where she teaches technical and

professional communication, digital rhetoric, and information design. Her research includes examining trends in and issues related to the communication curriculum.

Lisa Meloncon is an associate professor of technical writing at the University of Cincinnati and Director of the Urban Health Research Center in the McMicken College of Arts and Sciences. She specializes in medical and health communication and programmatic issues in technical and professional communication.

Service Learning and Undergraduate Research in Technical Communication Programs

Kelli Cargile Cook

Texas Tech University

Abstract. Service learning, as an instructional approach, was introduced in technical communication literature in 1997. Since then, service learning has been touted for its client-based learning affordances, but few scholars have noted its value as a means to teach research methodology and reporting, especially in undergraduate programs. This article's purpose, therefore, is to showcase a relatively unremarked aspect of service learning: the integral role that research plays in it. To support this claim, the article reviews service learning literature in professional and technical communication and examines several case studies of current technical communication courses across the United States. Through these examples, the article demonstrates how service learning experiences build undergraduate students' research and communication skills while simultaneously providing valuable services to community organizations in need. The article concludes with strategies for integrating service learning and instruction in research methods into undergraduate technical communication programs.

Keywords: service learning, undergraduate technical communication programs, pedagogy, research

Service learning, as a programmatic instructional approach, was introduced in technical communication literature in 1997. Since then, its values and goals have been well documented in articles that range from discussions of integrated technical communication/service learning writing assignments to advice for avoiding the pitfalls that can accompany these assignments. The continued viability of service learning as an undergraduate instructional approach was the focus of David Sapp's plenary address at the 2004 annual conference of the Council for Programs in Technical and Scientific Communication, and its usefulness has been considered in many professional conference presentations, including the

Association for Teachers of Technical Writing and the Association of Business Communication conferences. The Allyn and Bacon Series in Technical Communication included a textbook of the subject, Bowdon and Scott's *Service-Learning in Technical and Professional Communication*. Because of these resources and others like them, service learning has become a respected and frequently cited means for providing students with client- and/or community-based situated learning.

Although service learning has frequently been touted for its client- and community-based learning affordances, few authors have noted its value as a means to teach research. The omission is particularly noteworthy since almost every article and presentation about service learning in technical communication mentions student research as part of the instructional process. This article's purposes, therefore, are to showcase this relatively unremarked aspect of service learning—the integral role that research plays in it—and to encourage instructors and program directors to consider service learning as a viable means of teaching research methods in undergraduate technical communication programs.

Benefiting Students, Communities, and Technical Communication Programs

Service learning, according to Huckin (1997), is “experiential education in which students apply their academic skills to the needs of local non-profit agencies” (p. 50). Similarly, Therese Judge (2006) notes that service learning projects are ideal for providing “learning experiences for the volunteers [students] and [providing] some tangible good to the organization” (p. 190). As an instructional approach, service learning addresses several potential weaknesses in technical communication pedagogy. It provides students with opportunities to write for actual clients (or community partners) who need their assistance, yet this writing takes place with the assistance and supervision found within a university setting. It can broaden students' understanding of the locales of technical communication by asking them to consider workplaces other than corporations as potential sites for technical communication practice. Service learning can also provide students with a deeper understanding of their communities, the possible roles they may play in their communities, and the impact of their services within those roles. Consequently, service learning not only benefits the students who engage in it, but it also benefits the communities that it serves.

Service learning affords teachers and their students opportunities to practice actual workplace writing while still in a classroom setting. As such, service learning can resolve the problem of *pseudotransactionality* in

technical communication instruction. According to Spinuzzi (1996/2004), *pseudotransactionality*—writing to please the teacher or complete a classroom assignment rather than writing to address an actual communication problem—“is a particular problem for professional writing instructors” (p. 338) because students may confuse solutions for classroom pseudotransactional assignments with actual workplace writing solutions. For example, students may inaccurately assume that a teacher’s preferred design for memo heading is the only way to write a memo heading. Rather than investigate the specific conventions, audiences, and purposes for memos in the workplaces in which they find themselves, they default to their classroom conventions and genres and, consequently, produce rhetorically ineffective documents. In contrast, service learning writing is client-specific, rather than teacher-specific, and it allows groups of students to discuss differences from one project or workplace to another. As Kastman Breuch (2001) explains, “Client projects differ from traditional class assignments because they require writing that is addressed to an audience other than the teacher, and this rhetorical situation is often difficult for students to fully grasp... Client projects require that students complete some project for the client. Thus these projects require that students identify, consider, and understand client expectations and motivations for a project” (p. 194-195).

Service learning can also broaden and deepen the skill sets of technical communication undergraduate students. Given the field’s perceived practical focus, instructors sometimes find themselves privileging writing skills that lead to immediate job success over more subtle, and thus more difficult to teach, interpersonal and critical skills. Criticizing the more narrowly focused career-training approach, Scott (2004) argues that technical communication courses are often driven by “hyperpragmatism”—a pedagogical stance that emphasizes “ensuring students’ professional success” and “moves past critique, overlooks power relations and textual circulation, and narrowly positions students and their praxis” (p. 289). This approach may give students the tools and skills to do a job, he argues, but it does not give them a broader understanding of how to modify, adapt, or change tools given specific circumstances or how, given the tools and skills they possess, to position themselves in relation to others with whom or for whom they work. This tendency to emphasize practical job skills over critical and cultural examination privileges writing that benefits large corporations, argues Grabill (2000), or, as Sapp and Crabtree (2002) note, it privileges “the for-profit sector of the economy” (p. 416) without examining the ideologic and cultural practices that occur in such settings. From a more theoretical perspective, Mara (2006) describes this diametrical

tension as the “long-standing technical communication and rhetorical division between the Aristotelian notions of *praxis* and *techne*,” suggesting that this conflict results in a “question of how the technical communication instructor, and ultimately the future technical communicator, can both demonstrate technical skills and practice those skills ethically” (p. 219). A resolution to this dilemma, these authors agree, can be found in service learning, which immerses students in situations where issues of race, class, and culture complicate interactions and communication and where human needs rather than economic expediency drive goals. In effect, when technical communication students engage in service learning, their work is more situated within the humanities than it is when study focuses solely on the instrumental skills of doing that work.

Moving beyond the classroom and into the community for instruction may even provide long-term benefits that improve students’ lives as well as their communities. Faber (2002) warns that current lifestyles are causing a “retreat from local spaces” and thus “losing the important social connections people rely on in times of family stress, economic downturn, employment problems, health crises, and other social problems” (p. 176). Service learning is a measure he recommends for higher education to strengthen local connections and support communities. Such moves, he argues, will require university professors and instructors to consider new forms of active research and student involvement in local causes: “By learning to read and write change—meaning, how to understand, interpret, and realign an organization’s narratives and images—students, practitioners, and advocates of change can gain insights into power, social structures, individual agency, community agency, social change, and civic leadership” (Faber, 2002, p. 179). As a means of educating students as agents of change, Sapp and Crabtree, Grabill, and Faber all acknowledge service learning’s ability to awaken university students to the needs of their communities and to foster the ethical missions of universities themselves.

By providing students with authentic workplace writing experiences and embedding students within their communities, service learning’s benefits are clearly documented. But what do technical communication programs gain from integrating service learning experiences into their curricula? Integrating service learning into curricula supports community outreach and research—values frequently articulated in university mission statements. Furthermore, as Jo Allen (2010) notes in “Mapping Institutional Values and the Technical Communication Curriculum: A Strategy for Grounding Assessment,” the intersection between institutional values and technical communication curricula is fertile, though often untilled, ground for programmatic assessment:

Many institutions that promote research as a defining aspect of their mission extend that sense only into expectations of faculty productivity, not into the individual curricula in any pervasive way, and especially not at the undergraduate level. It makes all kinds of sense that a technical communication program in a research intensive or extensive institution would reflect that value in its curriculum and thus, in its assessment; yet, only a few do so (p. 40).

Integrating service learning with a research focus into technical communication undergraduate curricula connects the dots between programmatic and institutional values. It embeds undergraduate students in community organizations and provides them with opportunities to improve their technical communication research skills. Such work concludes with authentic deliverables that students can use in workplace portfolios and that programs can employ to self-assess their effectiveness in developing students' technical communication literacies (For more on programmatic self-assessment strategies, see Cargile Cook and Zachry's "Politics, Programmatic Self-Assessment, and the Challenge of Cultural Change," 2010.) The present article focuses on the following aspects of service learning and undergraduate research:

- An overview of literacies students will employ when completing research within service learning settings.
- A sampler of assignments that can be used in one or more courses to develop undergraduate research skills.
- A showcase of courses that have successfully integrated service learning and undergraduate research.

As a whole, the article offers instructors and program directors a broad picture of the benefits of integrating research-based service learning into individual courses or throughout an entire curriculum.

Improving Technical Communication Literacies through Service Learning

To engage students in their community and in the research mission of their university, service learning projects and courses ask them to develop their academic skills while increasing their civic awareness and helping their communities (Huckin, 1997, p. 50). The academic skills technical and professional communication students need to be successful are multiple and layered. They include literacies in six areas: basic writing and design, rhetorical, social, technological, ethical, and critical skills (Cargile Cook, 2002). Service learning

writing assignments allow students to practice all of these literacies and to do so within authentic, transactional settings. Specifically, service learning assignments can be designed to engage with communication problems in specific, usually local organizations. Students conduct research about their projects' intended audiences, purposes, and situations. To complete this research, they employ primary and secondary research methods, collecting data at community fieldwork sites, and, finally, at the completion of the project, they are able to create authentic deliverables that meet their community partners' research needs. At the same time, students' participation in such assignments is reciprocal: what they take from learning opportunities, they give back in valuable community service.

Technical communication service learning settings vary as widely as technical communication programs and the communities in which faculty and students live and work. In general, service learning sites include "local businesses, campus organizations, government agencies, and non-profit organizations" (Huckin, 1997, p. 49). Within these general categories, technical writing articles have identified many possible sites, including food banks, homeless and battered women shelters, environmental agencies, respite care agencies, recreation and rehabilitation services, family health and medical clinics, public health agencies, and disability resource centers (Grabill, 2000; Huckin, 1997; Kastman Breuch, 2001; Matthews and Zimmerman, 1999; Turnley, 2007; Cardenas, 2012). In addition to these generally identified sites, some authors also identify specific agencies with which they have worked: Easter Seals, Boys and Girls Clubs, Habitat for Humanity, and the American Cancer Society. Wherever a writing or communication need arises within the community, service learning assignments are often able to meet these clients' needs while offering students' occasions to practice and develop their communication skills. Within these settings, students can practice their basic writing and design skills by producing a variety of deliverables. In medical and health care settings, students can create health information brochures and instructions (Huckin, 1997; Kastman Breuch, 2001; Sapp and Crabtree, 2002). Job training materials and presentations, assessment and tracking forms, personnel and procedure manuals are also possible assignments in other office settings (Graves, 2001; Rupert and Loudermilk, 2002; Turnley, 2007). To strengthen their design skills, writing assignments can include posters, fact sheets, newsletters, and websites (Sapp & Crabtree, 2002).

Beyond developing basic writing and design skills, skills in other literacies can also be bolstered through service learning. When his students engaged in service learning, Huckin (1997) noted that his students became more sensitive to their audiences and their assignments' rhetorical situations

(p. 57). This increased sensitivity was a direct result of students' interactions with actual clients and their needs. Because clients work directly with students, they are able to respond to student work as it relates to their particular needs, and they can, consequently, provide students with directions and criticism that seem more "realistic" than teacher responses to their work. Blakeslee (2001/2004) credits this difference in perception to "authenticity," which she defines as "students' perceptions of how similar the activities are to actual workplace practices" (p. 350). Giving students this perception of authenticity, she argues, allows them more easily to transition to workplaces where rhetorical practices, generally, and audiences, specifically, are specific but often more complicated than in classroom assignments.

Service learning provides students with opportunities to work with more complicated notions of teamwork and technology than they might otherwise develop through classroom assignments. Turnley (2007) describes the invaluable insights about workplace technologies that students gain from service learning. In her service learning courses, students not only engage in writing assignments for their clients, but they also participate in critical meta-discussions or reflections on "the complex cultural positionings of communication technologies" (p. 108). She writes:

While negotiating different rhetorical situations, students encounter contradictions and complications that offer starting points for critical reflection. Differences in resources, assumptions, and procedures can raise questions about technology and create spaces for understanding technologies as complex sets of relationships among multiple, dynamic factors. With their mutual investment in situated knowledge and practices, critical approaches to technology and community-based projects have complementary goals (p. 109).

Such reflection requires students to consider their technological literacy as more than instrumental, *how to* knowledge. Instead, they begin to consider technology from critical and ethical perspectives situated in their understanding of specific community workplaces and practices.

Immersing students in social literacy activity, whether students are working in teams or simply with subject matter experts within non-profit or community agencies, is another of service learning's benefits. In many service learning technical communication courses, instructors prefer to assign small groups of students to agencies. Matthews and Zimmerman (1999) chose to group their students into teams of three or four. Working together, student groups completed assignments "developed to teach them project management skills: needs assessment, audience analysis, document plan, style guide, document log, usability testing, interim and final report, oral

debriefing, and summative evaluation” (p. 387). While these students demonstrated improved motivation and civic awareness, they also discovered the challenges of working as a team. The challenges sometimes seemed insurmountable, but Matthews and Zimmerman conclude that, with adequate instructional support, students can overcome their lack of “experience in negotiating writing tasks as a team” (p. 402).

Incorporating Research into Service: An Assignment and Methods Sampler

Although service learning’s benefits to communities and to students’ academic skills have been well documented in technical communication literature, student development of research skills, as an outcome of service learning, is absent or glossed in most of these descriptions. Yet service learning assignments can easily be designed to include instruction in investigative and collaborative research. Similarly, the need for research methods instruction in technical communication program curriculum is well documented (Whiteside, 2003; Rainey, Turner, & Dayton, 2005; Spilka, 2009); however, Campbell (2000) found that “a little more than 10% of the undergraduate programs” she surveyed required specific coursework in research methods. While Ford et al. (2009, 2011) have suggested strategies for improving research methods instruction in technical communication undergraduate programs, the connections between service learning and undergraduate research methods instruction have not been clearly articulated. The assignments outlined below seek to articulate this connection. Within a service learning assignment context and with community partners, technical communication students first learn about the organizations in which they find themselves; then they discover the information needed to complete their projects, invent rhetorical strategies for its delivery, and, finally, produce their projects, creatively working with and within their community partners’ needs, situations, and constraints (budgetary, technological, and cultural/political). All of these activities, to be successfully completed, require critical research skills: systematic data collection, analysis, and decision-making based on findings.

Pre-service Assignments: Researching to gain rhetorical insights on audience, purpose, and situation

A critical research component in most service learning projects begins prior to or simultaneously with students’ identification of their clients and projects: gathering information and knowledge about clients and their organizations. Research opportunities at this stage are rich and well defined in tech-

nical communication literature. Initial research typically requires students to use print and electronic sources to gather information. The researched biography, the social issues report, and the agency profile are three such assignments. At the beginning of a service learning project, these assignments can transition students from the research they typically complete in first-year composition courses to the types of research they will encounter in technical communication courses and their future workplaces. Although the audience for these assignments is typically the course instructor and the dissemination of research is limited to the instructor, the research itself is significant in that it prepares students to enter the service learning setting and provides them with better understandings of their community partners and their partners' needs. Additionally, these preliminary assignments provide students with the background—from knowledge of social issues to awareness of constituencies or stakeholders—necessary to plan and execute their actual service learning assignments.

The Researched Biography

The researched biography, as originally developed by Haussamen (1997) for first-year composition students, requires “students to spend at least fifteen hours in a nursing home in conversation with a senior citizen and to write the researched biography about that person” (p. 193). Students then draw upon library sources as well as their interviews to write a biographical essay. Modifying this assignment slightly for technical communication students, Dubinsky (2006) requires his students to write researched biographies of employees within the service learning organizations to “learn more about the lives of their community partners [and] understand the forces that led them to be involved in social issues their organizations represent” (p. 308). After completing the research biography, “students end up with a more in-depth understanding of the organization’s history and mission, thus establishing the “need” in their own mind as well as developing the language with which to present that need to others” (p. 309).

The Social Issues Report

A similar assignment less focused on individuals and more on the issues that agencies addressed is recommended by both Sapp and Crabtree (2002) and Turnley (2007). A social issues report requires students to research the problems that community and non-profit agencies address. Students use library and electronic resources to learn all they can about issues, in general, as well as the contexts in which the agencies work. For example, Sapp and Crabtree report that “one large student team produced a comprehensive report on sexual assault including examinations

of date/acquaintance rape, incest, serial sex crime, criminal prosecution, international perspectives of rape, and theories of recovery. Before they worked on creating documents for the agency, a sexual assault and crisis center, they learned all they could about the issue" (p. 420). Other groups researched "topics of community interest including AIDS, at-risk youth/gangs, teen pregnancies, homeless children, migrant farm workers, drug abuse, and domestic violence" (p. 420-21). Completing this preliminary research streamlined students' integration into agencies because they already had an understanding of the issues with which agencies worked. Because Turnley's class emphasizes technological literacies, her students' issues reports also include details of the technological aspects of agencies' work: how technologies support the work agencies do, how organizations made decisions about what technologies to use, and how the economic situations of non-profits constrained their abilities to use technologies to assist their clients and produce communications. Describing these reports, Turnley (2007) writes:

Students researched not only the local situations in which they were working but also the larger social issues that affected their client's ability to pursue its mission. For example, students encountered tangible evidence of the limited funding available to most communication organizations and became more aware that non-profits typically cannot afford high-end equipment....This attentiveness to socioeconomic forces complements the commitment to situated choices and actions and emphasized the critical approaches to technology and service-learning pedagogies (p. 116).

The Agency Profile

In their textbook, *Service Learning in Technical and Professional Communication* (2003), Bowdon and Scott recommend a third pre-service assignment, the agency profile. In this document, students research and report organizational mission, community problems the organization addresses, kinds of texts it produces, writers/readers of these texts, and ethos of the organization (p. 63). Students can gather this information from internet resources, community information brochures, agency public relations documents, and brief phone calls to agencies. In addition, most universities now have service-learning departments where students can gather information about potential clients and their needs; these departments can be quite useful to students as they begin their initial research into community needs and agencies that meet them.

Pre-service research projects fulfill a number of important pedagogical goals as students gain a better understanding of the social issues with which organizations work and are better prepared for their first forays into the organizations themselves. In addition to expanding students' awareness of social issues in their communities and of agencies' efforts to address these issues, the report also offers students' insights into the constraints non-profit and community agencies face within their communities. Understanding these constraints helps students to identify more fitting solutions for organizational needs. Armed with this pre-service research, students can more easily enter into the work before them.

Fieldwork: Honing Data Collection Methods

Moving beyond the secondary (print and electronic source-based) research of their pre-service assignments, student research turns to fieldwork once they are embedded within their organizations. Fieldwork—defined generally as gathering data through examination of artifacts, talking with research subjects, and observing subjects at work—requires students to interact primarily with people in their service or non-profit organizations, employing a variety of methods to gather the information they need to understand the problems they've been asked to resolve or assist in resolving. In this phase, instructors can draw from a broad range of assignments to teach these methods, ranging from one-on-one interviews to observational fieldwork reports. Before moving students into fieldwork settings, instructors may need to obtain Institutional Research Board (IRB) approval. IRB requirements for service learning projects can vary greatly between institutions. According to posts on a June 2007 thread on the Association for Teachers of Technical Writing listserv, some technical writing instructors are not required to obtain IRB approval for service learning projects, some must seek IRB approval for each individual student project, and others are able to obtain permission for the class as a whole working under the instructor as principal investigator, no matter how many specific projects are underway. Before implementing these fieldwork assignments, instructors should check with their IRB administrator for specific guidance.

Interviews and Questionnaires

Structured interviews are probably the most common assignment and method instructors use to teach students how to interact with others to gather information. Students, working alone or in teams, create interview questions and then meet with their clients to learn more about the work organizations do, their missions, goals, and populations served. Instructors may ask students to report their interview findings in memos or on elec-

tronic discussion boards to assess the effectiveness of the process, but even without formal evaluation of their interview results, students often quickly realize how well they have done their work: If they do not get the answers they need to proceed with their work or if a client has concerns about the work they are producing, the project can shutter to a halt, blocking their work.

To prevent these kinds of obstacles, teaching students to interview should include more than question development—what to ask to get the information—because this approach only addresses half of the interview process. The other half is good listening skills. Even armed with excellent questions, an interviewer can fail without good listening skills. Kastman Breuch (2001) recommends that “instructors discuss elements of listening, such as hearing, attending, understanding, and remembering;” she also suggests using Rogerian rhetoric to acknowledge the speaker and check the listener’s understanding of meaning (p. 205). Teaching and assessing students on their interviewing and listening skills can prevent problems that stymie a project before it ever begins.

Another advantage of using interviews and questionnaires is that they can be completed face-to-face or electronically. Using email, instant messaging, and chat rooms to conduct interviews or deliver questionnaires adds a layer of complexity to these assignments because students must navigate the challenges of communicating solely in writing. In-person interviewing, they learn, can be easier because they can immediately ask follow-up questions and delve more deeply into respondents’ answers, but they may be more challenging to schedule, given their clients and their own schedules. Easier to conduct, email interviews can be sent at any time, but they often require students to follow-up diligently to get responses from their clients, and they require more client time to write answers. Email interviews do not require transcription because they are already written whereas face-to-face interviews require skilled note taking or recording and transcription. Both methods have their advantages and disadvantages; having students try both approaches to data gathering teaches them through experience what these advantages and disadvantages are.

Focus Groups

A variation on the interviewing method is the focus group. Focus groups composed of stakeholders in the project—individuals who work at the community agency, clients from the population, and other stakeholders—can also provide students with key information for completing their assignments. Focus groups are particularly effective because they create

a group dynamic that can trigger ideas that individuals might not arrive at by themselves. Stakeholder focus groups can help students to understand the intricacies of complicated problem and brainstorm solutions. Scott (2004), whose students have used focus groups successfully, reports: “When students form focus groups or other mechanisms for stakeholder involvement early in the course, these stakeholders can help students and the organization define the problem, its significance, and its underlying causes” (p. 301). To use focus groups effectively, students need to prepare carefully with structured questions, plan for recording answers quickly and effectively, consider whether tape or video recorders are necessary for record-keeping, and recognize that analyzing the focus group transcript can be time-consuming and involved. What is gained in time by meeting with many individuals at once may be lost afterward in transcription and data analysis. Nevertheless, focus groups can provide insights that would otherwise be lost if students only employ interviews with their clients.

Document Archival Research

To help students understand the kinds of communication produced within an agency, archival or legacy document research assignments are useful. These assignments require students to review, analyze, and critique the kinds of writing or communication typically produced within the agency. For example, if students are assigned the task of producing a brochure or series of brochures for an agency, they might analyze already existing brochures and critique them, considering content and design questions such as information included, readability, layout, graphic integration, logos, and font styles. If the agency does not yet have brochures, then students may need to go outside the agency to find examples. They might seek examples at organizations outside the community, organizations within the community that serve comparable populations, or state or national agencies with which the community organization is affiliated. This research, wherever it takes place, will help students identify and consider design and content solutions similar to the one they are seeking to develop and implement. Students can then work this research into proposals for the work they have been assigned to complete. Document archive research can also assist students in developing style sheets—a list of style conventions and guidelines used within the organization—which they can then apply and follow as they produce their documents. Style guide research can assist students to “understand the agency’s conventions and expectations for its texts and their designs” (Bowdon and Scott, 2003, p. 151).

Reporting Outcomes: Designing, developing, and disseminating deliverables

Reports and proposals are often the overarching genres that technical communication students write to allow them to discuss their research findings and disseminate them to their community organization. Reports can be simple and short, such as memos that describe workplace observations at the community organization, progress reports, and trip reports that recount what students learn from client interactions; or they can be formal and long, such as style guides and final project reports that describe how teams complete their projects and accomplish their goals.

Among the most popular reports that incorporate research is the proposal. Instructors frequently require students to write a proposal outlining the work they are agreeing to complete for their client. The proposal typically includes much of the preliminary research students have conducted. For example, in the needs analysis found early in a proposal, students can include research they have conducted on the agency, the social issue or issues it addresses, and the population it serves. In describing the solution the team has developed for the community client, students can describe their preliminary archival research into communication solutions and demonstrate how their solution draws upon the strength of previous or comparable work. This work teaches students not only to rely upon research for their design plans but also to argue for the best design and content possible to meet clients' needs.

Reports can also be assigned later in the project process to give students opportunities to convey and receive evaluative comments about their projects. To convey and receive feedback from clients, interviews can be employed. Kastman Breuch (2001) describes these interactions as "information giving" interviews and notes that they require students to be more active because they must provide information to their clients about their projects, listen carefully to their clients' responses, and make adjustments to the work accordingly. If students do not listen well during these interactions, Kastman Breuch notes that "students often miss opportunities to see how their projects could be made better. [For this reason,] students should continually seek clarification about their projects with clients" (p. 206).

Another method for seeking clarification and evaluating project effectiveness is usability testing. Usability testing can take many forms, depending on the product being tested, and it can occur at various points in the document development cycle. Instructors can teach students a variety of methods for incorporating usability testing into their service learning

projects, but Bowdon and Scott (2003) recommend the following: “observe users with text,” “tape-record or videotape users in action,” “interview or administer a short questionnaire to testees,” or “create a user-testing guide that asks students to answer a few questions while they perform the process” (240). After developing and conducting the test, students can then deliver their findings in a usability test report or a recommendation for revision report. Both reports allow students to identify strengths and weaknesses in their projects and to revise them before they deliver them to clients. (For a more detailed exploration and study of usability as a means of engaging clients and students in community service projects, see Blake Scott’s [2008] “The Practice of Usability: Teaching User Engagement Through Service-Learning.”)

Serving and Learning Through Research: Vignettes from Across the Country

The following four vignettes showcase successful service learning projects that instructors in technical communication have conducted at universities across the United States; together they illustrate how service learning projects can seamlessly provide students with research instruction while engaging in community service. The first two vignettes describe course assignments that can be adapted to sections in which students identify their own clients and work in small groups on multiple projects. The final two demonstrate how instructors have directed entire class efforts on a single project. These vignettes illustrate how research methods instruction in conjunction with service learning projects can bolster student research skills and provide students with unique opportunities to complete authentic projects with and for community partners.

Service Learning through Individual and Team Writing: San Francisco State University

At San Francisco State University, Professor Lu Rehling teaches a course in individual and team writing that relies on service learning projects (L. Rehling, personal communication, September 8, 2008). The course requires students to create a series of documents for a client, and at least one of the documents--instructional, promotional, administrative, or technical, depending on their clients' needs--must include significant student research. Additionally, Dr. Rehling (2008) reports that “research on the organization’s needs, audiences, etc., is emphasized as an important part of the assignment, and teaching appropriate research methods (and attitudes)

is an important component of the course. The course also covers organizational culture, and students are asked to research, analyze, and address the organizational cultures of their NPO clients.” Students work in teams to complete the document sets for an external (off-campus) non-profit, community service organization. The course, which is graduation requirement for all technical and professional writing undergraduate majors, is taught annually.

The overarching assignment for the document set allows students to produce a variety of documents and purposes. Recent projects demonstrate the assignment’s ability to provide students with research and writing instruction in authentic settings. The following list identifies clients served through this assignment as well as the documents students researched, produced, and delivered to their clients:

- North Peninsula Food Pantry and Dining Center, Daly City: internal policy and procedures manual, instructional guide for teenage volunteers in the dining room, informational brochure about programs for prospective clients, especially homeless and poor families in need of services.
- Visitacion Valley Community Development Corp, San Francisco: emergency plan (for daycare facility), online newsletter, orientation guide for volunteers, recruitment plan.
- Marin Breast Cancer Watch: annual report, promotional brochure, needs assessment, online tutorial (on vetting news reports on relevant research topics).
- Seven Tpees Youth Program, San Francisco: website content and design, newsletter, donation request letters (templates), emergency procedures.
- California Coalition for Women Prisoners: slide show (for speaker support or kiosk presentation), policies and procedures, technical report.

Funding Opportunities Research Project and Proposal— Missouri University of Science and Technology

To provide her students with authentic experiences writing proposals, Professor Kathryn Northcut uses service learning in a course that requires students to work with clients to find funding sources and then write proposals to compete for this funding (K. Northcut, personal communication, August 13, 2008). She describes her motivation for the course design

this way: “I abhor pretend projects, so I make the students go out and find real challenges to work with. . . . Unfortunately, it seems a lot of teaching in [technical communication] is based on ‘let’s pretend;’ yet there are so many real problems in the world that we should identify and develop those as teaching cases and student projects.” The resulting course includes two research-driven intertwined assignments: the Funding Opportunities Research Project (FORP) and the Major Proposal.

To begin these assignments, students learn the terminology associated with grant-making and research national and local granting agencies; they also meet with guest speakers who introduce them to the grant review process and offer them tips on writing successful grant proposals.

With this initial information in hand, students then embark on the **Funding Opportunities Research Project (FORP)**. Students individually identify clients and projects; they may choose from projects in their field or with organizations to which they belong. In recent semesters, students have worked with clients such as The Chinese Student and Scholars Association, the Rolla High School drama department, the university martial arts organization, and Newburg Public Schools. With their clients identified, students research funding opportunities for such projects; this research provides students with a unique opportunity to explore a variety of funding sources, to evaluate how well the missions of the funding agencies match with their clients’ needs, and to identify the funding opportunities most suitable for their clients and the projects they have chosen. When they have completed their research, students write a short report that includes a detailed project description, needs statement, benefits analysis, budget, and timeline, as well as extensive information about two or more potential sources of funding. Following instructor approval of their FORP, students begin the next phase of their work, the **Major Proposal**, which may be a proposal for a grant, a pre-proposal to a foundation on behalf of an organization, or a draft of an academic research proposal.

Engineers Without Borders—Utah State University

As a semester project, fifteen professional and technical writing undergraduate students worked as a single team to research, design, and build a website for Utah State University’s Engineers Without Borders student organization. Under the direction of Professor Kelli Cargile Cook, these students completed four assignments, all of which involved research, to accomplish this goal in a single semester:

1. **Problem statement/action plan:** The problem statement addresses the following questions: a) What are the communication

problems the website will solve? What do you need to know to solve these problems? What is your plan to find solutions to these problems? This assignment required students to research and critique other websites as well as technological solutions to meet the organizations' needs. Through this research, students identified design elements and content their clients or they thought should be included in their design, and they began to research technologies for incorporating interactive web-based communications into the site.

- 2. User Analysis Report:** Student groups identified website stakeholders and researched their needs. This report required students to think beyond the actual clients with whom they had met and consider how more removed but nonetheless influential clients, such as donors, university administrators, and national organization officers should shape the content and design of the website.
- 3. Proposal Presentation:** After completing the problem statement, action plan, and detailed user analysis, student worked in groups of three or four to propose a redesign for the EWB website. Their proposal incorporates their findings in the first two assignments, and they are delivered orally in one session to the project clients—chapter sponsors and officers. The clients then deliberated and chose the winning design. The students then recombined into a single team to complete the implementation design the clients selected.
- 4. Website Redesign and Final Project Report:** In the final phase of the class, students formed design, writing, and technology teams and built the new Engineers Without Borders website. Although most of the writing for the site was taken from the previous iteration, the writing team decided to complete additional research to improve website content, and the technological team researched and tested various technologies to deliver the services the client desired. Before delivering the website to their clients, students also conducted usability tests to determine if the website worked as planned. After completing the project, individual students then wrote final project report, summarizing the work they completed to bring the project to a successful conclusion. In addition to summarizing work completed, the final report required students to recount obstacles they encountered and solutions they found for these obstacles and to discuss what they learned about working with

clients, working with each other, and working within technological and organizational constraints.¹

@SEA—Purdue University

Professors Michael J. Salvo and Jenny Bay of Purdue University collaboratively designed the @SEA project at Purdue University with support from Mark Hannah and Karen Kaiser Lee (M.J. Salvo, personal communication, August 11, 2008). This project combines qualities of study abroad programs with service learning, allowing students to take a series of thematically linked courses that also require them to work with a local community agency, most recently the Tippecanoe County Historical Association.

According to the project's website,² students worked to "restructure the exhibits at Fort Ouiatenon in ways that will highlight the Fort's importance to both migration and immigration in 18th century Indiana and to retain it as a vital space of learning and exploration for visitors and scholars in the 21st century." Showcased on the website are specific examples of students' work to achieve this goal. Among these examples are projects such as an online exhibit examining the history and uses of hand fans that are part of the TCHA fan collection, and a series of podcasts describing historical places, events, and persons, such as Tecumseh, William Henry Harrison, and the Feast of the Harvest Moon. Drawing upon research gathered outside the classroom, student teams also applied their writing and research skills to propose promotional documents for TCHA, web projects that promote @Sea's collaboration with TCHA, and researched and developed texts to support the associations' grantsmanship. The extensive needs of an organization like TCHA allowed students to identify the project that most interested them and suited their unique skills, abilities, and talents. In doing so, @Sea engages students "beyond the boundaries of individual formal classes [and allows them] to experience an immersive educational experience where their studies are transformed from learning about community issues to engaging and addressing community needs, ultimately serving as a resource for the greater Lafayette community" (@SEA, 2008).

Strategies for Integrating Service Learning and Undergraduate Research into Technical Communication Programs

As the sample assignments and vignettes illustrate, the possibilities for combining service learning projects with research methods instruction in

¹ The final website can be seen at <<http://web.ics.purdue.edu/~salvo/@SEA/aboutsea.asp>>.

² See <<http://web.ics.purdue.edu/~salvo/@SEA/aboutsea.asp>>.

technical communication undergraduate courses are limited only by the needs of community agencies and organizations. More importantly, these projects and the research associated with them offer instructors and their community partners opportunities to enrich students' understanding of social issues, connecting students with their communities and, in doing so, raising students' social consciousness by asking them to engage not only as practitioners of technical and professional communication but also as citizens who have the power to enact change. As Thomas P. Miller (1991) writes: "When students have a broader perspective on the problematic issues and situations that the community is organized around, they become aware of their own place in 'how things are done' and can then ask themselves if that is how they want to do things and how they want to express themselves in the things they do" (n.p.).

These vignettes also illustrate the integral role that undergraduate research plays in technical communication service learning assignments and programmatic outcomes. Students employ research to understand their community clients and their clients' situations, and they conduct research to find solutions to their clients' communication problems or needs. Most frequently, the research is disseminated directly to the community partner in the form of a communication deliverable that resolves an organizational need. After the communication solution is delivered, students may write or present culminating reports that are then disseminated through more traditional academic channels, such as research showcases and undergraduate research publications, but the most common method of dissemination of the concrete results of research is delivery to the community organization itself. Of course, the benefits to both students and the community do not always come without problems: student projects may not always meet their mark and community partners may, ultimately, decide not to implement student-generated solutions. But even when projects go awry, students learn from the experience of completing them and grow as a result.

Although the assignment sampler and vignettes offer examples of research activities and outcomes that instructors can integrate into their individual courses, program directors seeking broader integration of these practices into program curriculum will find the following suggestions helpful in promoting and integrating service learning and undergraduate research into their programs:

- 1. Review institutional goals and mission statements** related to community outreach, service learning, research, and, if possible, undergraduate research.

2. **Connect these statements to program goals and assessment outcomes.** See Allen's (2010) article for more specific suggestions for developing assessment outcome statements and tools for measuring successful achievement of these outcomes.
3. **Identify specific courses within the program where service learning and undergraduate research can be viably and productively integrated.** For example, Ford, Bracken, and Wilson (2009) describe how a senior capstone course can be adapted to incorporate more research methods instruction. Expanding the capstone scope into service-learning context allows instructors to use assignments described in this article. Other courses that might easily integrate service projects include ones that focus on specific genres (such as proposals, reports, marketing and promotional materials) or specific research methods (such as usability).
4. **Identify and connect to institutional resources and resource centers that support undergraduate research and service learning.** Many institutions now offer service-learning designation for courses and offer support in identifying community partners and projects. Similarly, with the growth in institutional commitments to undergraduate research, many institutions now have undergraduate research administrators who can identify dissemination opportunities within and beyond the campus. These opportunities vary from institutional undergraduate research conferences to statewide research showcases and national conferences, such as those sponsored by the Council for Undergraduate Research (CUR).³ Administrators from institutional offices for service-learning and undergraduate research are also prepared to assist to faculty in designing service learning and/or research projects; they are also excellent resources for identifying funding and other teaching support to instructors inexperienced in these areas.
5. **If institutional resources for service learning are unavailable, use one of these resources to identify class or individual student service-learning projects:**
 - a. If institutional guidelines allow, instructors and program di-

³ To learn more about CUR, visit its website at http://www.cur.org/conferences_and_events/student_events/ncur/

rectors can make their own connections with local organizations and identify community research needs. The benefits of personal contact between directors or faculty members and community partners can be significant: successful completion of projects can lead to repeat projects, student internships, and even advisory board memberships.

- b. Use websites, such as <http://www.idealists.org>, to find projects students can complete as a group or as individuals. A June 2013 Web search of <http://www.idealists.org> projects with the terms “volunteer” and “research” produced 2, 713 results. While not all of these results/projects promote technical communication research skills, many do.
- c. When local connections are unavailable, the SlotC (Service Learning Opportunities in Technical Communication) Database provides an excellent resource. Created by instructors at Auburn University, the database, which was initially funded by a research grant from the Council for Programs in Technical and Scientific Communication, serves as a clearinghouse of projects for students and instructors. Included in the database are many opportunities for service learning that can be completed from a distance.⁴

6. Assess the effectiveness of service learning and research assignments through individual course and programmatic review. Revise activities, assignments, and course outcomes, as necessary.

Using these strategies, program directors can assess student learning and skills while, at the same time, connecting students to their communities and their communities' agencies. In doing so, these opportunities can raise programmatic profiles in the community, builds goodwill between town-and-gown community members, develop extended student internship opportunities, and identify and recruit potential programmatic advisory board members. Through student service learning and the research involved in it, bridges are built and foundations laid for better educated student/researchers, more strongly connected communities, and improved technical communication programs.

⁴ The database can be accessed at <https://cla.auburn.edu/slotc/index.cfm/pages/index>.

References

- @Sea: *Student Engagement and Activism*. Retrieved from <<http://web.ics.purdue.edu/~salvo/@SEA/aboutsea.asp>>
- Allen, Jo. (2010). Mapping institutional values and the technical communication curriculum: a strategy for grounding assessment. In M. Hundleby & J. Allen (Eds.), *Assessment in technical and professional communication* (pp.39–56). Amityville, NY: Baywood Publishing.
- Blakeslee, Ann. (2001). Bridging the workplace and the academy: teaching professional genres through classroom-workplace collaborations. In J. Dubinsky (Eds.), *Teaching Technical Communication: Critical Issues for the Classroom* (pp. 348–371). Boston: Bedford/St. Martin's. (Reprinted from *Technical Communication Quarterly*, 10(2), 2001, 169–92).
- Bowdon, Melody, & Scott, Blake J. 2003. *Service Learning in Technical and Professional Communication*. New York: Longman.
- Campbell, Kim S. (2000). Research Methods Course Work for Students Specializing in Business and Technical Communication. *Journal of Business and Technical Communication*, 14(2), 223–241.
- Cardenas, Diana L. (2012). Challenges and rewards of teaching intercultural communication in a technical writing course: a case study. *Journal of Technical Writing and Communication*, 42(2), 143–158.
- Cargile Cook, Kelli. (2002). Layered literacies: a theoretical frame for technical communication pedagogy. *Technical Communication Quarterly* 11(1), 5–29.
- Cargile Cook, Kelli, & Zachry, Mark. (2010). Politics, programmatic self-assessment, and the challenge of cultural change. *Assessment in technical and professional communication*. In M. Hundleby & J. Allen (Eds.), *Assessment in technical and professional communication* (pp. 65–80). Amityville, NY: Baywood Publishing.
- Dubinsky, James. (2006). The role of reflection in service learning. *Business Communication Quarterly*, 69(3), 306–311.
- Engineers without Borders, Utah State University Student Chapter*. (2007). Retrieved from <<http://www.usu.edu/ewb/index.htm>>.
- Faber, Brenton D. (2002). *Community action and social change: Image, Narrative, and Identity*. Carbondale: Southern Illinois University Press.
- Ford, Julie Dyke, Bracken, Jennifer L., & Wilson, Gregory D. (2009). The two-semester thesis model: emphasizing research in undergraduate technical communication curricula. *Journal of Technical Writing and Communication*, 39(4), 433–454.
- Ford, Julie Dyke, & Newmark, Julianne. (2011). Emphasizing research (further) in undergraduate technical communication curricula: involving undergraduate students with an academic journal's publication and management. *Journal of Technical Writing and Communication*, 41(3), 311–324.
- Grabill, Jeffrey T. (2000). Shaping local HIV/AIDS services policy through activist research: the problem of client involvement. *Technical Communication Quarterly*, 9(1), 29–50.
- Graves, Roger. 2001. Responses from student writing from service learning clients. *Business Communication Quarterly*, 64(4), 55–62.

- Haussamen, Brock. (1997). Service learning and first-year composition. *Teaching English in the Two-Year College*, 24(3), 192–198.
- Huckin, Thomas N. (1997). Technical writing and community service. *Journal of Business and Technical Communication*, 11(1), 49–59.
- Judge, Therese M. (2006). Service learning on campus. *Business Communication Quarterly*, 69(2), 189–192.
- Kastman Breuch, Lee-Ann M. (2001). The overruled dust mite: preparing technical communication students to interact with clients. *Technical Communication Quarterly*, 10(2), 193–210.
- Mara, Andrew. (2006). Using charettes to perform civic engagement in technical communication classrooms and workplaces. *Technical Communication Quarterly*, 15(2), 215–236.
- Matthews, Catherine, & Zimmerman, Beverly B. (1999). Integrating service learning and technical communication: benefits and challenges. *Technical Communication Quarterly*, 8(4), 383–404.
- Miller, Thomas P. (1991). Treating professional writing as social praxis. *Journal of Advanced Composition*, 11(1), 57–72.
- Rainey, Kenneth T., Turner, Roy K., & Dayton, David. (2005). Do curricula correspond to managerial expectation? Core competencies for technical communicators? *Technical Communication*, 52(3), 323–352.
- Rupert, Avis Winifred, & Loudermilk, Susan. (2002). Using ethnographic research practices for technical writing assignments: developing a manual for employees. *Business Communication Quarterly*, 65(2), 67–81.
- Sapp, David Alan. (2004, October). *Exporting students, importing content: global and political diversity in homogenous universities and technical communication programs*. Plenary paper presented at the Council for Programs in Technical and Scientific Communication, Lafayette, Indiana.
- Sapp, David Alan, & Crabtree, Robbin D. (2002). A laboratory in citizenship: service learning in the technical communication classroom. *Technical Communication Quarterly*, 11(4), 411–431.
- Scott, J. Blake. (2004). Rearticulating civic engagement through cultural studies and service-learning. *Technical Communication Quarterly*, 13(3), 289–306.
- Scott, J. Blake. (2008). The practice of usability: teaching user engagement through service-learning. *Technical Communication Quarterly*, 17(4), 381–412.
- Spilka, Rachel. (2009). Practitioner Research Instruction: A Neglected Curricular Area in Technical Communication Programs. *Journal of Business and Technical Communication*, 23(2), 216–237.
- Spinuzzi, Clay. (2004). Pseudotransactionality, activity theory, and professional writing instruction. In J. Dubinsky (Eds.), *Teaching Technical Communication: Critical Issues for the Classroom* (pp. 337–347). Boston: Bedford/St. Martin's. (Reprinted from *Technical Communication Quarterly* 5(3), 1996, 295–308).
- Turnley, Melinda. (2007). Integrating critical approaches to technology and service-learning projects. *Technical Communication Quarterly*, 16(1), 103–123.

Whiteside, Aimee L. (2003). The skills that technical communicators need: an investigation of technical communication graduates, managers, and curricula. *Journal of Technical Writing and Communication*, 33(4), 303–318.

Author Information

Kelli Cargile Cook is Professor at Texas Tech University, where she researches technical communication pedagogy, online writing pedagogy, web-based training, and technical communication program development and assessment. She is a past president of the Association of Teachers of Technical Writing and the Council for Programs in Technical and Scientific Communication.

Engaging Entrepreneurship in Technical Communication using Client and Service-Learning Projects

Ryan Weber

University of Alabama in Huntsville

John M. Spartz

University of Wisconsin–Stout

Abstract. This article calls for technical communication scholars and teachers to introduce entrepreneurship into their classrooms through client and service-learning projects, especially those built on a consultancy model. The growth of entrepreneurship education throughout the university provides tremendous opportunities and resources for technical communication; at the same time, entrepreneurship education cannot be complete without the skills, mindsets, and ethical considerations provided by technical communication pedagogy. By having students serve as rhetorical consultants in projects that add value to for-profit and nonprofit organizations, technical communication teachers can develop entrepreneurship-focused client and service-learning projects that benefit students, the university, client organizations, the community, and regional economy.

Keywords: action-learning, curriculum design, entrepreneurship education, pedagogy, program design, research, service-learning, technical communication

This article offers technical communication¹ an opportunity to expand its commitment to service-learning projects by capitalizing on entrepreneurship, an area of increasing intellectual and financial significance in higher education. As we detail below, entrepreneurship and entrepreneurialism pervade both for-profit and nonprofit organizations.

¹ Technical communication courses often carry titles like Professional Writing, Technical Writing, Writing for the Professions, and Business Communication (Peebles, 2003, p. 2). Thus, for the purposes of this article, we use technical communication as a “cover all” term to refer to all related fields of study, academic programs, offerings, and courses in which technical and professional communicators might work.

Unfortunately, technical communication has largely ignored entrepreneurship and its population of writers (for further discussion, see Spartz & Weber, *in press*). As a consequence, the field has missed out on exciting pedagogical and scholarly opportunities, not to mention the significant resources and exposure granted to entrepreneurship programs and related entities in higher education. By extending the scope of service learning to include entrepreneurship and entrepreneurialism, we provide technical communication instructors and students a way to build on traditional client-based classroom projects and research.

Technical communication pedagogues and scholars may find common ground with entrepreneurship concerning its emphasis on active, experiential, student-driven, real-world learning. Taylor, Jones, & Boles (2004) argue that action learning, which embeds education in practice, “has been identified as an appropriate method for responding to the problem-centered needs of would-be entrepreneurs” (p. 230). As we detail below, many entrepreneurship instructors employ client and service-learning projects in their courses, often with the same motivations as technical communication teachers: providing students relevant, contextual learning while strengthening organizations and meeting community needs. In fact, our field can learn much from entrepreneurial insights into active learning, especially in its consulting model for client and service-learning projects. Our field’s insight on these project types can combine with best practices of entrepreneurship pedagogy to create technical communication projects with an emphasis on entrepreneurship and entrepreneurialism. Though many pedagogical approaches can help accomplish this goal, we offer one set of criteria that might be used to distinguish entrepreneurship-focused projects from others:

1. Students work with entrepreneurially-minded organizations or those with a capacity for growth and change;
2. Students work as rhetorical consultants who advise organizations on ways to improve their institutional structures and interactions with customer and employees;
3. Projects focus on adding value in a way that benefits the organization, its employees, its customers, and its community;
4. Students undertake the kind of rhetorical tasks relevant to aspiring entrepreneurs;
5. Students explicitly reflect on how their projects added value to the organization and how their writing helped to rhetorically construct and shape the institution.

In the technical communication classroom, the traditional approach to service learning centers around sustaining community-based nonprofit organizations while maximizing the educational experience through internships and volunteerism. However, academics and researchers committed to developing entrepreneurs [and entrepreneurialism] have engaged in a range of service-learning practices; some examples include students assisting new entrepreneurs to prepare business plans, completing entrepreneurial-related tasks for nonprofit and community organizations, or providing services to Small and Medium Enterprises (SME) through consulting projects (Calvert, 2009; Calvert & Kurji, 2012). Developing and incorporating entrepreneurship-focused projects that serve clients in the for-profit and nonprofit community holds many benefits for a wide range of factions— institutional and community alike. Accordingly, we call on the field of technical communication to engage entrepreneurship—specifically, through client projects and service learning—for the benefit of its varied stakeholders: students, faculty, programs, and the universities and communities in which we work.

Our call is based on an expansive definition of entrepreneurship that views it as a holistic mindset and skillset allowing people to recognize opportunity, instigate change, and unite people in collaboration to create something new.² One famous definition that fits these criteria comes from Harvard Business Professor Howard Stevenson, who argues that “Entrepreneurship is the pursuit of opportunity without regard to resources currently controlled” (Schrenberg, 2012). Columbia professor Amar Bhidé defines entrepreneurship as “the purposive effort to change the status quo” (“Faculty Insights”). And Jerry Timmons of Babson College writes that “Entrepreneurship is the ability to create and build something from practically nothing” (Consortium, 2004), an ability that requires skills like sensing opportunity, initiating change, coordinating founding teams, managing resources responsibly, and taking calculated risks. Such broad definitions have led to the emergence of the term, “entrepreneurialism,” which “encompasses the skills that a person needs to start their own business” (Cambridge Business English Dictionary) but may also refer to entrepreneurial skills and mindsets applied to pursuits beyond new venture creation. Furthermore, an emerging trend in entrepreneurship scholarship is to expand the term beyond business formation entirely. Management professor Elizabeth McCrea (2010) writes that while

² Although these definitions are helpful, we recognize the potential for the term entrepreneurship to become administrative jargon with little actual meaning, much like the term “excellence” (Readings, 1996). The insight of technical communicators can help universities avoid this problem.

most people think of competitive, profit-minded folks such as Bill Gates when they think of entrepreneurship...entrepreneurship is really a process of creating new value for a target group of customers. If value and customers are defined broadly, it is easy to see that creating 'a new museum experience' for 'patrons,' or 'good feelings' for 'donors,' is not much different than creating 'software' for 'businesses and consumers.' As noted above, entrepreneurship can be found nearly everywhere...and that concept was the impetus for developing a service-learning approach to teaching the subject to undergraduates. (p. 40)

This perspective opens up the potential to apply entrepreneurialism to work done with nonprofits and community organizations.

These expansive definitions lead to an equally expansive characterization of entrepreneurship education. The Consortium for Entrepreneurship Education sets goals that move far beyond the acquisition of personal wealth: "Entrepreneurship education seeks to prepare people, especially youth, to be responsible, enterprising individuals who become entrepreneurs or entrepreneurial thinkers and who contribute to economic development and sustainable communities" (Consortium, 2004). Only one of the Consortium's four elements of core entrepreneurial knowledge involves creating and operating a new venture; the others include recognizing opportunity, pursuing it "by generating new ideas and marshaling needed resources," and thinking creatively and critically. Similarly, Edward Lazear (2004) uses a Stanford Business School survey of self-employed graduates to argue that entrepreneurs are better understood as generalists who know how to recognize opportunity and coordinate people than specialists in a particular business or technology. These expansive abilities require a multidisciplinary approach. Though entrepreneurship is often housed in business schools, many call for moving it beyond these confines to make it a truly campus-wide area of study (Volkman, 2004; Shay & Terjensen, 2005).³ Technical communication can be a vital part of this curriculum; in fact, we argue that entrepreneurship education is not complete without the rhetorical, communication, and ethical abilities offered by our field.

Recent developments indicate that technical communication has begun to recognize the valuable contributions it can make to entrepre-

³ Granted, some of these calls to increase entrepreneurship education border on the ridiculous, such as columnist Steve Gerber's (2012) proposal in the Atlantic to "fire every college president with the means and resources to embrace entrepreneurship who doesn't explore, support or start an entrepreneurship education program or partnership of some kind."

neurship and entrepreneurialism. Faculty from various campus units at the University of Maryland, including the Professional Writing Program, the Center for Social Value Creation, the Robert H. Smith Business School, UM Ventures, the Dingman Center, and the Center for Philanthropy & Nonprofit Leadership, developed courses to reflect and build upon the entrepreneurship value-add we propose in this article.⁴ In the Spring Semester of 2013, the Department of English began to offer several service-learning courses “that complement the University of Maryland’s broader interest in ‘Fearlessly Supporting Entrepreneurship,’” which aligns with the University’s mission to make “professional entrepreneurship and innovation hallmarks of the undergraduate education experience” (“New Service Learning Courses,” 2013). This program’s course offerings not only complement the technical communication approach we advocate herein, but also evidence a burgeoning interest in connecting cross-campus stakeholders for entrepreneurship education. Such programs can serve as a model for other technical and professional writing programs wishing to incorporate entrepreneurialism into their curriculum.

Technical communication instructors and scholars would be well served to incorporate entrepreneurship as a locus of pedagogical and service-learning engagement for several reasons. Some may find the work stimulating and the opportunities interesting. For instance, as showed by Doheny-Farina (1986; 1992), entrepreneurs and SME owners make fascinating research subjects, and many important questions about entrepreneurship writing, communication, and rhetoric still await scholarly investigation. Technical communication can begin to unearth and answer some of these questions by engaging this population.

Other technical communication professionals may find themselves at a university with a prevalent emphasis on entrepreneurship (see discussions of institutions supported by KEEN or the Kauffman Foundation below), and they may want to tap into the opportunities provided by this emphasis. They may find that their work intersects more with entrepreneurship than they realized, allowing them to craft exciting interdisciplinary initiatives that emphasize the value of technical communication in new ways. Technical communication faculty at entrepreneurship-focused universities may also worry about the possibility of being marginalized by ignoring this university emphasis.

Still other teachers may find that entrepreneurialism engages the ever-increasing number of college students with entrepreneurial ambitions. In

⁴ For more information, see <<http://www.english.umd.edu/news/4274>>.

Entrepreneur magazine, Tulgan (1999) reports that “as many as 5.6 million Americans younger than age 34 are actively trying to start their own businesses” and “more than 60 percent of 18- to 29-year-olds say they want to own their own businesses, and nearly 80 percent of would-be entrepreneurs in the United States are between the ages of 18 and 34!” (as quoted in Kuratko, 2005, p. 578-579). According to the Millennial Generation Research Report (2012), half to two-thirds of Millennials are interested in entrepreneurship, and more than a quarter (27%) are already self-employed.; an Intuit Future of Small Business Report (2007) argues that Generation Y “will emerge as the most entrepreneurial generation ever” (p. 5). Entrepreneurial pursuits involve unique opportunities, dynamic rhetorical situations, and sophisticated writing challenges that technical communication is well suited to address. Framing our classes as relevant spaces for these issues offers an often unrecognized opportunity to engage our students.

In this article, we explore the potential of entrepreneurship-centered client and service-learning projects in several ways: First, we call the field’s attention to the proliferation of academic entrepreneurship and the opportunities presented through engaging entrepreneurship and its related factions. Second, we review the scholarship from technical communication and entrepreneurship education that addresses service-learning initiatives in these separate, but related fields. Third, we discuss the benefits of expanding the range of service-learning opportunities—and embracing entrepreneurialism in our technical communication courses—to illustrate the advantages this approach can provide to our students, programs, universities, and communities.

Growing Importance of Entrepreneurship Education

This entrepreneurial emphasis within and beyond the university is represented by President Barack Obama’s November 19, 2009 proclamation supporting American efforts to promote and create entrepreneurial activity. In it, President Obama called “upon all Americans to recognize the important contributions of entrepreneurs to our economy;” declaring that “entrepreneurs are the engine of job creation in America” and that “to secure our Nation’s future prosperity, we must ensure that our entrepreneurs have the tools they need to survive and thrive” (Obama, 2009, p. 1). This Presidential call to action speaks directly to the members of today’s institutions of higher education. The creation of a significant university infrastructure for entrepreneurship education, including majors, programs, courses, centers, over 300 endowed positions, and 44 academic journals, coupled with the “legitimization” of the field by the mainstream media (e.g., *Business Week*

and *U.S. News & World Report*) (Katz, 2003, p. 295; Kuratko, 2004, p. 7), all speak to entrepreneurial education's prominence.

Curricular Growth

Over the last several years, entrepreneurial education—traditionally housed in business schools—has become one of the fastest-growing curricular areas across American universities. In the past three decades alone, formal undergraduate programs (majors, minors, and certificates) in entrepreneurship “have more than quadrupled, from 104 in 1975 to more than 500 in 2006” (Kauffman Foundation, n.d., p. 6). The staggering number of entrepreneurship programs is not restricted to undergraduate education. The Princeton Review’s 2011 annual report lists 79 United States universities that offer an MBA or other graduate degree (e.g., PhD) with a concentration in entrepreneurship (Entrepreneurship Graduate Schools section, para. 1). According to recent research regarding the state of entrepreneurship education in the United States (Solomon, Duffy, Tarabishy, 2002; Katz, 2003; Kauffman Foundation, n.d.), the number of institutions offering entrepreneurship, new-venture, or similar courses has grown in the past 20 years from as few as two dozen to more than 1,600 (Kuratko, 2004, p. 5). The development of courses in entrepreneurship has been exponential, totaling more than 5,000 discrete courses across all two- and four-year college campuses in the United States (Kauffman Foundation, n.d., p. 16). Despite this vast number of courses, very few programs offer courses that take advantage of the unique knowledge and skill-set that technical communication has to offer (Spartz & Weber, *in press*).

University Centers

In addition to strong curricular growth, the explosion of university-based entrepreneurship centers demonstrates higher education's interest and investment. Established in 2000, the Global Consortium of Entrepreneurship Centers (*GCEC*) lists some 200, ranging from well established and nationally ranked to new and emerging academic centers. The intent of *GCEC* is to “provide a coordinated vehicle through which participating members can collaborate and communicate on the specific issues and challenges confronting university-based entrepreneurship centers” (Home section, para. 1). Accordingly, the trend in many universities has been to develop or expand entrepreneurship programs and design unique and challenging multi-disciplinary curricula explicitly geared toward entrepreneurship students.

Academic Research

A principal indicator of a well-developed, thriving, and sustainable academic discipline is its research activity, including that which is associated with its pedagogy. A number of prominent universities have developed robust programs in entrepreneurial research; *GCEC* has also established the “21st Century Entrepreneurship Research Fellows.” This growing body of scholars cultivates a mission “to identify leading-edge research issues and domains and develop high profile research initiatives that demonstrate the highest level of scholarship to entrepreneurship centers and the academic community at large” (Research Fellows section, para. 2). In addition to the annual *GCEC* conference, entrepreneurial scholarly activity is highlighted at the “Babson College Entrepreneurship Research Conference” (*BCERC*), considered by many to be the premier entrepreneurship research conference in the world.

Entrepreneurship Funding

In addition to substantial scholarly research activities, external financial support also exists for academically grounded entrepreneurship programs and courses. For example, the Kauffman Foundation continually supports universities through its Campuses Initiative; it has provided nearly \$50 million in grant money to nineteen schools as of 2006, combined with matching grants (from outside funding partnerships) totaling more than \$200 million. Beyond Kaufman, over \$1 billion has been granted to entrepreneurship education organizations by participating donors, including the Coleman Foundation, Opportunity International, The Deshpande Foundation, Tecovas Foundation, Templeton Foundation, and Edward Lowe Foundation (Creating the Entrepreneurship Stimulus Plan section, para. 1). This investment in developing nascent entrepreneurs has served as a catalyst to cultivate and improve entrepreneurship education.

Teaching Entrepreneurship

Teaching entrepreneurship effectively to establish its academic legitimacy remains a challenge and topic of discussion in the midst of the ongoing eruption of academic activity and resources (Kuratko, 2005, p. 579). Multiple works in the recent literature (Edelman, Manolova, & Brush, 2008; Honig, 2004; Katz, 2003; Kuratko, 2005; Matlay, 2006; Shinnar, Pruett, & Toney, 2009) discuss different approaches to entrepreneurship education. Universities also collaborate to develop such an education. For instance, the Kern Entrepreneurship Education Network (*KEEN*), “a collaboration of 20 universities around the U.S. that strive to instill an entrepreneurial mindset in undergraduate engineering and technology students” holds a

mission “to graduate engineers who will contribute to business success; and in doing so, transform the American workforce” (About section, para. 1). This continued commitment to extending, assessing, and improving entrepreneurship pedagogy highlights its relevance and growth. Curricular assessment is also being conducted by related stakeholders, including the “Kauffman Panel on Entrepreneurship Curriculum in Higher Education” and the recently established (2011) “Future of Entrepreneurship Education Summit” (<http://feesummit.com/index.php>).

Although these efforts across the academy illustrate a holistic response to the rise in entrepreneurship education, John Hughes and Michael Hennessy of the Coleman Foundation offer the most salient pedagogy-related proposition, given the purpose of this article. Specifically, Hughes and Hennessy advocate for the integration of entrepreneurs and entrepreneurialism into the classroom setting (Kuratko, 2004, p. 10). This call is echoed by Greene, Katz, & Johannison (2004) who argue that “experiential learning is often a key component of an entrepreneurial course or curriculum” and that “entrepreneurship education needs to reflect a real-world environment” (p. 238), even if that means challenging traditional educational hallmarks. This notion is precisely one on which our work hinges. We assert that introducing technical communication students to the real-world writing and communication needs of entrepreneurs and SME owners through service learning can provide the experiential learning through which they will foster the entrepreneurialism for success in the business world at large.

Many interested parties are working to ensure that entrepreneurship education best prepares students for venture creation and opportunity recognition. Still, questions remain: Has the academy appropriately and adequately addressed the needs of entrepreneurially minded 21st century students? What meaningful dialogue and research has truly affected curricula—both in course design and programmatic scope and sequence—for this ever-growing population? According to Kuratko (2004), educators who introduce for-profit entities into curriculum design must ensure that practicing entrepreneurs delve into the real problems and issues involved with creating and sustaining entrepreneurial ventures (p. 10). One such issue includes their communication needs throughout the stages of business development. We argue that teaching students to serve as rhetorical consultants and including for-profit organizations in service-learning projects will not only alter traditional academic thinking about the value of entrepreneurialism for all students, but also facilitate a better understanding of the writing and communication needs and skills of existing and future entrepreneurs and SME owners in our local communities.

Connections between Technical Communication and Entrepreneurship Scholarship

Entrepreneurialism and technical communication can form a productive partnership through client and service-learning projects that emphasize both technical communication and entrepreneurship-related skills and mindsets. However, this connection has not fully emerged for several reasons. One is the lack of attention given to entrepreneurship by technical and professional communication. While some scholars have looked at the rhetorical operations of new and emerging enterprises (Durack, 2003; Leydens, 2008; Mara, 2008), most technical communication scholarship investigating the private sector still focuses on large, well-established corporations. Additionally, some in the field may find an entrepreneurial focus—with its perceived emphasis on profit and corporate gain—incompatible with the ideology and theory of technical communication and service learning.

Technical Communication Service Learning Projects Involving Entrepreneurialism

A handful of technical communication scholars already describe client and service-learning projects that fit well with entrepreneurialism while adhering to educational principles of service learning. For instance, Cooke and Williams (2004) describe a consultancy project that charges clients a fee to use student services. Although we aren't specifically encouraging faculty to charge a fee for this type of work, consultancy projects encapsulate much of the approach we advocate. Cooke and Williams describe an example project with an explicit entrepreneurial focus that asks students to create a Venture Guide for aspiring entrepreneurs. Through these projects, students "experience the complexities of professional writing and recognize that there are real consequences if project work is substandard or not completed on time" (p. 148). This consultancy approach establishes both a precedent and a model for entrepreneurship-focused service-learning projects. In another precedent, Sapp and Crabtree (2002) detail a project conducted in their own department in which students wrote a grant, a policy manual, and various additional documents for a small business that serves mostly low-income women and couples. The authors are careful to note that the business has a social mission, which makes it appropriate for service learning, but this business fittingly encapsulates the idea of social entrepreneurship popularized by entrepreneurship theory. Other service-learning projects produce documents that are helpful to both nonprofit

organizations and aspiring entrepreneurs. In one instance, Bouelle (2012) asks students to write business plans and proposals for nonprofit agencies working on fundraising activities.

Technical Communication Scholarship with a Social Mission Focus

Despite these precedents, many technical communication scholars may worry that entrepreneurship is incompatible with the social, community-minded mission of service learning. These scholars believe service learning should, by definition, instill a spirit of public service and an awareness of social problems through interaction with nonprofit agencies. For instance, Huckin (1997) notes: "service-learning projects have three distinct goals (1) helping students develop their academic skills (in this case, writing) (2) helping students develop more civic awareness, and (3) helping the larger community by addressing the needs of local nonprofit agencies" (p. 50). Similarly, Henson and Sutliff (1998) articulate that service learning must provide more than a primer on corporate success:

Service learning, an expanding pedagogical movement, educates students to volunteer their expertise for the benefit of society. Teachers of business and technical writing can apply this pedagogy by assigning students to write for nonprofits. Such assignments prepare students for both workplace writing and responsible citizenship. (p. 189)

To achieve a similar goal, Wickliff (1989) uses client-based projects to help students investigate and rhetorically address local public and university issues, such as wetland preservation and student accessibility. Sapp and Crabtree (2002) envision service learning as an antidote to technical communication's overemphasis on for-profit enterprises: "In the current enthusiasm for university-industry collaborations, the study of technical communication privileges the large corporation, concerning itself almost solely with issues in the for-profit sector of the economy" (p. 416). For these scholars, service learning is a means to expand students' awareness of social problems.⁵ Scholars with a laudable commitment for civic and socially-minded service learning may object that a focus on entrepreneurialism will take students away from service to community organizations in favor of increasing company profits.

⁵ However, Matthews and Zimmerman (1999) use student comments and reflection to argue that students do not necessarily develop an ethical sense of community through service learning.

Client and Service Learning in Entrepreneurship and Related Fields

However, scholars in entrepreneurship and in related fields such as business, management, and even engineering have also developed engaging, civically-minded, and theoretically sound service-learning projects for their students. Some of these projects partner students with for-profit enterprises (Coyle, Clement, & Kruger 2007; Hernandez & Newman, 2006; Zidek, 2012), but many develop students' entrepreneurial skills while they serve their communities. Drawing on an expansive definition of entrepreneurialism, these projects view entrepreneurship more broadly than merely acquiring profits and enriching shareholders; instead, they define it as the identification of opportunity and the creation of value. Other scholars see service learning as a way to expand what they perceive as the narrow focus of entrepreneurial education (Myrah, 2009). For instance, Godfrey, Iles, and Berry (2005) argue that business programs too often give students a limited understanding of their roles as employees and managers while instilling a myopic focus on increasing shareholder wealth. For them, carefully implemented service learning "and the associated educational experiences, provide a partial solution to the problem of narrowness in business education precisely because the pedagogy blends academic rigor with practical relevance, set in a context of civic engagement" (p. 310). Their service-learning project asks college students to provide free financial literacy education to students in the community. Kenworthy (2010), who has students help community clients with negotiation tasks, also argues that effective service-learning experiences can broaden students' education and community mindedness because

service-learning projects expose students to real-world problems in community-based organizations, offering students an opportunity to work with and learn from members of the communities around them. Real-world projects provide the relevance demanded of today's university programs without compromising a theoretical and substantive context for learning. (p. 63)

Examples of these types of service-learning projects abound in entrepreneurship-related literature: Calvert and Kurji (2012) describe a service-learning project in accounting that partners students with Students for Free Enterprise (SIFE) to offer free tax preparation to low income Americans; Metcalf (2010) has marketing students operate "a collegiate chapter of a nonprofit engaged in international community service" (p. 155); and Mancuso, Alijani, Kwun, and Smith (2009) teach minority students entre-

preneurial strategies through service-learning projects. These types of projects demonstrate entrepreneurship's engagement with service learning, but they also demonstrate that students interested in entrepreneurship likewise need projects with a more direct technical communication emphasis.

Social Entrepreneurship, Local Economic Development, and Service Learning

The growth in entrepreneurship service learning parallels the rising interest in social entrepreneurship, a term that encompasses for-profit organizations "driven by a social mission and guided by the impact of this mission" (Myrah, 2009, p. 7). Social enterprises have a for-profit structure, but they are primarily or largely motivated by the social impact of their goods and services (one well-known example of a social enterprise is Tom's Shoes, which donates a pair of shoes to a child in need for every pair of shoes a customer purchases). Social enterprises use business strategies to solve social problems. Because of this social motivation, some scholars (e.g., Wessel & Godshalk, 2004) see natural ties between social entrepreneurship and service-learning education. Jones, Warner, and Kiser (2010) advocate stronger relationships between social entrepreneurship and service learning, as these philosophies "both engage students in work directed toward the public good, linking the education of students to addressing societal problems and needs" (p. 2). Many teachers and programs find that social entrepreneurship blends more traditional business education with a civic, community-oriented mindset. Myrah (2009) describes a service-learning class where "entrepreneurship was considered outside of a purely business context, and entailed linking students to the community through experiential activities that required them to apply problem solving and analytical techniques to a range of community issues and problems" (p. 5). Many of these community projects, such as designing logos, and writing manuals, marketing plans, and newsletters, would be an excellent fit for a technical communication classroom.

Other entrepreneurship scholars suggest that economic development is a significant community need, one on par with the missions of local nonprofits, especially in areas facing economic hardships and high unemployment. In this spirit, teachers at Ohio State, Iowa State, and Western Michigan University developed a service-learning rural community development project to strengthen the entrepreneurial skills opportunities of university students and community members:

Student teams complete learning activities in partnership with rural or small community business leaders to identify characteristics of strong rural communities, and then develop competitive strategies to strengthen the local retail and service sector. The service-learning activities have the potential to produce an array of beneficial and useful outcomes for participating rural businesses, including business proposals and marketing tool kits (Frazier, 2012).

These projects can strengthen area economies and university-community relationships. As Litzky et al. (2010) argue, “service-learning reconnects a university’s resources with community needs while providing students a valuable learning experience” (p. 143). Service-learning projects that increase local economic opportunities can be a great way for technical communication professionals—especially those at publically funded universities—to share resources and expertise with the community.

Concerns about Hyperpragmatism and Corporate Mindsets

Although many service-learning advocates in technical communication may be encouraged by entrepreneurship’s interest in service learning, others in the field may have ideological objections to importing business school jargon, approaches, and mindsets into the technical communication classroom. One potential critique comes from J. Blake Scott (2004), who appreciates the potential of service learning but fears that it is often co-opted by a “hyperpragmatist” approach that gives students little power to change organizations. Hyperpragmatism arises both from an over-emphasis on training students as productive, compliant workers and from unreflective engagement that prevents students from recognizing, critiquing, and changing undesirable organizational and social forces. Scott writes:

The main goal of this ideology is ensuring students’ professional success. Although service learning comes out of a more robust pragmatic tradition, it can be co-opted by a hyperpragmatism that moves past critique, overlooks broader power relations and textual circulation, and narrowly positions students and their praxis (p. 289).

Hyperpragmatism can squelch the civic and social power of service learning. Scott proposes a cultural studies approach that positions students as partners, rather than subordinates, within organizations, and incorporates more research on social problems and greater student reflection into the curriculum.

A related concern is represented by Jack Bushnell (1999), who argues that technical communication departments have too compliantly adopted

and internalized corporate paradigms, undermining the mission of the university to foster critical thinking and ethical questioning of language use. Instead, technical communication departments treat documents and language as neutral and objective in order to train students to meet employer's expectations. Bushnell writes:

It is tempting to act as the bridge from industry, to bring its practices to our students so that they may successfully 'return' with those skills after they graduate. But this impulse ignores what our mission as college and university teachers should be: to prepare our students to be critical thinkers, and to see that communication (because of the nature of language itself) is a complex human enterprise that goes far beyond describing or informing (p. 177).

Bushnell offers a compelling critique of technical communication curriculum that too willingly adopts a corporate mindset. But, not all scholars are so wary of business paradigms. Moore (2004) argues that cultural theorists criticize corporations too strongly, especially when it comes to their emphasis on profit. Moore sees profit as a useful tool for audience analysis and value creation; he adds that academics should view themselves as cultural capitalists creating intellectual products (we would further add that as paid employees, academics are a part of their local economies). Still, cultural theory's concerns with incorporating corporate practices provide an engaging caution for technical communication projects emphasizing entrepreneurship.

Rhetorically Robust Entrepreneurship-Focused Service-Learning Projects

Despite potential fears that an entrepreneurial focus may lead to hyper-pragmatic or overly corporate service-learning projects, we argue that strategically executed projects could actually open opportunities for student agency and critical reflection about corporate discourse and social issues. These projects could take cues from entrepreneurship pedagogy, which sometimes grants students significantly more agency to influence organizations. This appears to be especially true for consulting projects, which position students as experts with knowledge that can alter organizational structure. Unlike many of the technical communication projects that Scott critiques—where students simply fulfill client requests—consulting projects ask students to develop a more critical relationship with their organizations. Discussing their consulting client project, Pache and Chowdhury (2012) write:

To do this task properly, students are required to find the right balance between empathy and distance with the organization to come up with recommendations that not only take into account the organization's constraints and opportunities but also are compatible with the organizational and sector culture (p. 503).

This balance of distance and empathy asks students to not only respond to client needs, but also to evaluate critically the organization and suggest impactful changes. We advocate a similar stance for technical communication students, who can still meet the needs of clients while taking a more reflective, critical stance on the organization.

A representative consultancy project comes from Management professors Heriot, Cook, Jones, & Simpson (2008), who had students observe organizations and offer solutions to their real-world problems. In one project, students evaluated the role of cashiers at a large retail store and recommended ways to make the position less boring and more multifaceted. Another project had students evaluate the ordering processes at a Mexican restaurant and recommend changes that decreased ordering and wait times for customers. Both organizations implemented the suggested changes, illustrating the student potential to drastically change corporate operations. While both of these projects partially rely on the kind of efficiency ethic that Scott criticizes, they also allow students to substantially affect the company. In the case of the cashier project, students changed and expanded the role of workers, which could be a memorable experience for students as they later adopt employee roles of their own.

Technical communication may be able to increase the entrepreneurial focus of its courses and accomplish its own pedagogical and ethical goals by learning from this consultancy model. In these projects, students decide on solutions to an organization's problems or rhetorical challenges instead of being given the solution by the client. Thus, this model presumes that students possess their own knowledge that can change the client's organization. Several types of projects, many already staples of technical communication classes, could achieve this goal. Some entrepreneurship-focused service-learning projects might involve instructors changing their own approach to service learning, while others might involve instructors articulating their pedagogical goals differently to students, clients, and university stakeholders.

One possible project might position students as usability consultants for a local small business where they can make real changes in the user-centeredness of the organization, increasing not only the efficiency of websites, products, and processes, but also allowing customers to get their

needs met and making material accessible to customers with disabilities or limited technology access. In this sense, they can achieve the empathic, yet distant perspective advocated by Pache and Chowdhury (2012). These projects can also “add value” in the sense that McCrea advocates, not just increasing profits, but also improving customer experience and access. This consultancy approach to usability-based service learning can be informed by Scott’s (2008) own approach to usability:

While user-centered design can provide a mechanism for ensuring more reciprocally beneficial -learning partnerships, service-learning projects can provide rich contexts for students’ learning and trying out user-centered design. Indeed, one of the virtues of service-learning and other real-world assignments is the opportunity they provide students for adapting emergent knowledge to specific workplace or community-based contexts. (p. 382)

Another SME-centered project with potential to move beyond hyperpragmatism is the writing of policy manuals. Creating these documents—designed to help businesses operate more ethically, efficiently, and effectively—is an important rhetorical task for aspiring entrepreneurs. As performative texts with the potential to structure and even change behavior, policies have an ethical dimension that requires the writer to reflect holistically on the organization and its standards. Many SMEs and nonprofits lack the time, knowledge, and resources to create policy documents; therefore, they often function using ad-hoc, inconsistently applied policies (if any) not informed by the best legal guidelines or ethical standards. Crafting these manuals satisfies the client’s goal of consolidating employer directives for behavior, but the same manuals also require those clients to follow certain standards and to provide the student writers—and the employees of the company—with significant agency. Students who produce informed, well-researched policy manuals stand to drastically change the structure of an organization and compel more ethical behavior. For instance, they may implement harassment, affirmative action, discrimination, social media, or environmental policies that the organization lacked. The creation of such documents encourages reflection about the connections between legal and ethical standards, the relationships between employees and management, and the function of writing within organizations.

Teachers of grant and proposal writing courses can also develop an entrepreneurial emphasis by partnering students with aspiring or practicing entrepreneurs or with non-profits looking to expand their services or

client base. For instance, Belmont University offers a grant-writing course through its Social Entrepreneurship program that implements a service-learning project, partnering students with non-profits. Students at the University of Baltimore's Social Entrepreneurship program can take an elective in "The Fundamentals of Grant Writing," taught by the Community Studies and Civic Engagement department. Grant writing courses in technical communication programs might offer a similar entrepreneurial focus, providing valuable skills to both aspiring technical communicators and entrepreneurs (and many grant writing courses may already employ this approach). For instance, students may team with a women-owned small business to apply for grant and contract opportunities from the SBA Office of Women's Business Ownership, EILEEN FISHER, the Make Mine a Million \$ Business initiative from Count Me In, the Women Owned Small Business Federal Contract Program, or a variety of state and local sources. Similar funding and development sources exist for minority-owned business through the Minority Business Development Agency; funding for businesses in economically disadvantaged areas may also be available through the Historically Underutilized Business Zones (HUBZones) program. As many technical communication professionals know, service-learning projects in grant writing classes can also involve collecting narratives, focus group responses, or other types of data to supplement a grant proposal. Further, these projects often require students to conduct extensive quantitative and qualitative research to assess the impact of previous grant funding.

Web writing classes can be given an entrepreneurial emphasis as well. For instance, the English Department at University of North Carolina frequently offers a first year seminar on Entrepreneurial Writing on the Web in partnership with the Carolina Entrepreneurial Initiative. The catalog describes the entrepreneurial implications of the class:

This seminar will explore the current state of computer-assisted composition and help students develop new media writing projects for emerging online cultural and economic spaces. Content will range from understanding the economic dimensions of cultural production on the Web (e.g., viral popularity on YouTube and advertising-supported blogs) to developing new media composition skills necessary for success in emerging online environments, to successfully establishing online domains, and to creating virtual professional spaces.

Though the course is a first-year seminar, a similar course could seamlessly be implemented within a technical communication curriculum, where web-writing courses are commonly offered. Service-learning projects

could involve social media strategy planning and consulting, writing web content for emerging enterprises and organizations, creating documentation that allows clients' to maintain and enhance their websites, as well as information-architecture and content-management projects. Given that similar projects are common within web writing classes and technical communication curriculum, it may prove worthwhile for some instructors to craft service learning projects that meet the criteria for entrepreneurialism introduced by this article as a way to attract a wider variety of students and position them as consultants within organizations.

Effectively conceived service-learning projects emphasizing entrepreneurialism can also address Scott and Bushnell's concerns that service-learning projects lack adequate reflection on corporate structures and rhetorical practices. Writing for new and emerging enterprises provides students an excellent chance to witness discourse shaping an organization. In the nascent stages of a business's development, rhetorical practices have not yet been normalized and may be more tangible for observation, reflection, and alteration. For instance, Doheny-Farina (1986) found that the composition of a business plan not only reflected but also shaped the social realities of the emerging organization. Discussions about corporate rhetorical practices may be more frequent, open, and direct. Additionally, the role of documents such as business plans, grants, proposals, procedures, permits, and policies in creating new organizations adds an additional rhetorical dimension to students' understanding of corporations.

Service Learning Benefits and Entrepreneurialism

The projects that we propose here, although similar to traditional technical communication service-learning projects, offer additional opportunities for gaining the rhetorical skills essential for today's entrepreneurially minded students. The primary distinction between traditional service-learning projects and those focused on entrepreneurship can be found in the relationship between the students and clients. As we detail above (e.g., a consultancy model of service learning), students' major concerns and objectives during entrepreneurial service-learning projects are to add value by helping the organizations and businesses that they serve to realize their missions and objectives. As such, students don't simply work *for* these organizations; they work *with* them in both determining and carrying out a project that unites technical communication skills and ethics with client needs, values, and attitudes.

Although student, community, and institutional benefits of service learning are documented and accepted by technical communication

scholars and teachers, the benefits to students across the curriculum—and in entrepreneurship education, specifically—is a burgeoning area of inquiry. Moreover, the intersection between service-learning initiatives in technical communication and entrepreneurship education has not yet been fully detailed.

Student Benefits

Engaging entrepreneurship and entrepreneurialism through service-learning projects in the technical communication classroom has the potential to better equip all college and university students and graduates with the skills that meet the needs of industry and the expectations of society. Unfortunately, at present, “academic institutions and Business Schools in particular, are often criticized for producing graduates who are technically capable but lack the capability for teamwork, effective workplace communication, and the ability to react effectively in unstructured and complex situations” (Calvert & Kurji, 2012, p. 5). Addressing this perceived lack of capability needs to be a cross-curricular priority as we prepare students to enter today’s workforce. The student benefits of service learning in general (e.g., Eyler & Giles, 1999; Eyler, Giles, Stenson, & Gray, 2001; Palmer & Short, 2010), in the technical communication classroom (e.g., Bowdon & Scott, 2003; Matthews & Zimmerman, 1999; Sapp & Crabtree, 2002), and in entrepreneurship education (e.g., Hernandez & Newman, 2006; Litzky et al, 2010; McCrea, 2010) are widely reported. For the purposes of this article, we have chosen to detail the ways in which technical communication and entrepreneurialism education intersect via service-learning initiatives. The following benefits to students spin out directly from the type(s) of projects we discuss here:

- Service learning improves communication in technical communication classes and across the curricula in higher education.
- Service learning —through an enhanced understanding of and engagement with professional organizations and their inner-workings—contributes to career preparation via the cultivation of a personal identity [ethos] aligned with the complex requirements of the business world.
- Service learning fosters a complex and rhetorical understanding of audience and its various participants.

If the approach to service learning we propose is beneficial for “traditional” students, adult learners might find courses of this type to be especially attractive. Research shows that adult students value an andragogical (Knowles, 1980) emphasis on action learning (e.g., Calvert, 2011; O’Neil &

Lamm, 2000; Yorks, O'Neil, and Marsick, 2002), experiential learning (e.g., Kolb & Fry, 1975; Mok, 1999), and most significantly, project based learning (e.g., Von Kotze & Cooper, 2000; Helle, Tynjälä, and Olkinuora, 2006). We believe that our entrepreneurship-based service-learning model attends to the needs of adult learners who place a high value on educational approaches that allow them to put classroom theory and discussion into practice in their immediate surroundings. By working directly with SME owners and entrepreneurs in their local communities, adult learners see the measurable results of their work and value the direct applicability of what they are learning from our technical communication classes.

Improved Communication

Though the above outcomes are of equal importance, technical communication instructors and scholars might find the arguments regarding the communication benefits of entrepreneurial service-learning projects to be the most convincing, especially given the historical understanding of communication in business communication scholarship (e.g., Curtis et al., 1989; Flatley, 1990; Messmer, 1999; Roebuck et al., 1995; Waner, 1995). For instance, Tucker and McCarthy (2001) assert that "communication skills are critical to effective job performance, career advancement, and organizational success" (p. 227). Moreover, as both Jackson (2009) and Calvert and Kurji (2012) note regarding graduates of business and management programs, while "oral and written communication skills were consistently ranked as some of the most important in graduates," these same skills are "further noted as suffering from wide gaps in required versus actual capability" (Calvert & Kurji, 2012, p. 5-6). Although they are often seen as disparate academic disciplines, entrepreneurship and technical communication scholars agree that service-learning initiatives bolster these important skills and provide essential real-world experiences for our students.

Thomas and Landau (2002) adroitly capture the connections between business and entrepreneurship service learning and the rhetorical skills that might be fostered through a project in a technical communication course, noting that, as a result of their service-learning project, "skills in conflict resolution, communication, role clarification, goal setting, and project management" increased, while "students' interpersonal skills were further developed" because "writing and presenting to different audiences within academia, as well as to the community, forced students to write reports and prepare presentations in a manner that could be understood by and useful to a variety of stakeholders" (Wessel & Godshalk, 2004, p. 28). As Calvert and Kuji (2012) explain while detailing a service-learning

project in their managerial accounting courses, “a communication course that incorporates SL methodology offers an effective prototype for the development of ‘soft’ skills (Sharifi et al., 2009),” especially when the “course requires public service activities, multiple oral and written communication exercises, and requires individual response to feedback from both teammates and the client, contributing to enhanced awareness and communication capability” (p. 8). For many students and instructors, then, the interaction with both group members and clients serves to facilitate improved approaches to and capabilities of communication. “Students develop[ed] their communication skills when working with the client and their teammates under a stressful and time-restricted situation” (Calvert & Kurji, 2012, p. 10). The projects we propose and the extension of technical communication service learning to organizations with an entrepreneurial focus provides an added value to not only the curricula of technical communication programs, but also to students studying entrepreneurship, business, and related fields at our institutions.

Career-Ready Ethos/Identity

A hallmark of technical communication education is an acute understanding and application of situated ethos/identity construction. Service-learning initiatives are instrumental in helping students develop and apply contextually appropriate identities. Projects with a focus on entrepreneurialism create a context unlike those in traditional service-learning approaches; the relationship students develop with clients who have a heightened investment (e.g., financial, social, etc.) in the success of their organizations creates opportunities for much internal and external identity negotiation in carrying out the projects.

In entrepreneurship education, “entrepreneurial self” or “entrepreneurial identity” has become an increasingly important component of the curriculum, as scholars and instructors are interested in understanding “the connection between the variety of relevant discourses that exist in contemporary societies and the everyday action of entrepreneurial actors” (Watson, 2009, p. 251). Discussions of identity in entrepreneurship conceptualize identity comprising two intertwined aspects: a self-identity and discourse-related, social identity. “Both the ‘self’ and the ‘social’ aspects of entrepreneurs’ identity are influenced by discourses existing in the society around them” (p. 251). Accordingly, service-learning approaches to inculcating entrepreneurialism position students in contexts where success is determined by their abilities to “use discursive resources in a negotiated, shifting, creative, and nuanced but often ambiguous manner” (p. 251).

Growing evidence suggests that, as Halford and Leonard (2006) put it, “while generic discourses of enterprise, profession, gender or age may be important, they are received and interpreted in the particular and complex contexts” (p. 699). Ultimately, direct contact with real-world clients leads to an acute understanding of the types of identities necessary for personal and success of the organizations. “The personal commitment of their client provided students with an insight as to their professional role and the impact . . . on client operations and the success of their business” (Calvert & Kurji, 2012, p. 10).

Audience Awareness

For technical communication educators, developing projects that put students in rhetorical contexts that require a fine-grained understanding of audience—and the relative stakeholders’ needs, values, and attitudes—to create successful documents is a core pedagogical objective. Client-based projects that focus on entrepreneurship are uniquely suited to this objective, as they require that students possess or “require students to possess a fuller understanding of the rhetorical situation at hand. As Cooke and Williams (2004) aptly describe, in negotiating the details of their projects, students find themselves in complex situations that demand their recognition of not only the client as audience, but also the customer, clients, or community members those clients serve:

Students often participate in the negotiations that occur in the proposal stage of a project and meet with clients to ascertain a project’s requirements and scope. Many students have not worked in an autonomous production environment where they are responsible for negotiating the schedule for certain deliverables with a manager. Therefore, students begin to develop skills in recognizing the organization’s priorities as presented by a manager and proposing a plan to meet those goals. (p. 148)

These types of client projects provide the additional benefit of bringing “students into the workplace where they must team with professionals with different organizations and backgrounds to achieve a goal” (Tucker et al., 1998, p. 98). Students quickly learn the power of working together as their projects progress, which builds on the theoretical and classroom-centered work they conduct in their technical communication courses.

Community and Client Benefits

According to Michael Porter (2007) of the Harvard Business School, due to their roles as local employers, purchasers, and real estate developers,

“colleges and universities have long been important economic drivers in their surrounding communities,” and “their potential impact on the wider, regional economy has been growing dramatically” in recent years. While this is certainly the case, “few institutions have managed their role in economic development strategically . . . institutions can enhance their regional economy through a variety of targeted initiatives,” including “offering advice to startups and conducting the basic research that catalyzes and supports local industries” (Porter, 2007, p. 41). It is this type of work that technical communication is ideally suited to accomplish, and doing so through service-learning initiatives benefits all parties involved.

In addition to the more obvious benefits of well conceived service-learning projects—professional quality documents, service to the university community, increased university relations, access to further resources, etc. (Clarke, 2000)—technical communication students, faculty, and courses stand to have a broader impact on their local and regional communities by embracing entrepreneurialism. The educational and social reasons for and benefits of incorporating entrepreneurship and entrepreneurialism into the curriculum are many. As Carl Schramm of the Kauffman Foundation argues in a comment relevant to the current economic situation in the United States, “Historically through the last seven recessions it’s been entrepreneurs who essentially restarted the economy” (Riley, 2009). Further, “with rare exception entrepreneurship is perceived to be the engine driving all economies regardless of the political system, as countries emulate and adapt the best the United States has to offer” (Peña et al, 2010, p. 3). Economic development can be considered a civic priority in its own right, especially in communities where academic institutions can generate opportunities for regional workforces with insufficient job prospects and high rates of under- and unemployment.

Although universities are major contributors to preparing this nation’s future entrepreneurs, as we first began to conduct research in this arena—building relationships with and between entrepreneurs and technical communication—we experienced some false starts, limited responses, and a perceived lack of recognition for the value that academicians and technical communication might add for existing entrepreneurs, SME owners, and our local economies. During our work with a regional Business Incubation Center, the Director attempted to explain the possible difficulties we were experiencing in gaining access to this population, noting that beyond the effect that the university itself has on the local economy, “academics are notorious for their lack of influence on regional/community economic growth” (T. Fellner, personal communication, April 8, 2012). Simply put,

many believe that teachers and scholars in higher education have done little to drive regional economic growth, and teachers and scholars do not elucidate these contributions to the public. The assumption that underpins a statement about academics failing to address economic growth seems especially salient in the current economic and political landscape where public- and private-sector employees—especially those in education—are embroiled in disputes about their relative societal value. We propose that entrepreneurial service-learning initiatives have the potential for helping mitigate this misperception by involving students as active partners in the economic growth of their communities.

For example, a study conducted by San Francisco State University (2003) measures the benefits and economic impact of service learning on the local organizations, businesses, and communities it serves. On the whole, the results show that the positive effects of students on businesses far outweigh the challenges: Service learning increased the organizations' capacities to fulfill their missions, while positively affecting their economic status. Barrientos (2003) reports that service-learning students increased the ability of the businesses and organizations (some are for-profit, some nonprofit) with which they worked to provide services to their clients, noting that "thirty-two percent (32%) of respondents reported that students enhanced their services; 17% indicated that using students increased the numbers of clients served by their organizations" (p. 5). Further, eleven percent (11%) found that service learning "increased their ability to leverage other financial resources," which improved their financial bottom-line (Barrientos, 2003, p. 5). Ultimately, service learning was significant to these community agencies "because it directly affected their ability to continue providing services, especially during hard economic times when more people need already scarce services and resources," while helping "leverage much needed grant funding" (p. 6). Ultimately, the service-learning projects were instrumental in maintaining and growing the organizations with whom the students worked. While this growth is beneficial to the organizations as well as the public perception and community involvement of the university, it can also benefit students to reflect on how they added value to organizations. As we argue above, students receive unique educational insight from sustained reflection about how technical communication skills enhance and change organizations and how that knowledge adds value for the various customers and clients that an organization serves.

Faculty and Programmatic Benefits

In developing service-learning projects that engage real-world entrepreneurial practices, technical communication can contribute unique dis-

ciplinary knowledge, skills, and methods. The mutually beneficial relationships built and sustained through service-learning projects cultivate faculty research initiatives that allow for research-teaching integration. For example, our research into the writing and communication practices of entrepreneurs and SME owners (see Spartz & Weber, *in press*) provides technical communication pedagogues—and varied institutional stakeholders—the requisite information to develop and amend curricula that more closely aligns with the values, needs, and desires of for-profit and nonprofit businesses.

This type of research promotes robust academy-industry relationships in our local communities, while facilitating cross-institutional connections between technical communication (e.g., English and Communication Departments) and programs in entrepreneurship housed in the business school or a freestanding center. Some English faculty members are already developing these connections, such as Paul M. Rogers, an English professor who, at the time of writing, serves as Interim Executive Director of the George Mason Center for Social Entrepreneurship, where he “works with other Mason faculty to expand integration of social entrepreneurship concepts and pedagogy within their teaching, research and writing” (“Staff”, 2013). Once established, these academic connections can provide technical communication educators and their departments with new and exciting pedagogical and scholarly opportunities. Specifically, we have found that articulating (and supporting) our value to entrepreneurship education not only better serves the needs of today’s entrepreneur students (by inculcating a germane and transferable skill-set), but also enhances technical communication itself.

Relationships that instructors, students, and programs build with community businesses for client-based projects often yield long-term partnerships—especially when the clients are entrepreneurially focused. As Cooke and Williams (2004) suggest in their discussion about client projects in the technical communication classroom, “when the client is a profitable business, these projects can also effectively be a starting point for universities interested in establishing formal relationships with industry through academic consultancy services,” as these projects “can introduce businesses to the university’s faculty and students and be the foundation upon which long-lasting, mutually beneficial partnerships can be built” (p. 140). These types of relationships are not only beneficial for the university, but also for our technical communication programs and the departments that house those programs. Having an extensive and ongoing body of organizations with which our students can work—not only in a service-learning

capacity, but also in internships—provides enriching educational opportunities only made possible through a focus on entrepreneurialism.

Conclusion

We develop here an approach to service learning that might broaden and reconceptualize the partnerships between technical communication students and the community factions with which they work. Ultimately, by conceiving of an extension to service-learning initiatives across the curriculum—one that builds on and adds to existing models for client-based projects—we highlight the myriad opportunities that exist within and beyond the university by engaging entrepreneurship, entrepreneurialism, and its related stakeholders. Not only is entrepreneurship a ubiquitous entity of the contemporary educational landscape, but it also provides the field of technical communication a way to further evidence its significance in preparing our university and college graduates for the workforce, one that necessarily values an entrepreneurial focus.

We recognize that many technical communication instructors may already conduct service-learning projects that follow a consultancy model or otherwise meet the criteria we have outlined for entrepreneurship-focused projects. In that case, we hope this piece provides them with evidence and strategies for articulating to other departments and administrators the value of this curriculum to multi-disciplinary entrepreneurship education initiatives. Other technical communication professionals may find that entrepreneurship-focused client and service-learning projects provide an engaging way to connect their pedagogies with student interests and the missions and resources of the university. And other teachers may have never before considered this relationship but may realize that entrepreneurship naturally intersects with their curriculum. A strategic commitment to seeking out opportunities to partner with entrepreneurial community organizations has numerous benefits, the scope of which we have just begun to recognize. This piece serves as a call for technical communicators to engage entrepreneurship in client and service-learning projects and to do further research on the role of entrepreneurship in and beyond the classroom.

References

Barrientos, Perla. (2003). *Community service learning and its impact on community agencies: An assessment study*. San Francisco State University Institute for Civic and Community Engagement Community Service Learning Program, i-19.

Retrieved from <http://www.sfsu.edu/~icce/downloads/pdf/CSL%20Report%20for%20Publishing_3-25-10.pdf>.

- Bhidé, Amar. (2008). A diverse entrepreneurial ecosystem. Faculty Insights: What is the entrepreneurial mindset? The Eugene Lang Entrepreneurship Center at Columbia Business School. Retrieved January 14, 2013, from <<http://www8.gsb.columbia.edu/entrepreneurship/students/resources/facultyinsights>>
- Bouelle, Tiffany. (2012). Bridging the gap between the technical communication classroom and the internship: Teaching social consciousness and real-world writing. *Journal of Technical Writing and Communication*, 42(2), 183–197.
- Bowdon, Melody, & Scott, J. Blake. (2003). *Service-learning in technical and professional communication*. Longman.
- Bushnell, Jack. (1999). A contrary view of the technical writing classroom: Notes toward future discussion. *Technical Communication Quarterly*, 8, 175–188.
- Calvert, Victoria. (2009). Enhancing small business performance and student capability through service Learning. *Indian Journal of Economics and Business*, 127–138.
- Calvert, Victoria. (2011). Service Learning to Social Entrepreneurship: A Continuum of Action Learning. *Journal of Higher Education Theory and Practice*, 11(2), 118–129
- Calvert, Victoria, & Kurji, Rafik. (2012). Service-learning in a managerial accounting course: Developing the 'soft' skills. *American Journal of Economics and Business Administration*, 4(1), 5–12.
- Calvert, Victoria, Kurji, Rafik, & Kurji, Shiraz. (2012). Service-learning in a managerial accounting course: Developing the 'soft' skills. *American Journal of Economics and Business Administration*, 4(1), 5–12.
- Clarke, Melinda M. (2000). Evaluating the community impact of service initiatives: The 3-I model. Unpublished Dissertation, Peabody College, Vanderbilt University.
- Cooke, Lynne, & Williams, Sean. (2004). Two approaches to using client projects in the college classroom. *Business Communication Quarterly*, 67(2), 139–152.
- Consortium of Entrepreneurship Education. (2004). National standards of practice for entrepreneurship education. Retrieved December 21, 2012 from <http://www.entre-ed.org/_what/stds-prac-brochure.pdf>
- Coyle, Edward J., Clement, Nancy I., & Garton-Krueger, Joy. (2007). The innovation initiative for social entrepreneurship: Fostering awareness of global social issues via entrepreneurship education. In *Proceedings of the 2007 ASEE Annual Conference and Exposition*, Honolulu, HI.
- Curtis, Dan B., Winsor, Jerry L., & Stephens, Ronald D. (1989). National preferences in business and communication education. *Communication Education*, 38(1), 6–14.
- Doheny-Farina, Stephen. (1986). Writing in An Emerging Organization: An Ethnographic Study. *Written Communication*, 3(2), 158–85.
- Doheny-Farina, Stephen. (1992). *Rhetoric, innovation, technology: Case studies of technical communication in technology transfer*. Cambridge, MA: MIT Press.

- Durack, Katherine. (2003). Observations on entrepreneurship, instructional texts, and personal interaction. *Journal of Technical Writing and Communication*, 33(2), 87–109.
- Edelman, L.F., Manolova, Tatiana S., & Brush, C. (2008). Entrepreneurship education: Correspondence between practices of nascent entrepreneurs and textbook prescriptions for success. *Academy of Management Learning and Education*, 7(1), 56–70.
- Entrepreneurialism. (2013). In *Cambridge Business English Dictionary*. Retrieved January 3, 2013, from <<http://dictionary.cambridge.org/dictionary/business-english>>
- Extreme Entrepreneurship, LLC. (2011). Creating the entrepreneurship stimulus plan. In *Future of Entrepreneurship Education Summit*. Retrieved from <<http://feesummit.com/index.php>>.
- Eyler, Janet, & Giles Jr, Dwight E. (1999). *Where's the Learning in Service-Learning? Jossey-Bass Higher and Adult Education Series*. San Francisco: Jossey-Bass, Inc.
- Eyler, Janet, Giles Jr, Dwight E., Stenson, C. M., Gray, C. J., & At, A. (2001). *At a glance: What we know about the effects of service-learning on college students, faculty, institutions and communities, 1993–2000*. Nashville, TN: Vanderbilt University.
- Flatley, Marie E. (1990). Team Presentation Skills: Essential Tools Today. In *Business Education Forum*, 45 (2), 19–21.
- Frazier, Barbara. (2012). Rural entrepreneurship teaching unit. Center for Midwest Initiatives. Retrieved January 14, 2013, from <<http://www.cmi.ruraledu.org/place-based-forum/100-rural-entrepreneurship-teaching-unit>>
- Gerber, Scott (2012, September 24). How liberal arts colleges are failing America. *The Atlantic*.
- George Mason University Center for Social Entrepreneurship. (2013). Staff. Retrieved May 30, 2013 from <http://masoninnovation.org/staff/>.
- Greene, Patricia G., Katz, Jerome A. & Johannison, Bengt (2004). Entrepreneurship education. *Academy of Management Learning and Education*, 3(3), 238–41.
- Halford, Susan, & Leonard, Pauline. (2006). Place, space and time: Contextualizing workplace subjectivities. *Organization Studies*, 27(5), 657–676.
- Godfrey, Paul C., Iles, Louise M., & Berry, Gregory R. (2005). Creating breadth in business education through service learning. *Academy of Management Learning Education*, 4(3), 309–323.
- Halford, Susan, & Leonard, Pauline. (2006). Place, space and time: Contextualizing workplace subjectivities. *Organization Studies*, 27(5), 657–676.
- Helle, Laura, Tynjälä, Päivi, & Olkinuora, Erkki. (2006). Project-based learning in post-secondary education: Theory, practice, and rubber sling shots. *Higher Education*, 51(2), 287–314.
- Henson, Leigh, & Sutliff, Kristene. (1998). A service learning approach to business and technical writing instruction. *Journal of technical writing and communication*, 28(2), 189–205.
- Heriot, Kirk C., Cook, Ron, Jones, Rita C., & Simpson, Leo. (2008). The use of student consulting projects as an active learning pedagogy: A case study in a produc-

- tion/operations management course. *Decision Sciences Journal of Innovative Education*, 6, 463–481.
- Hernandez, Sigfredo A., & Newman, Cynthia M. (2006). Minding our business: A model of service-learning in entrepreneurship education. *Journal of Entrepreneurship Education*, 9, 53–75.
- Honig, Benson. (2004). Entrepreneurship education: Toward a model of contingency-based business planning. *Academy of Management Learning and Education*, 3(3), 258–273.
- Huckin, Thomas N. (1997). Technical writing and community service. *Journal of Business and Technical Communication*, 11(1), 49–59.
- Intuit. (2007). Intuit future of small business report. Retrieved from <<http://www.intuit.com/>>
- Jackson, Denise. (2009). An international profile of industry-relevant competencies and skill gaps in modern graduates. *The international journal of management education*, 8(3), 29–58.
- Johnson Center for Entrepreneurship & Innovation, Kelley School of Business, Indiana University. (2011). Home. In *Global Consortium of Entrepreneurship Centers*. Retrieved from <<http://www.globalentrepreneurshipconsortium.org/index.cfm>>
- Johnson Center for Entrepreneurship & Innovation, Kelley School of Business, Indiana University. (2011). Research Fellows. In *Global Consortium of Entrepreneurship Centers*. Retrieved from <<http://www.globalentrepreneurshipconsortium.org/prot/research.cfm>>
- Jones, Angela Lewellyn, Warner, Beth, & Kiser, Pamela M. (2010). Service-learning and social entrepreneurship: Finding the common ground. *Partnerships: A Journal of Service Learning & Civic Engagement*, 1(2), 1–15.
- Katz, Jerome. (2003) The chronology and intellectual trajectory of American entrepreneurship education 1876–1999. *Journal of Business Venturing*, 18, 283–300.
- Kauffman Foundation. (n.d.). *Entrepreneurship in American education: A report from the Kauffman panel on entrepreneurship curriculum in higher education*. Retrieved from <http://www.kauffman.org/uploadedfiles/entrep_high_ed_report.pdf>
- Kauffman Foundation (2011). Kauffman Campuses. In *Kauffman Foundation: Education*. Retrieved from <<http://www.kauffman.org/entrepreneurship/kauffman-campuses.aspx>>
- Kenworthy, Amy L. (2010), Service-learning and negotiation: An education win-win. *Journal of Management Education*, 34, 62–87.
- Kern Entrepreneurship Education Network. (2013). About. Retrieved from <<http://www.keennetwork.com/about-keen/>>.
- Kolb, David A. and Fry, Ronald. (1975). Toward an applied theory of experiential learning. In C. Cooper (Ed.), *Theories of Group Process*. London: John Wiley.
- Knowles, Malcolm. (1980). *The modern practice of adult education: From pedagogy to andragogy*. Wilton, Connecticut: Association Press.
- Kuratko, Donald F. (2004). Entrepreneurship education in the 21st Century: From Legitimization to Leadership. A Coleman Foundation White Paper for the U.S. Association of Small Business & Entrepreneurship Conference. Retrieved from <<http://www.sbaer.uca.edu/research/usasbe/2004/pdf/01.pdf>>

- Kuratko, Donald F. (2005). The emergence of entrepreneurship education: Development, trends, and challenges. *Entrepreneurship Theory and Practice*, 29(5), 577–598.
- Lazear, Edward P. (2004). Balanced skills and entrepreneurship. *American Economic Review*, 94, 208–211.
- Leydens, Jon. (2008). Novice and insider perspectives on academic and workplace writing: toward a continuum of rhetorical awareness. *IEEE Transactions on Professional Communication*, 51(3), 242–263
- Litzky, Barrie E., Godshalk, Veronica M., & Walton-Bongers, Cynthia. (2010). Social entrepreneurship and community leadership. A service-learning model for management education. *Journal of Management Education*, 34(1), 142–162.
- Mancuso, Louis C., Alijani, Ghasem.S., Kwun, Obyung, & Smith, Larry D. (2009). Successful outcomes of teaching minority undergraduate students entrepreneurial business planning concepts using andragogy and service learning. *Academy of Entrepreneurship Proceedings*. Allied Academies International Conference. New Orleans, 33–40.
- Mara, Andrew. (2008). Ethos as market maker: The creative role of technical marketing communication in an aviation start-up. *Journal of Business and Technical Communication*, 22(4), 429–453.
- Matlay, Harry. (2006). Researching entrepreneurship and education part 2: What is entrepreneurship education and does it matter. *Education + Training*, 48(8/9), 704–718.
- Matthews, Catherine, & Zimmerman, Beverly B. (1999). Integrating service learning and technical communication: benefits and challenges. *Technical Communication Quarterly*, 8 (4), 383–404.
- McCrea, Elizabeth A. (2010). Integrating service-learning into an introduction to entrepreneurship course. *Journal of Management Education*, 34(1), 39–61.
- Messmer, Max. (1999). Skills for a new millennium. *Strategic Finance*, 81, 31–259.
- Metcalfe, Lynn E. (2010). Creating international community service learning experiences in a capstone marketing-projects course. *Journal of Marketing Education*, 34, 155–171.
- Mok, Yan Fung. (1999). Experiential learning: Functional attributes and effectiveness. *Studies in Continuing Education*, 21(1), 57–73.
- Moore, Patrick. (2004). Rethinking the idea of profit in professional communication and cultural capitalism. *Journal of Business and Technical Communication*, 18(2), 233–246.
- Myrah, Kyleen K. (2009). Using a service-learning approach to teach students about social entrepreneurship. *Entrepreneurial Practice Review*, 1, 4–23.
- New Service Learning Courses Showcase Entrepreneurship and Innovation in the English Department* (2013). Retrieved from <<http://www.english.umd.edu/news/4274>>
- Office of the Press Secretary, President Barack Obama. (2009, November). *Presidential proclamation: National entrepreneurship week*. Retrieved from <<http://www.whitehouse.gov/sites/default/files/2009entre-proc-web.pdf>>

- O'Neil, J. & Lamm, S.L. (2000). Working as a learning coach team in action learning. *New Directions for Adult & Continuing Education*, 87, 43–52.
- Pache, Anne-Claire, & Chowdhury, Imran. (2012). Social entrepreneurs as institutionally embedded entrepreneurs: Toward a new model of social entrepreneurship education. *Academy of Management Learning & Education*, 11(3), 494–510.
- Palmer, Timothy B., & Short, J. C. (2010). Getting Engaged: Factors Enhancing Perceived Student Benefits from Service-Learning in Business Education. *Journal on Excellence in College Teaching*, 21(2), 5–28.
- Peebles, Tim. (2003). *Professional writing and rhetoric: Readings from the field*. New York: Longman.
- Peña, Vanessa, Transue, Morghan, Riggieri, Alison, Shipp, Stephanie, & Van Atta, Richard. (2010). A survey of entrepreneurship education initiatives. Institute for Defense Analyses: Science and Technology Policy Institute. Alexandria, VA. Available at SSRN 1666943.
- Porter, Michael. (2007). Colleges and universities and regional economic development: A strategic perspective. Excerpted from *Forum Futures 2007, Forum for the Future of Higher Education*, 41–44.
- Princeton Review. (2011). Entrepreneurship graduate schools. In Top entrepreneurship schools. Retrieved from <<http://www.princetonreview.com/entrepreneur/>>
- Readings, Bill. (1996). *The university in ruins*. Cambridge: Harvard University Press.
- Riley, Naomi S. (2009). Giving capitalism its due: The weekend interview with Carl Schramm." *Wall Street Journal*.
- Roebuck, Deborah B., Sightler, Kevin W., & Brush, Christina C. (1995). Organizational size, company type, and position effects on the perceived importance of oral and written communication skills. *Journal of Managerial Issues*, 99–115.
- Sapp, David Allen, & Crabtree, Robbin D. (2002). A laboratory in citizenship: Service learning in the technical communication classroom. *Technical Communication Quarterly*, 11(4), 411–432.
- Schrenberg, Eric. (2012). What's an entrepreneur? The best answer ever. Inc.com. Retrieved January 14, 2013, from <<http://www.inc.com/eric-schurenberg/the-best-definition-of-entrepreneurship.html>>
- Scott, J. Blake. (2004). Rearticulating civic engagement through cultural studies and service-learning. *Technical Communication Quarterly*, 13(3), 289–306.
- Scott, J. Blake. (2008). The practice of usability: Teaching user engagement through service learning. *Technical Communication Quarterly*, 17(4), 381–412.
- Sharifi, Mohsen, McCombs, Gary B., Fraser, Linda L., & McCabe, Robert K. (2009). Structuring a competency-based accounting communication course at the graduate level. *Business Communication Quarterly*, 72(2), 177–199.
- Shay, Jeff, & Terjensen, Siri. (2005). Entrepreneurial aspirations and intentions of business students: A gendered perspective. Paper presented at the Babson Entrepreneurship Conference, Boston, MA.
- Shinnar, Rachel, Pruett, Mark, & Toney, Bryan. (2009). Entrepreneurship education: attitudes across campus. *Journal of Education for Business*, 84(3), 151–159. Amityville, NY: Baywood.

- Solomon, George T., Duffy, Susan, & Tarabishy, Ayman. (2002). The state of entrepreneurship education in the United States: A nationwide survey and analysis. *International Journal of Entrepreneurship Education*, 1(1), 65–86.
- Spartz, John M. & Weber, Ryan P. (in press). A technical communication venture in building academic-entrepreneur relations and partnerships. In Tracy Bridgford & Kirk St. Amant (Eds.), *Academy-Industry Relationships and Partnerships: Perspectives for Technical Communicators* (348–391), in progress for Baywood Publishing.
- Taylor, David W., Jones, Oswald, & Boles, Kevin. (2004). Building social capital through action learning: An insight into the entrepreneur. *Education+ training*, 46(5), 226–235.
- Thomas, Kecia M., & Landau, Harriet. (2002). Organizational development students as engaged learners and reflective practitioners: The role of service learning in teaching OD. *Organization Development Journal*, 20(3), 88–99.
- Tucker, Mary L., & McCarthy, Anne M. (2001). Presentation self-efficacy: Increasing communication skills through service-learning. *Journal of Managerial Issues*, 227–244.
- Tucker, Mary L., McCarthy, Anne M., Hoxmeier, John A., & Lenk, Margarita M. (1998). Community service learning increases communication skills across the business curriculum. *Business Communication Quarterly*, 61(2), 88–99.
- Tulgan, Bruce. (1999). Generation X: The future is now. *Entrepreneur of the Year Magazine*, 5(Fall), 42.
- U.S. Chamber of Commerce Foundation. (2012). The millennial generation research review. Retrieved April 1, 2014 from <<http://www.uschamberfoundation.org/MillennialsReport>>
- U.S. Small Business Administration. (2001). Quarterly indicators: The economy and small business. Retrieved August 5, 2005, from <<http://www.sba.gov/index.html>>
- Volkman, Christine. (2004). Entrepreneurial studies in higher education. *Higher Education in Europe*, 29, 177–185.
- Von Kotze, Astrid, & Cooper, Linda. (2000). Exploring the transformative potential of project based learning in university adult education. *Studies in the Education of Adults*, 32(2), 212–229.
- Waner, Karen K. (1995). Business communication competencies needed by employees as perceived by business faculty and business professionals. *Business Communication Quarterly*, 58(4), 51–56.
- Watson, Tony J. (2009). Entrepreneurial Action, Identity Work and the Use of Multiple Discursive Resources The Case of a Rapidly Changing Family Business. *International Small Business Journal*, 27(3), 251–274.
- Wessel, Stacy, & Godshalk, Veronica M. (2004). Why Teach Social Entrepreneurship: Enhance Learning and University-Community Relations through Service-Learning Outreach. *Journal of Higher Education Outreach and Engagement*, 9(1), 25–38.

- Wickliff, Greg. (1989). The case of the real group project. In R. Louth & A.M. Scott (Eds.), *Collaborative technical writing: Theory and practice* (31–39). Hammond, LA: ATTW.
- Yorks, Lyle, O’Neil, Judy & Marsick, Victoria J. (1999). Action learning: theoretical bases and varieties of practice. In L. Yorks, J. O’Neil & V. J. Marsick (Eds.). *Advances in developing human resources*, vol. 2 (pp. 1–18). London: Sage.
- Zidek, Lisa. (2012). Service Learning and entrepreneurship for engineers. In B. A. Nejme (Ed.). *Service-learning in the computer and information sciences: Practical applications in engineering education* (213–233). Hoboken, NJ: John Wiley & Sons.
-

Author Information

Ryan Weber is an assistant professor of English and Director of Business and Technical Writing at the University of Alabama in Huntsville. His work has appeared in *Journal of Advanced Composition*, *College Composition and Communication*, and *Journal of Business and Technical Writing*.

John M. Spartz is an assistant professor of Professional/Technical Communication and Emerging Media in the Department of English and Philosophy at the University of Wisconsin-Stout. His research draws connections between the fields of professional/technical communication and entrepreneurship, focusing on the disciplinary and pedagogical import of that relationship. His work has appeared in *The Writing Instructor* and *The Writing Center Journal* and is scheduled to appear in *Journal of Business and Technical Communication*.

Technical Communication at Missouri S&T

Challenges and Strategies

Edward A. Malone

Missouri University of Science and Technology

David Wright

Missouri University of Science and Technology

Elizabeth M. Roberson

Missouri University of Science and Technology

Abstract. This article provides an overview of technical communication programs at Missouri University of Science and Technology. In addition to describing the profile of our faculty and students, we discuss the challenges we have faced because of the newness of our degree programs, the small number of faculty and majors in our programs, and the institutional environment in which we operate. As a contribution to the Council for Programs in Technical and Scientific Communication's growing body of "program showcases," this article is intended to be another source of ideas, examples, and precedents (both positive and negative) for current and future program administrators.

Keywords. technical communication programs, curriculum, development strategies, program administration and sustainability

Missouri University of Science and Technology (Missouri S&T) has two degree programs in technical communication—a Bachelor of Science (BS) and a Master of Science (MS)—as well as several certificate and minor programs in technical writing and technical communication.¹ Located in Rolla, Missouri, a small town about 100 miles southwest of St. Louis, Missouri S&T is a well-established engineering school with several nationally ranked programs. This environment has proven to be both a blessing and a curse for our technical communication programs. The study and practice

¹ We use the term *program* to mean a set of courses and requirements leading to a degree (such as a BS or MS), certificate, or minor.

of technical communication go hand in hand with the study and practice of science and technology, especially engineering, but the strong identity of our university as an engineering school has made it difficult for non-engineering programs on campus to gain the necessary visibility and understanding to attract majors. The university's rural location has also proven to be a limiting factor in our quest for majors. Since the creation of our BS and MS programs almost ten years ago, the number of technical communication majors (BS and MS combined) has increased from 5 in the first year to a high of 30, but these numbers have not kept pace with the projections in the original proposals for the degrees. Moreover, because we are not yet graduating at least 10 undergraduate students per year, our BS program may be regarded by the state as a "low producing" program.

In other respects, Missouri S&T has strong, active undergraduate and graduate programs in technical communication. We offer more than a dozen upper-level courses on a two-year rotation (see Appendix A). Small class sizes have created close, working relationships between faculty and students and camaraderie among students. All faculty who teach in the program have doctoral degrees and active research agendas. We try to involve students in research projects that result in conference presentations or publications, and we have a record of success in this area. A growing number of our undergraduate and graduate students are finding internships with major companies around the country. After graduation, many are finding good jobs in industry and academia. In these respects, our programs have been quite productive.

We also fill several distinctive niches in technical communication instruction in our state. Other universities in Missouri offer undergraduate and graduate degrees in professional writing, written communication, and English with a concentration, track, or option in technical writing or technical communication.² Although these programs belong to the same discipline that our programs do, Missouri S&T is the only Missouri university that offers a Bachelor of Science and Master of Science in Technical Communication. Moreover, Missouri S&T is an engineering school with a long history of technical communication instruction (see Roberson, 2011), and our courses provide essential support to other majors on campus.

² Missouri State University (Springfield) offers a Bachelor of Arts in Professional Writing, a Bachelor of Science in Professional Writing, and a Master of Arts in Writing with a track in technical and professional writing. Missouri Western State University (St. Joseph) offers a Bachelor of Arts in English with a concentration in technical communication and a Master of Applied Arts in Written Communication with a technical communication option. These schools also offer undergraduate minors in technical writing and technical communication, respectively.

Although both the University of Missouri - St. Louis and Missouri S&T offer an undergraduate certificate in technical writing, our university is the only one in Missouri that offers a graduate certificate and graduate minor in technical communication. We also offer the only online graduate degree program in technical communication in the state.

In this article, we provide an overview of technical communication programs at Missouri S&T. We describe our faculty and students and discuss the major challenges we have faced because of the newness of our degree programs, the small number of faculty and majors in our programs, and the institutional environment in which we operate. As a contribution to the Council for Programs in Technical and Scientific Communication's growing body of "program showcases," this article is intended to be another source of ideas, examples, and precedents (both positive and negative) for current and future program administrators.

History: From Service Course to Degree Programs

The Missouri School of Mines and Metallurgy (MSM)—as Missouri S&T was originally called—began offering courses for students in November 1871.³ Although the curriculum focused on educating would-be engineers (mining engineers at first, civil engineers later), English was prominent in the curriculum from an early date, and, in 1913, MSM created the school's first technical writing course: English 3 Technical Writing (Roberson, 2011, pp. 17, 30). Over the next several decades, this service course changed names and numbers multiple times until it finally became English 160 Technical Writing (its current number and name).

In the 1980s, speech professor Sam Geonetta—an active member of CPTSC—attempted to create a Bachelor of Science in Technical and Scientific Communication.⁴ Although he worked for more than four years on the proposal for a degree program,⁵ he encountered many institutional obstacles, from budgetary issues to academic politics, and ultimately abandoned the project.

More than 15 years would pass before the campus was ready for a degree program in technical communication. In Fall 2000, the Dean of Arts and Sciences appointed an ad hoc committee of faculty from different departments to discuss the creation of a technical communication degree.

³ MSM became the University of Missouri-Rolla (UMR) in 1964 and Missouri S&T in 2008.

⁴ Geonetta served as CPTSC national treasurer (1984–1986), editor of the conference proceedings (1986), national vice president (1986–1988, and eventually national president (1991).

⁵ For a copy of Geonetta's proposal, see Roberson (2011), pp. 122–162.

The committee worked through several drafts of a proposal, but eventually became mired in disagreement. Thus, the English department—with the support of the dean—decided to proceed on its own. The department chair, Elizabeth Cummins, and another English professor, Larry Vonalt, drafted proposals for a Bachelor of Science and a Master of Science in Technical Communication. They were assisted by a third faculty member, Janet Zepernick, in the development of course titles and descriptions and other details.

After clearing several campus hurdles, the two proposals were sent to the Missouri Coordinating Board of Higher Education (CBHE) in Fall 2004.⁶ Anticipating favorable action at the state level, the department changed its name from the Department of English to the Department of English and Technical Communication. The CBHE approved both degrees in December 2004, and our university began offering courses under the new TCH COM designation in Fall 2005. Subsequent curricular developments included the creation of a Graduate Minor in Technical Communication (2008), an undergraduate Certificate in Technical Writing (2009), an online version of the M.S. degree (2011-2013), and an online Graduate Certificate in Technical Communication (2012).

Faculty and Students: Quality over Quantity

The low faculty-to-student ratio and the small class sizes usually translate into a quality experience for our students, permitting some personalized instruction. Missouri S&T has three tenure-line faculty members in technical communication. They are supplemented by two English faculty members who devote part of their time to the technical communication curriculum: (1) a non-tenure-track assistant teaching professor and (2) a tenure-line assistant professor who is the department's Director of Composition. All of these professors have doctoral degrees in either technical communication or English. Eight funded GTA lines cover multiple sections of two service courses: ENGL/TCH COM 65 Introduction to Technical Communication and ENGL 160 Technical Writing. With this small ensemble, we are able to offer between three and four upper-level courses (i.e., 300-level courses, which are taken by both graduate students and undergraduate juniors and seniors, and 400-level courses, which are taken by graduate students only) as well as between three and four lower-level courses (e.g., the service courses) each semester (see Appendix A). From time to time, we have hired adjuncts with special qualifications to teach individual courses. We have also hosted two visiting professors: Donald H. Cunningham and Dale L. Sullivan.

⁶ For copies of these proposals, see Roberson (2011), pp. 169-241.

Although we used to have one program director (a position that rotated every two years), we now have three co-directors: one who trains and supervises GTAs, one who focuses on recruitment and admissions, and one who oversees the online programs and maintains records and policies. For these administrative duties, each co-director receives an annual course release from his or her regular 2-2 teaching load.

Since 2005, we have produced 29 MS graduates and 17 BS graduates. Our first MS student, who began taking courses before the MS program was formally approved, graduated in Fall 2005. The first group of (five) BS students graduated in Spring 2009. Enrollments in both programs have increased gradually with a few dips since 2005 (see Table 1). Neither program, however, has reached the enrollment projections that were stated in the original proposals for the degrees. For example, the original proposal for the BS program projected 35 full- and part-time majors by AY 2009-2010 (Roberson, 2011, p. 176); we had 13. The original proposal for the MS program projected 21 full- and part-time majors by the same year (Roberson, 2011, p. 212); we had 11.

Table 1: Number of TCH COM Majors by Calendar Year⁷

Degree	BS	MS
2005	1	4
2006	5	6
2007	8	9
2008	10	6
2009	13	11
2010	18	10
2011	15	15
2012	15	13
2013	14	9

Source: Missouri S&T (2013)

We employ several methods—beyond the required coursework for the degrees—to enculturate and professionalize our students. At both the undergraduate and graduate levels, students may enroll in TCH COM 380 Internship and receive between 1 and 6 credits for working on either a paid or a volunteer basis in either industry or government. Past co-ops and

⁷ This table presents the numbers of declared BS and MS majors who were actively enrolled in courses in September of each year. In this annual census, a student with a double major is credited to the first declared major program. The MS numbers for 2012 and 2013 may include one graduate certificate student.

internships have included positions at Sprint, Monsanto, Diebold, Cummins, eClinicalWorks, Express Scripts, Micron Systems, Fort Leonard Wood, Brewer Science, and Phelps County Regional Medical Center. Faculty and students often work on research projects together, and these projects have resulted in grant proposals, posters, conference presentations, and even publications in peer-reviewed journals, such as *Technical Communication* and *Technical Communication Quarterly* (e.g., Hallier & Malone, 2012; Leslie & Northcut, 2013; Wright, Malone, Saraf, Long, Egodapitiya, & Roberson, 2011). In spring 2012, we began a student chapter of the Society for Technical Communication (STC), reportedly one of the first student chapters of STC to be formed in several years. We hope that this chapter will prepare our students for career-long participation in professional associations and activities.

Each semester, we employ between six and eight graduate students on quarter-time teaching assistantships. After a semester of training (which includes workshops, a shadowing experience, etc.), each Graduate Teaching Assistant (GTA) is given full instructional responsibility for one course per semester: either ENGL/TCH COM 65 Introduction to Technical Communication or ENGL 160 Technical Writing. ENGL/TCH COM 65 is a lower-level course intended for both majors and non-majors, especially business students. ENGL 160 is a junior-level technical communication course intended for non-majors, especially engineering students. All GTAs are closely supervised by a program director. At some point in their course of study (ideally in the first semester), these students also take a pedagogy course: TCH COM 404 The Teaching of Technical Communication. When they graduate, our GTAs have substantial teaching experience. This experience (along with their own course work) prepares them for teaching at the junior college or university level.

Curriculum: A Balance of Theory and Praxis

The architects of the BS and MS programs wanted to achieve a balance of practical and theory-based courses in the curricula of both degrees. As Vonalt explained to the dean before the creation of an MS program was planned:

[The BS] would have a thrust of practicality supported with a foundation of theory; its students would know how to perform the practical tasks of communication such as writing, speaking and designing documents that are both printed and electronic, both verbal and visual. They would also understand the concepts that

lead to the practice, so that they would be both inventive and competent problem solvers. (as cited in Roberson, 2011, p. 167)

The same philosophy underpinned the development of the complementary MS program although the 400-level (graduate only) courses were intended to be (and still are) more theory-based than the 200- and even 300- level courses.

At the undergraduate level, courses such as ENGL 281 Theory of Written Communication and TCH COM 340 Theory of Visual Technical Communication provide grounding for applied courses such as ENGL/TCH COM 240 Layout and Design and ENGL/TCH COM 260 Practicum in Technical Communication. At the graduate level, courses such as TCH COM 402 Foundations of Technical Communication and TCH COM 420 Advanced Theory of Visual Technical Communication complement courses such as TCH COM 331 Technical Editing, TCH COM 325 Help Authoring, and TCH COM 409 Web-Based Communication.⁸

Because Missouri S&T actively promotes service learning, we try to find clients for students to serve during applied courses, particularly at the undergraduate level. We have found that those students who have some exposure to theory before taking on service learning assignments are much better prepared to face the challenges of working with a “real” client who has a unique set of problems.

Bachelor of Science

If you compare the original version of the BS requirements (Appendix B) to the current version (Appendix C), you will see that the BS requirements have undergone several revisions since the degree program was created in 2005. The most significant change was made to the interdisciplinary component. The original degree program required 36 credits of specific out-of-department courses. We discovered that the specificity and number of these courses made our program less attractive to transfer students, many of whom were changing majors while in the process of changing schools. Our revision of the interdisciplinary component made it possible for transfer students to count more courses from a previous major or minor toward their new technical communication degree. Not only did this change increase the appeal of our degree program, but it also gave students more flexibility to design a course of study that was relevant to their personal interests and/or career plans.

⁸ Many of our 300-level courses—such as 331 and 325—are “dual career” courses; in other words, they fulfill requirements in both the BS and MS programs.

In 2008-2009, in response to initiatives by the State of Missouri and the University of Missouri System, we followed other programs on our campus in articulating and publicizing Student Learning Outcomes (SLOs) for our BS and MS programs. After graduating, our BS students should be able to do the following:

- demonstrate relevant technological, visual, verbal, rhetorical, cultural, and ethical literacies
- understand a range of methods of technical communication research and identify ways to study questions that arise in situations where technical communicators work
- produce documents in a variety of media that communicate technical information effectively to varied audiences
- critique and revise documents to increase their usability and effectiveness
- explain what technical communication is and argue persuasively for its value and importance

Implicit in these SLOs is the combination of theory and praxis that underpins our curriculum. To demonstrate the desired literacies, for example, the students need to be well versed in visual, verbal, rhetorical, and cultural theories—through courses such as Theory of Visual Technical Communication and Dimensions of International Technical Communication—as well as in ethics, the English language, and the tools of text production, document design, image editing, and multimedia authoring. To explain what technical communication is, students must understand the profession's history as well as the scope of the discipline's body of knowledge.

To assess the SLOs for the BS program, we administer the same test at the beginning and end of ENGL/TCH 65 Introduction to Technical Communication and again in TCH COM 385 Theory and Practice of Technical Communication (the senior capstone course for the BS). Until recently, we also required all BS majors—during their final semester of study—to prepare a portfolio of five projects (originals and revisions, with reflective prefaces) from their course of study. All three technical communication professors evaluated these portfolios. The portfolio evaluations gave us only a vague sense of whether the program-level SLOs were being achieved.

Master of Science

As shown by the comparison between the original version of the MS requirements (Appendix D) and the current version (Appendix E), the graduate curriculum has undergone significant changes since 2005. The original

MS requirements allowed a student to take two out-of-department courses and six credits of research (if writing a thesis) as part of the 30-credit minimum required for the degree. The faculty quickly realized that some students might complete the MS with only 18 credits of graduate coursework in technical communication. Thus, we revised the MS curriculum to require a sequence of ten core courses (30 credits). Now a graduate student who wishes to complete a thesis must complete six credits of TCH COM 490 Research in addition to the 30-credit minimum required for the degree. Under the current version of the MS program, the student may take other courses—for example, out-of-department courses or TCH COM 380 Internship—but not in place of the ten core courses. In spite of these changes, we are seeing an increase in the number of internships and co-ops because we are doing a better job of emphasizing their importance.

Our MS degree is offered in two versions: face-to-face and online. Both versions have the same requirements. Not many of our MS students come to us with a bachelor's degree in technical communication; they are more likely to have a degree in engineering, English, or business. Nevertheless, by the time they graduate, they should be able to do the following:

- engage with knowledge domains (e.g., research methods) relevant to doctoral study in technical communication, rhetoric, or related areas
- teach technical communication effectively and in keeping with academic best practices
- produce and edit written documents suitable for publication in professional venues
- communicate scientific and technical information for multiple audiences, including nonspecialists
- demonstrate understanding of the history of technical communication as a practice, profession, and academic discipline

We designed these SLOs around the assumption that our graduate students will follow one of three paths after graduation: pursue a doctoral degree in some discipline (not necessarily technical communication), teach technical communication in academia, or work as a technical communicator in industry or government. The first path is supported by the first SLO, the second path by the first and second SLOs, and all three paths by the third and fourth SLOs. The final SLO reflects our desire and efforts to professionalize the students and help them contribute to a strong, lasting profession.

Other Programs

The courses required in our undergraduate minor and undergraduate certificate programs are a subset of the courses required in our BS program, just as the courses required in our graduate minor and graduate certificate programs are a subset of the courses required in our MS program. (See Appendix F.) We will say more about these smaller programs later in the article.

Challenges: Visibility and Recruitment

Most of our programs' challenges have resulted from both a lack of visibility (see, for example, Leslie & Northcut, 2013) and the need to recruit more majors. Because the programs are still new, they are relatively unknown on campus, in the region in which we live, and in the larger academic community.⁹ Although Missouri S&T is a well-respected STEM school, it is less well-known for programs other than science and engineering. In fact, the school's reputation as an engineering school so precedes itself that non-engineering programs often have difficulty recruiting students. We have certainly found this to be true for the technical communication programs.

Furthermore, because Missouri S&T is located in a small town nearly 100 miles from the nearest large city, we do not have large populations of working adults to draw upon. Most students are required to move to Rolla to attend Missouri S&T. For adult students, this requirement constitutes a major commitment. Our hope is that distance programs may overcome this obstacle in time, but the distance courses are still too new for us to judge their effectiveness in this regard.

Hence, one of the biggest obstacles to recruiting has been a lack of visibility. According to Missouri S&T's Vice Provost and Dean of Enrollment Management, 76% of Missouri S&T students are majoring in some form of engineering (Laura Stoll, personal communication, 10 June 2013). The fact that the school is so dominated by one cluster of majors leads high school students, high school advisors, and parents to look elsewhere if they do not plan on studying engineering. Regional students who come to Missouri S&T are often completely unaware of the existence of our programs until after they have taken a required technical communication course.

Our problems with visibility and recruitment might be considered simple growing pains if not for one factor. In 2010, the Governor of Missouri called for a statewide review of academic programs at two- and four-year public institutions of higher learning: "We must take a hard and

⁹ Our MS program, however, was noted in a recent issue of *Nature*. See Bonetta (2011), p. 256.

unsentimental look at all academic programs, and cull those that are of low productivity, low priority, or duplicative” (MDHE, 2011, p. 104). Missouri institutions had been conducting state-mandated five-year reviews of selected programs at the campus level for about 25 years, but the Governor’s call for a statewide review of all academic programs was a response to shrinking federal funds to the state, a slow recovery of the state’s economy, and a desire to make institutions more efficient. Conducted in 2010 and 2011, the review put pressure on institutions to eliminate low-producing programs if they had already had time (i.e., five years) to demonstrate their viability (MDHE, 2011, pp. 102–103, 109, 113)

In our state, to be deemed viable after this probationary period, a bachelor’s degree program must average at least 10 graduates per year during a three-year period, while a master’s degree program must average at least 5 graduates per year during the same period (MDHE, 2011, p. 111). These productivity “thresholds” are apparently “written into” Missouri’s CBHE policy and have been used for campus-level program reviews for some years (MDHE, 2011, p. 111). For this reason, when a degree program is proposed to Missouri’s CBHE, the proposal must project the year-by-year growth of the program in number of majors and predict the date by which the program will become viable (i.e., capable of producing the required number of graduates per year). The Missouri Governor used the CBHE’s existing thresholds of 10 and 5 graduates per year (as well as 3 graduates per year for PhD programs) to determine “program productivity and viability” in the statewide review (MDHE, 2011, p. 8).

The original proposals for our BS and MS programs projected far more majors than we have been able to recruit (compare Table 1 against the tables on p. 176 and p. 212 in Roberson, 2011). The projections were based on data provided by our university’s former Dean of Enrollment Management (Roberson, 2011, p. 178). Many of the previously discussed impediments to visibility and recruitment had not been anticipated at that time. If they had been anticipated and the projections had been much lower, the degree programs might not have been approved. In the 2010-2011 statewide review, both of our programs were exempted from review because they were still in the probationary period, but we now find ourselves at the date by which our programs should be “viable” by state standards: 10 BS and 5 MS graduates per year.

In the last three calendar years (2011–2013), our MS program has graduated an average of 5 students, while our BS program has graduated an average of 2.5 students (see Table 2). Thus, our MS program has already crossed the state’s productivity threshold, and we hope to stay above this

arbitrary line for a long time. Our BS program, however, is unlikely to cross the line in the near future, and, as a “low-producing program,” it will have to be justified by other criteria. For example, one possible justification is that the “Program contains courses that support general education and/or other programs.” Another is that the “Program shares a substantial number of courses and faculty with other similar programs” (MDME, 2011, p. 144), namely our MS, certificates, and minors (MDHE, 2011, p. 114).

Our BS program is a four-year program. To graduate 10 BS students each year, we would need to attract at least 10 new full-time BS majors each year and have at least 40 full-time majors at the beginning of each academic year—and they would all have to stay with the program and graduate on time. The math becomes more complicated when part-time students are considered, but we have had very few part-time BS majors since 2005.

Table 2: Number of Graduates by Academic Year¹⁰

Degree	BS	MS
2005–2006	0	1
2006–2007	0	1
2007–2008	0	4
2008–2009	5	4
2009–2010	2	3
2010–2011	2	1
2011–2012	4	6
2012–2013	4	6
2013 (SU & FS)	0	3

Strategies for Marketing and Recruitment

In order to prosper in the current economic and political environment, we must increase the number of majors in our programs and students in our courses. Thus, we have developed the following strategies:

1. the creation and promotion of smaller (“subset”) programs, such as our undergraduate minor and graduate certificate
2. the development of online versions of courses and complete graduate programs

¹⁰ In this table, the academic year goes from summer to spring (e.g., June 2007 to May 2008). We expect three MS students and several BS students to graduate in May 2014.

3. the appointment of a co-director who is in charge of program marketing and recruitment as well as admissions
4. We will discuss each of the three strategies in turn.

Creation and Promotion of Smaller Programs

To make better use of our existing faculty and courses, we decided to create additional options for students. We started by revising the existing technical writing minor, created by the Department of English in 1991, into a five-course technical communication minor. Later, we created a four-course Certificate in Technical Writing. These undergraduate programs share courses with our BS program. On our campus, business students are required to take two or three of the courses that make up the minor and certificate; engineering students are required to take one or two of the same courses. Thus, these students can complete our undergraduate minor or certificate by taking an additional one to three courses and (as we argue) increase their own marketability for employment.

We did something similar at the graduate level: We created a graduate minor and a graduate certificate. After graduation, the same business and engineering students can add a graduate certificate in technical communication to their academic credentials. Current master's and doctoral students on campus can complete a graduate minor or certificate in a relatively short period of time. The graduate minor is administered by an interdisciplinary committee of faculty and permits at least two of the four required courses to be "technical-communication intensive" courses in other departments. Similarly, the graduate certificate allows one of the four required courses to be an out-of-department course.

We created these smaller programs to increase course enrollments and the visibility of our programs while promoting an understanding of technical communication on campus. We also hoped that they would function as "feeders" for our degree programs, and to some extent they have. These programs will not require additional resources unless the numbers of minor and certificate students increase substantially and create a need for additional sections of courses and thus more instructors. The greater variety of students in our classes has created its own pedagogical challenges and opportunities.

Development of Online Courses and Programs

In Spring 2011, the technical communication faculty responded to a funding opportunity from the University of Missouri (UM) System eLearning Initiative. Our proposal to make ten of our graduate courses—and thus all

of our graduate programs—available in completely online versions was funded (Fulps, 2011). The first two courses were ready for delivery by the beginning of Fall 2011; the remaining eight courses were developed over the next three semesters. When a class has a mix of online and face-to-face students rather than just online students, the online students join the classroom students via a webcam and software projected on a large screen in the classroom.

Our goal in creating online versions of courses was to reach students in other parts of the state (e.g., St. Louis) as well as in other states and countries. It is still too early to determine whether this goal will be achieved. So far, most of our online students have been local (campus) students who prefer to take courses online rather than come to campus. However, our first distance student—a non-traditional student who lives and works in St. Louis—will graduate from our online graduate certificate program in May 2014. We hope to have many more like him in the future.¹¹

Appointment of a Co-Director in Charge of Marketing and Recruitment

Although we rely upon personnel in the Office of Admissions and the Office of Global Learning to market our programs, one of our three program co-directors also engages in marketing and recruitment. His efforts include, but are not limited to:

- Publicizing our students' accomplishments after graduation. We have successfully placed both graduate and undergraduate students into good careers and well-established PhD programs.
- Making presentations and attending career nights at regional high schools and community colleges. Though our campus is far removed from major cities, there are many high schools and community colleges within a short distance. We hope that they may be a good source of new students.
- Contacting guidance counselors at high schools statewide. We recently identified 80 high school campuses within Missouri that currently enroll at least 1,000 students. The co-director is currently in the process of contacting a guidance counselor at each school and sending program information to them.

¹¹ At any given time, we have several undergraduate tech com minors. To date, we have had no graduate minors or undergraduate certificate students. Our first two graduate certificate students began in Spring 2012; a third joined our program in January 2014. Only one of the three is a distance (completely online) student.

- Increasing awareness of technical communication and our programs on campus. The co-director is available to make presentations in courses offered by our department and other departments on campus. He also communicates with advisors in other departments.
- Working with campus marketing and recruitment personnel. The co-director is our programs' liaison with key personnel in the offices of admissions and distance education on campus. He tries to keep our programs in their minds and coordinates their efforts with departmental needs and objectives.
- Making sure that non-majors in our courses know about our certificate and minor programs. In many cases, as part of their own degree requirements, students in business, IS&T, and engineering have already taken two or three of the courses required for a minor or certificate in technical writing/communication. They can complete the minor or certificate by taking one or two more courses, but they must be informed of this option.

Conclusion

The technical communication degree programs at Missouri S&T have grown over the last nine years in spite of the challenges of our rural location. We believe that the strategies we have developed will enable us to continue to grow although perhaps not at the speed that the state might demand.¹² In the meantime, our students benefit from small class sizes (often 10 to 15 at the 300 level and 8 to 12 at the 400 level) and easy access to the technical communication faculty. Graduate students move through the program, taking the same courses, in cohorts of 8 to 10 students. We have not yet reached the point where we have had to sacrifice quality to accommodate quantity, and we hope we never do.

Through our teaching and mentoring, we are not just preparing students for jobs; we are preparing them for careers as professionals. Our curriculum offers the combination of theory and praxis that we believe is necessary for a successful and lasting professional career. When they graduate, our BS and MS students are familiar with the history of the profession, the ethical obligations of professionals, and the benefits of professional relationships.¹³ Many of our graduate students acquire substantial

¹² In Fall 2013, for the first time in our department's history, the number of technical communication majors surpassed the number of English majors.

¹³ For a discussion of the role of historical study in our programs, see Malone and Wright (2012).

teaching experience as well as industry experience from internships and co-ops.

We are particularly proud of what our graduates have accomplished and the positions they have obtained. Not all of them are working as professional technical communicators. For example, one is a professional basketball player, another is a high school science teacher, and several are full-time parents. But the many who are working as technical communicators at companies such as Cerner, eClinicalWorks, Mallinckrodt Pharmaceuticals, Ancile Solutions, Elekta, and MathWorks have expressed satisfaction with their jobs. Their success may be the best possible PR for our programs.

References

- Bonetta, Laura. (2011, July 14). The best words in the best order: Those who prefer organizing ideas to working at the bench should consider a career in technical writing. *Nature*, pp. 255–257.
- Fulps, Linda. (2011, August 15). Online graduate programs receive funding at S&T. Missouri S&T News & Events. Retrieved from <http://news.mst.edu/2011/08/online_graduate_programs_recei/>
- Hallier, Patrica A., & Malone, Edward A. (2012). Light's "technical writing and professional status": Fifty years later. *Technical Communication Online*, 59(1), 29-31. Retrieved from <<http://techcomm.stc.org/2012/03/lights-technical-writing-and-professional-status-fifty-years-later/>>
- Leslie, Trent & Northcut, Kathryn M. (2013). A survey of awareness about technical communication programs on campus. *Programmatic Perspectives*, 5(2). Retrieved from <<http://www.cptsc.org/pp/vol5-2/leslie&northcut.pdf>>
- Malone, Edward A., & Wright, David. (2012). The role of historical study in technical communication curricula. *Programmatic Perspectives*, 4(1), 42–87. Retrieved from <<http://cptsc.org/pp/vol4-1/malone-wright.pdf>>
- MDHE. (2011, February). Statewide academic program review: Report to the governor. Missouri Department of Higher Education. Retrieved from <<http://www.dhe.mo.gov/documents/ProgramReviewSummaryReport.pdf>>
- Missouri S&T. (2013). Enrollment reports. Office of Registrar. Retrieved from <<http://registrar.mst.edu/enrollmentreports/>>
- Roberson, Elizabeth M. (2011). *The history of technical communication instruction at Missouri University of Science and Technology: The evolution of a curriculum*. M. S. thesis. Missouri S&T, Rolla, Missouri. Retrieved from <https://mospace.umsystem.edu/xmlui/bitstream/handle/10355/27384/Roberson_2011.pdf>
- Wright, David, Malone, Edward A., Saraf, Gowri G., Long, Tessa B., Egodapitiya, Irangi K., & Roberson, Elizabeth M. (2011). A history of the future: Prognostication in technical communication. *Technical Communication Quarterly*, 20(4), 443–480.

Appendix A

Rotation of TCH COM Courses

Odd Falls (e.g., Fall 2011)¹

65	Intro to Tech Com
160	Technical Writing
240	Layout and Design
281	Theory of Written Com
333	Proposal Writing
361	History of Tech Com
411	Advanced International Tech Com ²

Even Springs (e.g., Spring 2012)

65	Intro to Tech Com
160	Technical Writing
260	Tech Com Practicum
331	Technical Editing
409	Web-Based Com
420	Advanced Visual Tech Com

Even Falls (e.g., Fall 2012)

65	Intro to Tech Com
160	Technical Writing
240	Layout and Design
281	Theory of Written Com
302	Research Methods
334	Usability Studies
340	Visual Tech Com
404	Teaching of Tech Com

¹ The following courses are offered every semester: 380 Internship, 490 (Thesis) Research, and 493 Oral Defense. A few courses are in the catalog, but are not offered on a regular basis: 310/410 Seminar, 403 Theoretical Approaches, and 450 Information Management.

² Some of our courses have what we call “shadows”—a way of cross-listing a graduate course for undergraduates or vice versa. 311 International Dimensions of Technical Communication is an undergraduate-level shadow of 411. 433 Advanced Proposal Writing is a graduate-level shadow of 333. 440 Advanced Layout and Design is a graduate-level shadow of 240. We use 440 as a remedial course.

Odd Springs (e.g., Spring 2011)

- 65 Intro to Tech Com
- 160 Technical Writing
- 260 Tech Com Practicum³

- 325 Help Authoring⁴
- 385 Theory and Practice
- 402 Foundations of Tech Com

Appendix B

BS Information Sheet (c. 2007)

Bachelor of Science in Technical Communication: Degree Requirements

Specific requirements for the B.S. in Technical Communication include a minimum of 126 credit hours.

Core Courses (30 credit hours)

TCH COM 240 Layout and Design	3
TCH COM 260 Practicum in Technical Writing	3
TCH COM 302 Research Methods in Technical Communication	3
English 281 Theory of Written Communication	3
TCH COM 340 Theory of Visual Technical Communication	3
TCH COM 390 Theory and Practice of Technical Communication	3
and four courses from TCH COM electives, including English 160 and 305	12

General Education Requirements (45 credit hours)

Art 80, 85, Music 50, or Theater 90	3
English 75, 80, 102, 105, 106, or 110	3
Speech 85	3
English 20	3
TCH COM 65	3
Psychology 50	3
Biological Sciences 110, 231, 235, or 251	3
Math 4, Statistics 115, or Survey of Calculus	3
Chemistry, Geology, or Physics	3
Additional science course	3
History 175, 176, 111, or 112	3
Micro or Macro Economics 121 or 122	3
Political Science 90	3
Art History, Philosophy, Literature	6

³ The theme of this course is technical marketing communication.

⁴ The university’s course numbering system is undergoing a major revision. For example, what is now a 300-level course will be a 4000- or 5000-level course in Fall 2014.

Information Science and Technology (15 credit hours)

IST 51, Algorithms and Programming (Visual Basic)..... 3
IST 151 Introduction to Data Structures and Applications (Java) 3
IST 141 Information Systems 3
IST 211 Web Design and Development 3
IST 221, IST 233, IST 241, IST 223, or IST 243 3

Speech and Media (6 credit hours)

SP&M 181 Theory of Communication..... 3
SP&M 235, SP&M 283, or SP&M 250 3

Ethics, History, and Psychology (15 credit hours)

History 270, 274, or 275 3
Philosophy 25, 35, 212, 320, or 350 3
Psychology 212, 311,315, 372, or 374 6
Select one additional course from the above history, philosophy, and psychology courses 3

Free Electives 15

Appendix C

BS Information Sheet (2013)

Bachelor of Science in Technical Communication: Degree Requirements

Specific requirements for the B.S. in Technical Communication include a minimum of 126 credit hours.

Core Courses (33 credit hours)

TCH COM 240 Layout and Design 3
TCH COM 260 Practicum in Technical Communication 3
TCH COM 302 Research Methods in Technical Communication 3
English 281 Theory of Written Communication 3
TCH COM 340 Theory of Visual Technical Communication 3
TCH COM 385 Theory and Practice of Technical Communication 3
Five courses from TCH COM electives, including English 160 and 305 15

General Education Courses (42 credit hours)

English 75, 80, 102, 105, 106, etc. 3
Speech 85 3
English 20 3
TCH COM 65 3
Psychology 50 3
Biological Sciences 110, 231, 235, or 251 3
Math 4 3
Chemistry, Geology, or Physics 3
Math or statistics 3

Technical Communication at Missouri S&T

History 175, 176, 111, or 112	3
Micro Economics 121	3
Political Science 90	3
Humanities, Art, Theater, etc.	6

Interdisciplinary Courses (36 credit hours)

In consultation with his or her advisor, the student will select 36 hours of interdisciplinary courses from two of the disciplines listed below, with no fewer than 15 credit hours per discipline. For example, the student might choose chemistry and finance. At least 12 of the 36 hours must come from courses numbered 200 or above. The student’s course selections must be approved by the technical communication committee of the Department of English and Technical Communication.

biological sciences	finance	physics
business	one foreign language	political science
chemistry	geology	psychology
computer science	history	speech and media studies
economics	IS&T	statistics
education	management	any type of engineering
engineering management	mathematics	
English	philosophy	

Free Electives	15
-----------------------------	-----------

Appendix D

MS Information Sheet (c. 2007)

Master of Science in Technical Communication: Degree Requirements

Total credits required for graduation: 30 hours
Residency requirement: 24 hours

Master’s Degree with Thesis

minimum of 30 hours of graduate credit; at least 9 hours of 400-level courses; at least 6 hours of out-of-department courses; no more than 6 hours of 200-level out-of-department courses; at least 6 hours of TCH COM 490 Research; no more than 4 hours of special problems and seminar

Master’s Degree without Thesis

minimum of 30 hours of graduate credit; at least 9 hours of 400- level courses; at least 6 hours of out-of-department courses; no more than 6 hours of 200-level out-of-department courses; no more than 4 hours of special problems and seminar

Core Courses (9 credit hours)

TCH COM 402 Foundations of Technical Communication	3
TCH COM 411 International Technical Communication	3
TCH COM 420 Advanced Theories of Visual Technical Communication	3

Elective TCH COM Courses (Thesis: 9 credit hours; Non-Thesis: 15 credit hours)

English 302, 305, or 306	3
TCH COM 301 Special Topics	3
TCH COM 302 Research Methods in Technical Communication	3
TCH COM 331 Technical Editing	3
TCH COM 340 Theory of Visual Technical Communication	3
TCH COM 361 History of Technical Communication	3
TCH COM 380 Internship	3
TCH COM 401 Special Topics	3
TCH COM 403 Theoretical Approaches to Technical Communication	3
TCH COM 404 Teaching of Technical Communication	3
TCH COM 410 Seminar	3
TCH COM 450 Information Management.....	3

Out-of-Department Electives (6 credit hours)

For the out-of-department courses, candidates are advised to construct a module that fits their special interest—e.g., information systems, industrial organization, industrial management, global economics. After completing their course work, all candidates will present a portfolio of their work. In addition, those who select the thesis option will write a thesis; those who select the non-thesis option will take a comprehensive exam.

**Appendix E
MS Information Sheet (2013)**

Master of Science in Technical Communication: Degree Requirements

Total credits required for graduation: 30 hours

Residency requirement: 24 hours

Master’s Degree with Thesis

minimum of 30 hours of graduate credit; at least 9 hours of 400-level courses; no more than 4 hours of special problems and seminar; at least 6 hours of TCH COM 490 Research

Note: The 6 hours of TCH COM 490 do not count as part of the 30-hour minimum.

Master’s Degree without Thesis

minimum of 30 hours of graduate credit; at least 9 hours of 400-level courses; no more than 4 hours of special problems and seminar

Core Courses

TCH COM 302 Research Methods in Technical Communication

TCH COM 325 Help Authoring

TCH COM 331 Technical Editing

TCH COM 334 Usability Studies

TCH COM 361 History of Technical Communication

TCH COM 402 Foundations of Technical Communication

TCH COM 409 Web-Based Communication

TCH COM 411 International Technical Communication

TCH COM 420 Advanced Theories of Visual Technical Communication

TCH COM 433 Advanced Proposal Writing

Total: 30 Hours

In addition to their course work, those students who select the thesis option will write a thesis; those who select the non-thesis option will take a comprehensive exam. If core courses are unavailable, students will be allowed to substitute other available TCH COM courses at the department's discretion. Students may also be allowed to complete internships for credit, if approved by departmental faculty, although not necessarily in place of a required core course.

**Appendix F
Information about Other Programs**

Undergraduate Minor in Technical Communication

ENGL/TCH COM 65	Introduction to Technical Communication
ENGL/TCH COM 240	Layout and Design
ENGL/TCH COM 260	Practicum in Technical Communication
6 credits of 300-level courses with the TCH COM designation	e.g., Help Authoring, Technical Editing, History of Technical Communication

Graduate Minor in Technical Communication

Six or more credits of 300- or 400-level courses with the TCH COM designation, plus up to 6 credits of approved technical communication-intensive courses in other disciplines, for a total of 12 credits. See below for examples of acceptable courses in other disciplines.	
BIO SCI 451	Environmental Microbiology
BUS 311	Business Negotiations
ENGL 281	Theory of Written Communication
ENGL 392	Advanced Writing for Science and Engineering
GE 352	International Engineering and Design
IST 487	HCI Research Methods
MATH 209	Foundations of Mathematics
MATH 354	Mathematical Logic
MSE 422	Thermodynamics and Phase Equilibria

Undergraduate Certificate in Technical Writing

ENGL/TCH COM 65	Introduction to Technical Communication
ENGL 160	Technical Writing
ENGL/TCH COM 260	Practicum in Technical Communication
One 300-level course with the TCH COM designation	e.g., Proposal Writing, Usability Studies, International Dimensions of Technical Communication

A student pursuing the technical writing certificate may count the same courses for the technical communication minor and the certificate. A student who already has a bachelor's degree from UMR/Missouri S&T may count relevant courses from that degree (e.g., TCH COM 65) toward the technical writing certificate

Graduate Certificate in Technical Communication

ENGL/TCH COM 65	Introduction to Technical Communication
ENGL 160	Technical Writing
ENGL/TCH COM 260	Practicum in Technical Communication
One 300-level course with the TCH COM designation	e.g., Proposal Writing, Usability Studies, or International Dimensions of Technical Communication

A student pursuing the technical writing certificate may count the same courses for the technical communication minor and the certificate. A student who already has a bachelor's degree from UMR/Missouri S&T may count relevant courses from that degree (e.g., TCH COM 65) toward the technical writing certificate.

Acknowledgments

The authors would like to thank the following people who influenced the final form of this article: the editors of *Programmatic Perspectives*, Tracy Bridgeford and Kirk St. Amant; our Missouri S&T colleagues Kris Swenson, Liz Cummins, and Kathy Northcut; and the anonymous peer reviewers. We would also like to thank Lingke Meng and Melody Lloyd—both of Missouri S&T—for their assistance with archival research. Author Information

Edward A. Malone is an associate professor of technical communication at Missouri S&T. He has published articles in *Technical Communication Quarterly*, *Journal of Technical Writing and Communication*, *IEEE Transactions on Professional Communication*, *Technical Communication*, *Journal of Business and Technical Communication*, and *Programmatic Perspectives*.

David Wright is an associate professor of technical communication at Missouri S&T. He has published articles in *Technical Communication Quarterly*, *Journal of Technical Writing and Communication*, and *Programmatic Perspectives*. He is the editor of *Communication Practices in Engineering, Manufacturing, and Research for Food, Drug, and Water*, a forthcoming volume in the IEEE PCS Professional Engineering Communication Series.

Elizabeth M. Roberson is a full-time technical editor in the office of Graduate Studies at Missouri S&T. She is also an adjunct instructor of English at Southwest Bible College in Salem, Missouri. She has published an article in *Technical Com-*

munication Quarterly. Her master's thesis was a study of the history of technical communication instruction at Missouri University of Science and Technology.

Apparent Feminist Pedagogies

Interrogating Technical Rhetorics at Illinois State University

Erin A. Frost

East Carolina University

Abstract. This curriculum showcase introduces apparent feminist pedagogies and reports on their use in a technical rhetorics course at Illinois State University. I describe the exigence for apparent feminist pedagogies, which seek to recognize and make apparent to students the urgent and sometimes hidden need for feminist critique of technical texts, and I offer a theoretical rationale supporting apparent feminist pedagogies. Finally, I critically reflect on my own experience enacting one possible iteration of apparent feminist pedagogy in hopes that readers might see how such an approach can enhance the efficiency with which technical communicators (including instructors) reach diverse audiences.

Keywords. technical communication, apparent feminisms, course design, social justice, technical rhetorics, efficiency, objectivity, women, culture, resistance

This curriculum showcase introduces apparent feminist pedagogy and reports on the use of this pedagogy in a technical rhetorics course at Illinois State University. K. Alex Ilyasova (2012) suggests that the curriculum showcase should “self-critically describe a specific pedagogy that engages in the larger discourse of the field and that reflects the diversity and innovation of our curricular goals, content, structures, or approaches” (p. 138). In this essay, I engage in critical reflection on and description of a technical rhetorics course I taught with an apparent feminist approach at Illinois State University. I also make the case that apparent feminist pedagogies are an increasingly necessary part of our field’s discourses and that they stand to enhance the efficiency with which technical communicators reach diverse audiences.

In brief, apparent feminist pedagogies seek to recognize and make apparent the urgent and sometimes hidden exigencies for feminist critique of contemporary politics. Functioning at the nexus of social, ethical, politi-

cal, and practical technical communication domains (Hart-Davidson, 2001; Johnson, 1998; Miller, 1989), *apparent feminism* is a theoretical approach that emphasizes responses to social justice exigencies, invites participation from allies who do not explicitly identify as feminist but do work that complements feminist goals, and seeks to make apparent the ways in which efficient work actually depends upon the existence and input of diverse audiences. The term *technical rhetorics*, meanwhile, refers to any rhetorical assemblage that attempts to persuade a specific audience with a specialized set of knowledge (Frost & Eble, forthcoming). For example, I asked students to consider disciplinary histories—like McDowell’s (2003) history of technical communication—as examples of technical rhetorics; disciplinary histories qualify as such because they 1) address audiences who are members of specialized cultures and 2) attempt to persuade those audiences of their own perspective on the foundation of a discipline.

Exigency

During a semester when I taught an introductory technical communication course at Illinois State University, I worked with another instructor to do a peer review of instruction manuals between our students. While students in my class were reviewing sets of instructions from the other class, one found a document on how to change a tire, written explicitly for young women. She was offended by the content of the instructions because of the way she believed they constructed women as—in her words—helpless and fashion-obsessed, and she voiced her displeasure to the class.¹ Students began a discussion of why the document was or was not offensive and how it might be read differently or revised. Without really meaning to—and without me pushing them in this direction—they embarked on a smart and dynamic feminist critique. This particular discussion was one that many students later told me they found to be the most useful and productive of the course.

Although the student-scholar-trainees in this story found their own exigence for feminist inquiry, such conversations do not happen in every technical communication classroom and often would not happen at all without guidance and support from a feminist teacher. I fear that technical communication students take far too few courses that use feminisms and other critical approaches to explicitly question rhetorics of objectivity, neutrality, efficiency, and truth. This fear arises partly from my experiences

¹ In the interest of representing the student’s work as fairly as possible, the instruction manual was almost certainly a satirical or humorous piece. Regardless of the author’s intention, it did provide for an enriching discussion.

with students who arrive in the classrooms I teach in and partly from my observation that almost 15 years have passed without a collective, sustained interrogation of the relevance of feminist theory and methodology for technical communication. That is, while feminisms have been taken up in technical communication literature and a number of contemporary technical communication scholars use feminist and gender-based inquiry in their work, collective works heralding the importance of feminist theory in technical communication are things of the past and the conversations they began have not been as widely sustained as they should be. Further, the term *postfeminism*—along with other terms like *postrace*²—has arrived on the scene, despite the fact that we live in a world still bound up in the issues that feminisms were developed to critique.

My assertion that sustained, collective attention to feminisms in technical communication has fallen by the wayside in recent years is based on qualitative analysis in my dissertation project. Further, this argument is supported by Isabelle Thompson and Elizabeth Overman Smith's (2006) findings, which were reached through quantitative analysis. They surveyed the use of feminisms in technical communication journals and concluded that "technical communication scholars' interest in feminism and women's issues has declined over the past 15 years" (p. 196) though individual, isolated articles on the topic still occur. Because teaching tends to develop parallel to or in reaction to research agendas, waning interest in feminisms in technical communication scholarship over such a long period of time demands that we consider the effects on technical communication classrooms.³ Further, in a more direct reflection of the state of feminist influence on technical communication at the programmatic level, Meloncon's (2009) survey of 84 technical communication Master's programs found "intercultural/global courses are poorly represented in curriculums" (p. 144) and "Specialized Other" courses were required in only 1% of the programs surveyed (p. 142). Perhaps more tellingly, I report the statuses of these broad programs under which feminist courses might conceivably fall because feminisms simply did not come up as a relevant term in this survey data. Even given the fifteen-year gap in focused scholarship that I mention above, this lack of attention at the programmatic level is troubling.

² For a discussion of the rhetorical effects of the term *postrace*, see Haas (2012).

³ I believe this pattern is striking and further underscores the importance of reviving interest in feminisms in technical communication, particularly in classroom settings. However, I do not wish for this claim to elide the important work done by individual scholars on diversity and feminisms in technical communication. For example, Gerald Savage, Kyle Mattson, and Natalia Matveeva all have recently published work on racial and ethnic diversity in Programmatic Perspectives (Savage & Mattson, 2012; Savage & Matveeva, 2012).

Thus, rather than wait to find an opportunity to engage in feminist critique, teachers should enact apparent feminism in the classroom by creating such opportunities and making them apparent to student audiences. This is especially important in relation to technical documentation, which students too often perceive as objective, neutral, and efficient. This cultural belief in the objectivity and efficiency of technical documentation is recognizable when we encounter two characteristics in combination: 1) a document (or set of documents) that supports a hegemony and 2) popular resistance to any and all critique of said document(s). In other words, it is precisely a resistance to critique—often manifesting as apathy—of particular materials that makes those materials so important to study. As evidence of this, a number of scholars have engaged in historiographical recoveries that demonstrate how hegemonic resistances have covered over important feminist technical communication work. For example, Gail Lippincott (2003) examined Ellen Swallow Richards's rhetorical development of an ethos that allowed her to do work with her experimental food laboratory; Lee Brasseur's (2005) historiographic work on Florence Nightingale's persuasive use of rose diagrams to advocate for government reform of sanitary conditions in hospitals points out that Nightingale was a talented administrator, statistician, and technical communicator.⁴ Both discoveries demonstrate that student engagement with feminist perspectives can aid in the development of new strategies for effective technical communication for a wide range of audiences.

Following these scholars, I seek to intervene in a discipline that is profoundly masculinized in many ways and in a nation that continues to silence women. Thus, I argue that it is vital for technical communication students to engage with feminist perspectives during their training. For this reason, and many others, technical communication professionals, scholars, and teachers cannot and should not rely only on exigent circumstances to provide opportunities for talking about feminist issues. Rather, we can recognize the exigence already surrounding us by looking to public discourses and technical communications that demand a feminist presence. That exigence is easy to find; I wrote parts of this article on the eve of Texas Senator Wendy Davis' attempted filibuster of the Texas Senate, during which she was silenced because Lt. Gov. David Dewhurst considered her mention of ultrasound to be not "germane" to a bill on abortion—this, in a

⁴ See also, for example, Allen, 1994; Bosley, 1994; Brady Aschauer, 1999; Carrell, 1991; Durack, 1997; E. Flynn, 1997; E. Flynn, Savage et al., 1991; J. Flynn, 1997; Gurak & Bayer, 1994; Koerber, 2000; LaDuc & Goldrick-Jones, 1994; Lay, 1989, 1991; McDowell, 2003; Moulettes, 2007; Ross, 1994; Rothschild, 1981; Sauer, 1994.

state that legally requires pregnant people to undergo ultrasound prior to any abortion procedure (Frost, 2013). The technical rhetorics on display on the Texas Senate floor during this event would certainly be instructive for technical communication students.

Taking up apparent feminism in classroom settings involves numerous challenges, several of which I will articulate in this essay. That said, I will continue to use apparent feminist pedagogies because of the many benefits they offer to teachers of rhetoric and technical communication. Those benefits include attention to the fallacy of pedagogical objectivity, the danger of believing in the objectivity of fields of knowledge, the shifting power of the teacher and students, and the role of subjectivities in classroom dynamics as well as curriculum and course design. More specifically, apparent feminist pedagogies are efficient for students in that they encourage thinking about the subjectivity of technical documents, textual production, and embodiment and cultural memory. They support students' recognition of their own ability to intervene in unjust situations. Above all, apparent feminist pedagogies sponsor social justice work by teachers and students; a dedication to *social justice*, in this instance, means a dedication to widening our perspective and reminding ourselves that we have an obligation to work for the betterment of a community as well as the individuals in it.⁵ Because technical communication is concerned with audiences, technical communicators must also always be concerned with communities. Further, apparent feminist pedagogies involve teaching with specific concerns about the status of women, feminist identification, and rhetorics of efficiency—and also teaching students to recognize social injustice and to produce work that disrupts hegemonic rhetorics and systems.

I opened with the example that began this section as experiential knowledge pointing to the efficiency—when we consider broad and diverse audiences, as we should—of employing apparent feminist approaches in technical communication and rhetoric classrooms. However, I wish to point out that it is a story about future technical communicators engaging in job-related training and professionalization practices. It is a story that reflects upon technical communicators' dedication to serving "the public good," (Society for Technical Communication, 2012) if we look to the Society for Technical Communication's ethical principles; it is a story about technical communicators' obligations to, according to Constitution of the Association of Teachers of Technical Writing, "both the greater academic community and to the public at large" (Association of Teachers

⁵ For more on the use of the term *social justice*, see Frost (2013).

of Technical Writing, 2013). This example underscores the necessity for technical communication instructors to work toward a structured approach to incorporating feminist methodologies and social justice goals in technical communication courses and conversations by showing the value of acknowledging and incorporating feminist perspectives in technical communication training and professionalization.

Course Description, Goals, & Contexts

I first employed an apparent feminist pedagogical approach while teaching an undergraduate course focused on rhetoric and technical communication studies in Fall 2011. The present article uses that course as an example of the potential benefits of this pedagogical approach. This course, English 283: Rhetorical Theory and Applications, was listed as a rhetoric course. My specific section included a special focus on technical and professional rhetorics. Illinois State University's undergraduate major in English Studies emphasizes that students should have familiarity with three different sub-disciplines: literary and cultural studies, rhetoric and composition, and linguistics. In addition to those main areas, students also are encouraged to explore technical and professional writing, publishing studies, and creative writing. This intradisciplinary approach supports teachers who recognize and value the overlap between sub-disciplines like professional writing and rhetoric; faculty tend to emphasize that these areas of study are inextricable.

My main goals for this course were threefold. First, I wished to support and emphasize the value of the English Studies approach. Second, I wanted students to make explicit the ideological commonplaces their chosen disciplines used to create a community and simultaneously required them to adhere to for entrance into that community. Third, I was determined that students would engage with cultural studies and social justice; in so doing, they would come to a more critical understanding of what is happening—who is being marginalized—when the term *objective* is invoked. This third goal was the most explicit in the course and often served to undergird the former two goals. I used apparent feminism as an approach for critiquing rhetorics of objectivity, meaning that we often examined the roles of women in the shaping of disciplinary histories. However, in keeping with apparent feminism's dedication to goal-oriented social change, persuading students to identify as feminist was not a specific goal of the course.⁶

⁶ To be clear, I certainly did not dissuade students from identifying as feminist. Rather, I focused on convincing students they should research culturally loaded terms before identify-

To elaborate upon these interconnected goals, I purposefully designed this course to trouble the boundaries between professional and technical communication and rhetoric as an example of the ways that disciplinary boundaries should sometimes be challenged. To explain further, I intended my version of English 283, in part, as a recruiting tool for the professional writing and rhetorics curriculum at Illinois State University⁷; I also worked to make it a point of connection between the English Studies major and the English Education major. Many students who enroll in English 283 are majoring in English Education; the course is a program requirement. For English Studies majors, the course is one of four choices⁸ to fulfill one component of the program. It is especially important for future teachers to recognize the power of texts, such as study guides, curriculum guides, and rubrics, which are often heralded in their field as technical and objective.

To make the class most useful to students in Illinois State's English Education and English Studies programs simultaneously, I designed the course to educate students about the rhetorical effects of technical communication, particularly technical documents that reinscribe disciplinary conventions and histories. The course description in my syllabus informed students that the "class will have a focus on rhetorical artifacts broadly considered to be public, technical, and objective; we will focus especially on analyzing the ideologies such artifacts support." As such, the methods I used to focus this class (which I will discuss below) are applicable to any technical communication classroom; in fact, I saw this course as a technical communication course as much as a rhetoric course, even though its catalog name positions it as a rhetoric course in the university's curriculum.

My sense that students benefit from studying the development of disciplinary histories—an assertion corroborated by Edward A. Malone and David Wright (2012)—was pivotal in the design of the course. Thus, we concentrated on the gendered nature of the writing of histories, an endeavor widely understood to be professional, technical, objective, and efficient. By considering a history as a technical artifact that is subjective in scope, style, and content, students worked toward understanding the gendered nature of the writing of histories and canon formation, whether those histories and canons are about the field of rhetoric, technical communication, education, or on some other subject entirely. The course en-

ing or dis-identifying with them.

⁷ I mean this in several senses. Most of all, I hoped to recruit students into additional technical communication and rhetoric courses. I also made students aware of the value of a double major and the potential usefulness of Illinois State's Masters in Professional Writing and Rhetorics.

⁸ The other three options are Poetry, Drama, or Prose.

couraged students to engage in their own work with the tension between canonical/traditional interpretations of rhetorical history and de-centered rhetorics and rhetorical histories.

Twenty-five students enrolled in the course and twenty-four students finished the semester. Most of the students majoring in English Education had the intention of becoming teachers. All but one student (a sophomore) were juniors or seniors in Fall 2011. Only one student had ever taken a rhetoric or technical communication course before. Several students have since taken courses in technical communication and rhetoric at Illinois State.

Theoretical Rationale and Methods

English 283 builds on a foundation of interdisciplinary feminist theory. One of the most influential concepts I drew upon in designing this course was Francesca Bray's (1997) gynotechnic methodology, which involves recognizing "a technical system that produces ideas about women, and therefore about a gender system and about hierarchical relations in general" (p. 4). Because I set the course up to examine rhetorical histories as technical documents, the course design was informed by a study of historical and historiographic work on feminisms in technical communication (Allen, 1994; Barker & Zifcak, 1999; Bergvall, Sorby, & Worthen, 1994; Bernhardt, 1992; Boiarsky, Grove, Northrop, Phillips, Myers, & Earnest, 1995; Bosley, 1992, 1994; Carrell, 1991; Dragga, 1993; J. Flynn, 1997; Gurak & Bayer, 1994; J.W. Herrick, 1999; Koerber, 2000; Lay, 1991, 1993; Malone, 2010; Moulettes, 2007; Petit, 2001; Ranney, 2000; Ross, 1994; Royal, 2005; Sutcliffe, 1998; Tebeaux, 1998; Zdenek, 2007) and in rhetoric studies (Dingo, 2008; Enoch, 2005; Glenn, 1994, 1997; Lunsford, 1999; Queen, 2008). Finally, the course presupposes that students will be willing to accept the premise that technical communication is always rhetorical and thus is an appropriate focus for study for a rhetoric course.⁹ Based on my experience, the content of the course bears out this premise for students who are willing to suspend disbelief (if it exists) long enough to engage with class readings. Once students begin to understand the connections between rhetoric and technical communication, they often make connections to their own fields of study.

Building on the research cited above as well as other social-justice oriented research that privileges apparency—particularly the work of Winona

⁹ For more on technical communication's rhetorical nature, see Halloran, 1978; Johnson, 1998; Kinsella, 2005; Koerber, 2000; Kynell-Hunt & Savage, 2003, 2004; Lay, 1991; Mara & Hawk, 2010; Ornatowski, 1997; Peeples, 2003; Rude, 2004; Savage, 2004; Winsor, 1998.

LaDuke (1999) and Chandra Mohanty (1988; 2003)—I made apparent on the first day of class my personal ideological approach to teaching, which includes my identification as a feminist. I also asked students to use particular types of feminist perspectives on various assignments. My hope was to study how undergraduates understand technical and seemingly objective documents, but also how feminist rhetorical theories can help students become more critical of such documents and of the resulting effects on their lives. In doing so, my objective was also to determine pedagogical strategies that are most effective at achieving these results. I planned for students to come away from this course with greater insight into hidden ideologies. That is, I wanted students to raise questions about *why* they are tempted to look at a document and call it objective. I also wanted them to become more aware of the rhetorical methods used to mask ever-present ideological bias in technical communication. As many instructors have, I found that some students are tenacious in resisting efforts to destabilize worldviews that they consider to be neutral, objective, and efficient. Several students were resistant to many of the basic ideas about feminisms that I introduced in the course. They were especially resistant to my efforts to make the benefits of feminist perspectives apparent. As such, this study positions me well to discuss the problems that apparent feminism introduces for students in an applied setting. However, I also found that my work as an apparent feminist teacher-scholar was highly productive for some students, who were able to follow the example I modeled and make feminist values apparent in the classroom. Indeed, the resistance enacted by a minority of students often proved to be a valuable meta-text and precipitated some of the most valuable discussions in the course.

My attempts to collect data from this course focused in two main areas. First, and most importantly, I introduced a series of class discussions that often incorporated metadiscussions. For example, I would ask students to discuss a set of texts I provided (such as a study about the effect of gender on choice of career). I would then introduce a new concept or idea (like thinking about gendered patterns of communication); finally, I would ask students to use the new concept to analyze their own previous discussion (considering who spoke in the earlier discussion and why they felt compelled/comfortable to speak). I also alternated between large class discussion and small group discussions. By doing so, I tried to create a variety of different discussion spaces so that students might feel encouraged to speak at different moments. I kept a detailed journal of every class discussion throughout the semester. Second, I required ten written responses to texts and class discussions throughout the semester. These written

responses were supposed to be a productive space for those who were less comfortable speaking out loud as well as a place for more detailed reflection. My own reflections on the course draw largely from my discussion journal and from the students' reflections I was given permission to use.

Critical Reflections

Because I found instances of conflict and resistance to be the most interesting and productive parts of the course, and because I think examining these pieces might be most useful to instructors employing similar approaches, I focus my reflections here on resistance. Perhaps unsurprisingly, my application of an apparent feminist pedagogy resulted in the most overt and interesting instances of student resistance I had ever encountered in my teaching. One student was undoubtedly resistant to the idea of an instructor acknowledging bias in course design. Others were resistant to taking up feminist perspectives themselves. And still others were resistant to critically examining documents they considered to be technical, traditional, objective. I am certain, as well, that other strands of resistance occurred that I am so far unable to identify, but time and reflection might make these perspectives apparent (to me) in the future. In the meantime, I focus here on student resistance to critiquing technical, "objective" documents.

One of the patterns I found most fascinating was that the students who were resistant to critiquing technical documents—in this case, "traditional" and "objective" curricula and histories—were many of the same students who self-identified as feminists. Their resistance almost uniformly stemmed from a feeling that non-traditional courses and interpretations of history do a disservice to students by leaving out canonical works and ideas. A helpful parallel is Elizabeth Robertson and Bruce K. Martin's (2000) description of Malaysian educators' attitudes toward the concept of world Englishes: They "were more concerned to help Malay students perfect their English and catch up with the Chinese and the Indians... At issue, then, was not the purity of English language standards, but the greater success of one ethnic group over another" (p. 500). In other words, I feel that students' concern over the material effects of their own education is pragmatic, smart, and appropriate, though it introduced a problem for me as an apparent feminist instructor.

Obviously, this type of resistance is one I especially struggle with; this resistance seemingly pits social justice against students' desires to learn to navigate civil society. To help illustrate the situation, I quote at length from Susan Welsh's (2001) article on resistance theory:

Resistance theory posits an expert teacher/analyst, whose aim is to reform predictably uncritical students/clients who are about to enter into legitimate social critique—into the conversion or redemption narratives...counter-resistance in students is not, as Jay had argued, a “defense” of endangered, uncritical, and static positions (793). It is itself a critical social literacy, a complex, self-preserving, and community-preserving or community-building strategy aimed against the conditions of power under which public dialogue has been constrained. (p. 561)

Here, Welsh frames student resistance as “counter-resistance” to the resistant/critical dialogue already introduced by the instructor. She highlights some of the potentially productive purposes of this counter-resistance. She also hints at the underlying social function of student resistance to critical dialogues: to reify hegemony. Peter Mayo (2005), drawing on Antonio Gramsci (1971), said “hegemony entails the education of individuals and groups in order to secure consent to the dominant group’s agenda” (p. 67). By the time they reach college, students have been educated for years to support hegemony. Asking them to be critical of or resistant to hegemony is an understandably challenging prospect. Mayo goes on to suggest that Gramsci’s *war of position*,¹⁰ which involves being both embedded in and actively working against hegemony, as a useful approach to university education:

Civil society institutions such as universities are not monolithic. Rather, they are sites of contestation in that they serve to cement the present hegemonic arrangements while containing pockets wherein these arrangements can be contested. Such contestation or counter-hegemonic action constitutes a “war of position” waged primarily by cultural workers/educators acting as organic intellectuals with an ethical commitment to the subordinate groups whose interests and cultures they seek to promote. (p. 79)

By taking up Gramsci’s war of position, I seek to position myself as an instructor whose goal is to help students recognize increased possibilities for *efficiently* navigating civil society, which requires simultaneously supporting social justice. Jacqueline Jones Royster and Jean C. Williams (2000) suggested “that the direction for action begins with an attitude of resistance to the officializing effects of our master

¹⁰ Like many feminists, I am generally hesitant to use war metaphors in my work. However, in this case, I find that Gramsci’s war of position does not call a war into being or encourage engagement in metaphorical combat; rather it acknowledges the existence of a pre-existing struggle and creates space for me to take up a position of embedded and active resistance.

narratives and with a commitment to action” (p. 135). As a teacher-scholar constantly revising her apparent feminist pedagogy, it may be more useful for me right now to imagine that the direction for action begins with developing in students the ability to critically recognize the effects of master narratives and to engage in resistance when they feel ethically compelled to do so.

In discussing resistance to feminist pedagogies in technical communication and rhetorics, it may also be helpful to talk about some specific contexts of resistance. Near the end of October 2011, I asked students to begin thinking about different types of feminisms rather than seeing the F-word as a monolith (Bauer, 1990). I also set up a discussion intended to help students see the inherent ideologically biased nature of course design. To this end, I provided students with two syllabi for an American Literature course. The syllabi were identical except that the required readings for one were all by male authors and the required readings for the other were all by female authors. After examining the documents, students determined that the syllabus with the female reading list would generally be called something like “Women in Literature” rather than being credited as a general “American Literature” course. I distilled the following main themes from the discussion that followed: a) Some students, who had been in explicitly feminist courses before, came away angry at being “forced” to engage with feminist perspectives; b) Most students seemed to struggle with the idea that the canon is also biased and operates from a specific kind of perspective; however, some students did understand this and introduced ways for students to intervene when being taught only canonical texts; and c) A few students made connections with rhetorical theory in their discussion of the place of “-isms” in the classroom.

Even though this discussion was characterized in some ways by students protesting that they should “have a voice” and not be “forced to deal with” feminist issues, the conversation was also noteworthy because a female student, Sydney,¹¹ explicitly told a male student, James—with considerable heat—that he was being “anti-feminist” when he said that the canon was “objectively more important.” I intervened in the conversation at that point. Quintillian (1987) asked, in one of the pieces we read for this course, “Shall a pupil, if he commits faults in declaiming, be corrected before the rest, and will it not be more serviceable to him to correct the speech of another?” (p. 109). Partially because of this reading, I later sent

¹¹ All student names are pseudonyms. The study received Institutional Review Board approval (protocol 2011-0177) from Illinois State University.

Sydney an e-mail thanking her for her participation and for intervening in male-dominated discussions. I also asked her to remember to consider the effects of her rhetoric on the men she is trying to persuade. Now, much later, I wonder if I might have put this Quintillian quote to action better by allowing Sydney to correct James, rather than taking it upon myself to correct her. In hindsight, I regret my intervention. Sydney had a valid point, and I should have allowed her and James to have a discussion, even if it was a heated, uncomfortable one. Such a discussion could have been a lesson to the rest of the class, including me. My apparent feminist curriculum design and pedagogy created the space into which Sydney asserted her identity as a feminist, her feminist apparency, her resistance to traditional and objective technical artifacts like histories and curricula; my apparent feminist classroom management should have supported her use of that space.

Later in the class, after reading Plato's *Menexenus* (Jowett, 1953) and Cheryl Glenn's (1994) "Sex, Lies, and Manuscript: Refiguring Aspasia in the History of Rhetoric," James raised the possibility that Aspasia might not have really existed. Several students, all males, picked up on my argument that we have no primary sources from Socrates; that is, we have no technical documentation of his existence. Yet no one was suggesting he might not be real. Students argued that there is much more secondary textual evidence for Socrates' existence than for Aspasia's. However, they were unable to name or discuss these secondary sources. At that point, I suggested that they were drawing on a particular and biased set of cultural memories. We discussed the inclusion of cultural memories versus written histories as technical documents that we feel allegiance to and problematized our own methods for choosing one to sponsor our values over the other. Nevertheless, these students continued to express resistance to the idea of Aspasia being "real" in their later written responses; some students displayed a quite literal inability to hear my teaching on this subject. For example, despite his explicit valuing of open-mindedness and general intellectual flexibility, Marc was determined throughout the class that "We do not know if Socrates simply made [Aspasia] up." Although he said similar things out loud in class and I told him that our reading was by Plato and that we have no primary work from Socrates, he seemed unable to transcend the idea that Socrates and Plato are "real" and that Aspasia might not be.¹²

¹² However, he was able to engage with the idea of rhetorical effect being more important for our purposes: "If [Aspasia] is taught simply as an idea, similar to the way Mulan (the oriental female warrior) is taught, it can be quite effective" (Marc, in a weekly written response). Marc was tapping into an understanding that we can recognize important rhetorical effects on culture and history even when elements of the rhetorical situation in question (up to

Meanwhile, and to my surprise, every woman in the class indicated that Aspasia was an important part of rhetorical history and that her absence from many modern technical documents, such as textbooks, course syllabi, or university curricula, was unacceptable and inefficient for female students.¹³ For example, Florence wrote in a weekly written response that “teaching Aspasia would broaden the history of rhetoric....Before I knew anything about Aspasia, I felt that the art of rhetoric was very sexist.” Suzanne said, “It shouldn’t matter if she existed or not because she was written about. ...[O]ther great rhetors, including Plato, Socrates, and even Aristotle are thought of by some to never have existed—this does not mean that classrooms stopped teaching their works and influence within history and the rhetorical sphere.” Women also revised their responses in order to react to the class discussions. June took particular issue with the men in the class who questioned Aspasia’s existence while putting Socrates on a pedestal, saying that our beliefs in this regard are a product of our educations and the technical documents we value; they arise “because we are taught in a fashion that implies that Socrates was indeed a real figure in ancient Greece” and also in a way that elevates him to the status of cultural hero. Christina, in particular, offered a nuanced exploration of Aspasia’s place in modern rhetoric courses and the effects of historical technical documentation. I include here a lengthy passage from her response:

Although there is some debate as to whether or not Aspasia actually existed, I think that the concept behind Aspasia and her teachings is what actually matters in teaching a rhetoric class. Moreover, I strongly believe that the only reason why Aspasia was never well-documented and could potentially be seen as a fictional character is because of the fact that she is not a man, but a woman. On a different note, when trying to establish a positive and credible ethos as a teacher, I can understand why one might not teach Aspasia due to the lack of information that is documented in regards to her....I feel that Aspasia, or the stories of Aspasia, should be taught in a rhetoric class for the sake of gender equality. The teachings of Aspasia allow courses such as English 283 to incorporate theories

and including the rhetor herself) were/are not “real”; some examples of this phenomenon that we discussed in class include Marie Antoinette’s famous line “let them eat cake,” Marc Antony’s (via Shakespeare) “Friends, Romans, countrymen” speech, and the existence of Tom Sawyer’s boyhood home in Hannibal, Mo., to name just a few.

¹³ I make this statement based on the women students’ oral and written responses.

and concepts from both men and women.

Christina goes on to say that she struggled with one of the weekly responses that required feminist analysis, and that she might have been better equipped to handle this response if we had read *Aspasia* earlier in the semester or if she had ever had a teacher prior to our class who made feminisms apparent as a valid epistemological perspective.

Also of interest in Christina's response is her clear acknowledgement that teachers who explicitly engage in feminist teaching in technical communication and rhetoric courses will likely damage their ethos with their students. My explicit engagement of feminist perspectives was one of the few critiques students offered in their anonymous evaluation of the course; one student stated that feminism is a "flawed worldview," with no further explanation about the implications for the class experience. I also have often found that my desire to work through complicated rhetorical issues with students, rather than insisting on a predetermined outcome or a technical and objective answer, results in student challenges to my expertise. Although Shari Stenberg (2005) values this, suggesting that the scholar-teacher challenges "the conflation of good teaching with 'technical expertise,'" (p. 37) it is nevertheless a problematic subject position for an instructor whose bodily apparency is similar to mine.

The particular contexts of resistance discussed above are the ones that have demanded the majority of my energy as I have revised my course design in subsequent semesters. I was especially interested in students' perceptions of the importance (or lack thereof) of feminisms in the classroom and their feelings that such ideologies are unjustly forced upon them; I was also intrigued by the ways in which discussion and written responses helped me develop a more nuanced understanding of how individual students understood their own subject positions and the subject positions of others. While these triangulated data points were helpful, I am also very aware that many facets of the experience are not apparent to me even now because of my own cultural situatedness.

Further, the limitations I am able to understand are considerable. I am aware that my self-identification as a feminist on the first day of class affected possible learning opportunities in the course. This highlights one major limitation of apparent feminist pedagogies: the format of traditional courses confines the timing of making one's feminism apparent. That is, I have learned that the timing of making my feminism apparent, particularly when I am in a position of some power, can greatly increase my persuasive influence. However, traditional university semesters run for about 16 weeks. While I have revised the timing of when I self-identify as a feminist to stu-

dents in the courses I've taught in recent semesters,¹⁴ this time limit means that I sometimes have to force the issue. The perfect kairotic moment to introduce my feminist positionality may simply not occur in 16 weeks.

Indeed, I found that even for students willing to do difficult intellectual work, it often takes more than one semester to be able to think of the terms *feminism*, *technical*, *efficient*, and *objective* as similarly situated and mutually contextual. For example, the following two statements come from some late-semester work written by two female students who had been particularly willing to intervene in male-dominated conversations throughout the semester. All emphasis is mine.

- "We have become so accustomed to only viewing the male point of view that, *although I am not a feminist by any means*, I fear people today believe the woman's perspective in this field is less valuable because they have never before been brought to our attention or taught in our classes" (Rory).
- "As a female, *I don't consider myself to be much of a feminist*. It doesn't really bother me when I am asked to do domestic things or when men hold doors open for me and offer me their arm. However, I am aware of the inequality that exists between the genders and can be aware of the anti-feminist or feminist concepts and languages that can be uncovered in texts" (Natalie).

I was surprised by these responses. These women were explicitly moving to narrate themselves in a particular way—as *women but not feminists*. They were certainly reacting to a) the presence of a woman in authority who self-identified as a feminist and b) the failure/refusal of that woman to create a resistance-free classroom space.¹⁵ These women saw the troubles I brought upon myself by being "out" as a feminist, and although they both verbally espoused ideas and beliefs aligned with postmodern and apparent feminisms throughout the course, they sought to avoid labeling themselves as feminists.

Finally, a significant limitation of apparent feminist pedagogies is precisely the concern that my students often articulated about being "forced"

¹⁴ I usually wait to explicitly identify myself as a feminist until we have time to problematize the term *feminism* and our reactions to it. I am tactical about the ways I self-identify, the frequency with which I do so, and the related work I assign. I maintain my dedication to feminist apperency, but I am more careful in managing the ways in which I allow that apperency to manifest in the classroom.

¹⁵ To be clear, I do not consider a safe or resistance-free classroom space to be a goal of my teaching, but I do recognize that students might be invested in these concepts as evidence of "good" teaching.

to think about particular subjects. In reaction to these complaints being directed at other instructors, I designed an end-of-semester project that allowed students in Fall 2011 to examine their choice of text using their choice of rhetorical theory or theories. Despite the obvious focus of the class, only two students out of twenty-four completed final projects that explicitly engaged with feminism as a major organizing principle. Further, several students displayed a marked difficulty in identifying a topic narrow enough for rhetorical analysis; some struggled to tie a topic they chose based on personal interest back to the course. In subsequent semesters, I have significantly revised the final project to make attention to feminisms more apparent. For example, in Spring 2012, I asked students to create some sort of technical document that shows major events or people in the history of rhetoric. The exact format of the document is left up to the individual student. As part of the project, I encouraged them to imagine apparent feminist ways of subverting or critiquing the traditional linear timeline model that many students immediately planned to utilize; for example, one student created a web that placed Sappho in a central position and attempted to map her rhetorical effects on other scholars. Students were required to justify the choices they made on this timeline. This project prompt yielded much stronger results than the previous semesters' more open-ended prompt.

I will certainly continue to find new challenges, obstacles, and limitations to apparent feminism as a pedagogical approach, in addition to those discussed above. However, I offer this Curriculum Showcase precisely because of the enormous benefits this approach also offers. To review, those benefits include attention to the fallacy of pedagogical objectivity, the danger of believing in the objectivity of fields of knowledge, the shifting power of the teacher and students, and the role of subjectivities in classroom dynamics as well as curriculum and course design. Perhaps most importantly, taking up apparent feminist pedagogies in technical communication classrooms provides a way for students to increase their understanding of the permeable nature of disciplinary boundaries, while encouraging them to re-examine hegemonic technical rhetorics that are often difficult to challenge.

References

- Allen, Joe. (1994). Women and authority in business/technical communication: An analysis of writing features, methods, and strategies. *Technical Communication Quarterly*, 3(3), 271–292.

- Association of Teachers of Technical Writing. (2013). ATTW Constitution. Retrieved from <http://www.attw.org/about-attw/constitution>
- Barker, Randolph T., & Zifcak, Lisa. (1999). Communication and gender in workplace 2000: Creating a contextually-based integrated paradigm. *Journal of Technical Writing and Communication*, 29(4), 335–347.
- Bauer, Dale M. (1990). The other 'F' word: The feminist in the classroom. *College English*, 52(4), 385–396.
- Bergvall, Victoria L., Sorby, Sheryl A., & Worthen, James B. (1994). Thawing the freezing climate for women in engineering education: Views from both sides of the desk. *Journal of Women and Minorities in Science and Engineering*, 1(4), 323–346.
- Bernhardt, Stephen A. (1992) The design of sexism: The case of an army maintenance manual. *IEEE Transactions on Professional Communication*, 35(4), 217–221.
- Boiarsky, Carolyn, Grove, Laurel K., Northrop, Barbara A., Phillips, Marianne T., Myers, Felicity, & Earnest, Patricia. (1995). Women in technical/scientific professions: Results of two national surveys. *IEEE Transactions on Professional Communication*, 38(2), 68–76.
- Bosley, Deborah S. (1992) Gender and visual communication: Toward a feminist theory of design. *IEEE Transactions on Professional Communication*, 35(4), 222–229.
- Bosley, Deborah S. (1994). Feminist theory, audience analysis, and verbal and visual representation in a technical communication writing task. *Technical Communication Quarterly*, 3(3), 293–307.
- Brady Aschauer, Ann. (1999). Tinkering with technological skill: An examination of the gendered uses of technologies. *Computers and Composition*, 16(1), 7–23.
- Brasseur, Lee. (2005). Florence Nightingale's visual rhetoric in the rose diagrams. *Technical Communication Quarterly*, 14(2), 161–182.
- Carrell, David. (1991). Gender scripts in professional writing textbooks. *Journal of Business and Technical Communication*, 5(4), 463–68.
- Dingo, Rebecca. (2008). Linking transnational logics: A feminist rhetorical analysis of public policy networks. *College English*, 70(5), 490–505.
- Durack, Katherine T. (1997). Gender, technology, and the history of technical communication. *Technical Communication Quarterly*, 6(3), 249–260.
- Dragga, Sam. (1993). Women and the profession of technical writing: Social and economic influences and implications. *Journal of Business and Technical Communication*, 7(3), 312–321.
- Enoch, Jessica. (2005). Survival stories: Feminist historiographic approaches to Chicana rhetorics of sterilization abuse. *Rhetoric Society Quarterly*, 35(3), 5–30.
- Flynn, Elizabeth A. (1997). Emergent feminist technical communication. *Technical Communication Quarterly*, 6(3), 313–320.
- Flynn, Elizabeth A., Savage, Gerald, Penti, Marsha, Brown, Carol, & Watke, Sarah. (1991). Gender and modes of collaboration in a chemical engineering design course. *Journal of Business and Technical Communication*, 5(4), 444–462.
- Flynn, John F. (1997). Toward a feminist historiography of technical communication. *Technical Communication Quarterly*, 6(3), 321–329.

- Frost, Erin. A. (2013). *Theorizing an apparent feminism in technical communication*. (Unpublished doctoral dissertation). Illinois State University, Normal, IL.
- Frost, Erin. A., & Eble, Michelle F. (2014). *Technical Rhetorics*. Unpublished manuscript.
- Glenn, Cheryl. (1994). Sex, lies, and manuscript: Refiguring Aspasia in the history of rhetoric. *College Composition and Communication*, 45(2), 180–199.
- Glenn, Cheryl. (1997). *Rhetoric retold: Regendering the tradition from Antiquity through the Renaissance*. Carbondale: Southern Illinois University Press.
- Gramsci, Antonio. (1971). *Selections from the prison notebooks* (Q. Hoare & G. Nowell-Smith, eds. & trans.). New York: International Publishers.
- Gurak, Laura. J., & Bayer, Nancy. L. (1994). Making gender visible: Extending feminist critiques of technology to technical communication. *Technical Communication Quarterly*, 3(3), 257–270.
- Haas, Angela M. (2012). Race, rhetoric, & technology: A case study of decolonial technical communication theory, methodology & pedagogy. *Journal of Business and Technical Communication*, 26(3), 277–310.
- Halloran, S. Michael. (1978). Technical writing and the rhetoric of science. *Journal of Technical Writing and Communication*, 8(2), 77–88.
- Hart-Davidson, William. (2001). On writing, technical communication, and information technology: The core competencies of technical communication. *Technical Communication*, 48(2), 145–155.
- Herrick, Jeanne W. (1999). “and then she said”: Office stories and what they tell us about gender in the workplace. *Journal of Business and Technical Communication*, 13(3), 274–296.
- Ilyasova, K. Alex. (2012). An editorial introduction: A new curriculum showcase section for *Programmatic Perspectives*. *Programmatic Perspectives*, 4(1), 136–142.
- Johnson, Robert R. (1998). *User-centered technology: A rhetorical theory for computers and other mundane artifacts*. Albany, NY: SUNY Press.
- Jowett, Benjam. (Trans.). (1953). *The Dialogues of Plato* (4th ed., Vol. 1). London: Oxford University Press.
- Kinsella, William J. (2005). Rhetoric, action, and agency in institutionalized science and technology. *Technical Communication Quarterly*, 14(3), 303–310.
- Koerber, Amy (2000). Toward a feminist rhetoric of technology. *Journal of Business and Technical Communication*, 14(1), 58–73.
- Kynell-Hunt, Teresa, & Savage, Gerald J. (Eds.). (2003). *Power and legitimacy in technical communication: The historical and contemporary struggle for professional status* (Vol. I). Amityville, NY: Baywood.
- Kynell-Hunt, Teresa, & Savage, Gerald J. (2004). *Power and legitimacy in technical communication: Strategies for professional status* (Vol II). Amityville, NY: Baywood.
- LaDuc, Linda, & Goldrick-Jones, Amanda. (1994). The critical eye, the gendered lens, and “situated” insights—feminist contributions to professional communication. *Technical Communication Quarterly*, 3(3), 245–256.
- LaDuke, Winona. (1999). *All our relations: Native struggles for land and life*. Cambridge, MA: South End.

- Lay, Mary M. (1989). Interpersonal conflict in collaborative writing: What we can learn from gender studies. *Journal of Business and Technical Communication*, 3(2), 5–28.
- Lay, Mary M. (1991). Feminist theory and the redefinition of technical communication. *Journal of Business and Technical Communication*, 5(4), 348–370.
- Lay, Mary M. (1993). Gender studies: Implications for the professional communication classroom. In N. R. Blyler & C. Thralls (Eds.), *Professional communication: The social perspective* (pp. 215–229). Newbury Park, CA: Sage.
- Lippincott, Gail. (2003). Rhetorical chemistry: Negotiating gendered audiences in nineteenth-century nutrition studies. *Journal of Business and Technical Communication*, 17(1), 10–49.
- Lunsford, Andrea A. (1999). Rhetoric, feminism, and the politics of textual ownership. *College English*, 61(5), 529–544.
- Malone, Edward A. (2010). Chrysler's 'most beautiful engineer': Lucille J. Pieti in the pillory of fame. *Technical Communication Quarterly*, 19(2), 144–183.
- Malone, Edward A., & Wright, David. (2012). The role of historical study in technical communication curricula. *Programmatic Perspectives*, 4(1), 42–87.
- Mara, Andrew, & Hawk, Byron. (2010). Posthuman rhetorics and technical communication. *Technical Communication Quarterly*, 19(1), 1–10.
- Mayo, Peter. (2005). "In and against the state": Gramsci, war of position, and adult education. *Journal for Critical Education Policy Studies*, 3(2), 65–90.
- McDowell, Earl E. (2003). *Tracing the history of technical communication from 1850–2000: Plus a series of survey studies*. United States Department of Education: Educational Resources Information Center.
- Meloncon, Lisa. (2009). Master's Programs in Technical Communication: A Current Overview. *Technical Communication*, 56(2), 137–148.
- Mohanty, Chandra T. (1988). Under Western eyes: Feminist scholarship and colonial discourses. *Feminist Review*, 30, 61–88.
- Mohanty, Chandra T. (2003). 'Under Western eyes' revisited: Feminist solidarity through anticapitalist struggles. *Signs: Journal of Women in Culture and Society*, 28(2), 499–535.
- Moulettes, Agneta. (2007). The absence of women's voices in Hofstede's cultural consequences: A postcolonial reading. *Women in Management Review*, 22(6), 443–455.
- Miller, Carolyn R. (1989). What's practical about technical writing? In B. E. Fearing & W. K. Sparrow (Eds.), *Technical writing: Theory and practice* (pp. 14–24). New York: NY: MLA.
- Ornatowski, Cezar M. (1997). Technical communication and rhetoric. In K. Staples & C. Ornatowski (Eds.), *Foundations for teaching technical communication: Theory, practice, and program design* (pp. 31–51). Greenwich, CT: Ablex.
- Peeples, Tim. (Ed.). (2003). *Professional writing and rhetoric: Readings from the field*. New York: Addison Wesley Educational Publishers.
- Petit, Angela, (2001). Domestic, virtuous women: Examining women's place in a public environmental debate along Louisiana's cancer corridor. *Technical Communication Quarterly*, 10(4), 365–386.

- Queen, Mary.(2008). Transnational feminist rhetorics in a digital world. *College English*, 70(5), 471-489.
- Quintilian. (1987). *Quintilian on the teaching of speaking and writing: Translations from books one, two, and ten of the Institutio Oratoria*. (J. J. Murphy, Trans.). Carbondale: Southern Illinois University Press.
- Ranney, Frances J. (2000). Beyond Foucault: Toward a user-centered approach to sexual harassment policy. *Technical Communication Quarterly*, 9(1), 9–28.
- Robertson, Elizabeth, & Martin, Bruce K. (2000). Culture as catalyst and constraint: Toward a new perspective on difference. *College English*, 62(4), 492–510.
- Ross, Susan M. (1994). A feminist perspective on technical communicative action: Exploring how alternative worldviews affect environmental remediation efforts. *Technical Communication Quarterly*, 3(3), 325–342.
- Rothschild, Joan A. (1981). A feminist perspective on technology and the future. *Women's Studies International Quarterly*, 4(1), 65-74.
- Royal, Cindy (2005). A meta-analysis of journal articles intersecting issues of Internet and gender. *Journal of Technical Writing and Communication*, 35(4), 403–429.
- Royster, Jacqueline J., & Williams, Jean C. (2000). Reading past resistance: A response to Valerie Balester. *College Composition and Communication*, 52(1), 133–142.
- Rude, Carolyn D. (2004). Toward an expanded concept of rhetorical delivery: The uses of reports in public policy debates. *Technical Communication Quarterly*, 13(3), 271–288.
- Sauer, Beverly A. (1994). Sexual dynamics of the profession: Articulating the écriture masculine of science and technology. *Technical Communication Quarterly*, 3(3), 309–23.
- Savage, Gerald J. (2004). Tricksters, fools, and sophists: Technical communication as postmodern rhetoric. In T. Kynell-Hunt & G. J. Savage (Eds.), *Power and legitimacy in technical communication: Strategies for professional status* (Vol. Two, pp. 167–193). Amityville, NY: Baywood.
- Savage, Gerald J., & Mattson, Kyle. (2012). Perceptions of racial and ethnic diversity in technical communication programs. *Programmatic Perspectives*, 3(1), 5–57.
- Savage, Gerald J., & Matveeva, Natalia (2012). Toward racial and ethnic diversity in technical communication programs: A study of technical communication in Historically Black Colleges and Universities and Tribal Colleges and Universities in the United States. *Programmatic Perspectives*, 3(1), 58–85.
- Society for Technical Communication. (2012). Ethical Principles. Retrieved from <http://www.stc.org/about-stc/the-profession-all-about-technical-communication/ethical-principles>
- Stenberg, Shari J. (2005). *Professing and pedagogy: Learning the teaching of English*. Urbana, IL: National Council of Teachers of English.
- Sutcliffe, Rebecca J. (1998). Feminizing the professional: The government reports of Flora Annie Steel. *Technical Communication Quarterly*, 7(2), 153–173.
- Tebeaux, Elizabeth (1998). The voices of English women technical writers, 1641–1700: Imprints in the evolution of modern English prose style. *Technical Communication Quarterly*, 7(2), 125–152.

- Thompson, Isabelle & Overman Smith, Elizabeth (2006). Women and feminism in technical communication—an update. *Journal of Technical Writing and Communication*, 36(2), 183–199.
- Welsh, S. (2001). Resistance theory and illegitimate reproduction. *College Composition and Communication*, 52(4), 553–573.
- Winsor, Dorothy A. (1998). Rhetorical practices in technical work. *Journal of Business and Technical Communication*, 12(3), 343–370.
- Zdenek, Sean (2007). “Just roll your mouse over me”: Designing virtual women for customer service on the Web. *Technical Communication Quarterly*, 16(4), 397–430.

Syllabus for English 283: Rhetorical Theory and Applications

Course Description

English 283: Rhetorical Theory and Application is a critical examination of the nature and historical development of rhetorical theory and its applications to contemporary discourses. The course is designed as an introduction to rhetoric, a field with both classical origins and important modern applications. Rhetoric—though it can’t really be defined in so few words—is the art of persuasive communication. In this class, we will study how we can shape language to our own benefit, but we also will examine how language, in turn, shapes our lives. This class will have a focus on rhetorical artifacts broadly considered to be public, technical, and objective; we will focus especially on analyzing the ideologies such artifacts support. In doing so, we will devote significant time to rhetorics that you might recognize as examples of *technical communication*, and we will explore this related field.

Required Materials

Ancient Rhetorics for Contemporary Students. 4th ed. ISBN: 978-0205574438
Ability to print a minimum of 400 black-and-white pages
Internet access

Required Readings (PDFs will be provided)

- Augustine. (2011, September 7) Augustine, on Christian doctrine, book IV. *Georgetown University: Web Hosting*. Retrieved from <http://www9.georgetown.edu/faculty/jod/augustine/ddc4.html>
- Bitzer, Lloyd F. (1968). The rhetorical situation. *Philosophy and Rhetoric* 1(1), 1–14.
- Dragga, Sam, & Voss, Dan. (2001). Cruel pies: The inhumanity of technical illustrations. *Technical Communication*, 48(3), 265–274.
- Glenn, Cheryl. (1994). Sex, lies, and manuscript: Refiguring Aspasia in the history of rhetoric. *College Composition and Communication*, 45(2), 180–199.

Half-baked pies, cruel cover, and anecdotal accuracy. (2002). *Technical Communication*, 49(1), 9.

Herrick, James A. (2009). Contemporary rhetoric II: Rhetoric as equipment for living. In *The history and theory of rhetoric: An introduction*. (pp. 224–246). Boston: Pearson/Allyn & Bacon.

Jowett, Benjamin (Trans.). (1953). *The Dialogues of Plato* (4th ed., Vol. 1). London: Oxford University Press.

O'Linder, Douglas (n.d.). *The trials of Oscar Wilde*. Retrieved from <http://law2.umkc.edu/faculty/projects/ftrials/wilde/wilde.htm>

*Additional readings as deemed necessary

Grades

Grades will be rendered on a straight scale. (A 90 percent and above is an A, 80 percent and above is a B, etc.) Students who fulfill requirements will earn Cs; higher grades require extra and exceptional effort.

Participation – 100 points

Weekly Responses – 200 points

Midterm Exam – 200 points

Final Project & Presentation – 300 points

Final Exam – 200 points

Assignments

Written Responses – Written responses will help us build a foundation for our class discussions. I will give detailed instructions for the structure of each weekly response during the class before it is due. You will be called on at least once during the course of the semester to read your response out loud to the class. You should keep all written responses in a folder that you bring to class with you every day. I will collect your folder at several unannounced points during the semester in order to grade your work. You will write 11 written responses throughout the semester, and the lowest grade *above a zero* you receive will be dropped.

Midterm Exam and *Final Exam* – Each exam will be a closed-book evaluation of your comprehension of terms and concepts covered in the course. Exams will ask you to answer content-based questions that assess your understanding of the theoretical material we have covered as well application questions that assess your ability to rhetorically analyze a specific text. The final is comprehensive.

Final Project & Presentation – During this course, you should be teasing out some area(s) of interest that you would like to explore further. For the final

project, you will conduct a detailed rhetorical analysis of a particular text (or set of texts) from your area(s) of interest using a rhetorical theoretical framework we have studied. Your final project should be a paper 8-10 pages in length (or the equivalent, should you choose to produce a multi-modal project) that demonstrates your understanding of a rhetorical theory and a method of applying it to a particular text/discourse. A *complete draft* is due in time for peer review. The final draft of your project should be turned in along with your rough draft and copies of the two peer reviews you wrote. More details on this assignment will be given as we progress through the semester. You will also give a formal presentation (6-8 minutes) to the class that explains the work you do in your final project. Part of your grade on the final presentation will rest on your written and oral responses to others' presentations. More details on this assignment will be given as we progress through the semester.

Approximate Course Schedule

This course schedule will change as we incorporate readings into the course that are most relevant for the area(s) of interest of particular students.

Week /Day	In-class activities	Work assigned
1/1	Course introduction, including brief discussion of feminisms as a guiding principle. Discuss students' prior knowledge of rhetoric. Discuss my IRB and the nature of the study I'll be conducting this semester.	Read Wikipedia's definition of rhetoric, paying particular attention to places where the words "objective" or "objectivity" are used. Doing additional research as needed, write your own definition of rhetoric (WR1). Discuss the relationship between rhetoric and objectivity.
1/2	Discuss Wikipedia article on rhetoric, focusing especially on what is left out of that article. Discuss the audience for this article. Detailed introduction of feminisms as guiding theoretical framework for the course. Two students read their WR1 aloud. Introduce key concepts we will study in detail later, including the modes of persuasion, species of rhetoric, canons of rhetoric. Introduce textbook, focusing on discussion of bias in the preface.	Read Ancient Rhetorics for Contemporary Students (ARCS) Chapter 1, which introduces rhetoric as an area of study.

Apparent Feminist Pedagogies

2/1	<p>Open class by talking about connections between Chapter 1 of the text and students' lives. Talk about technical communication, give examples, ask how students who evaluate these examples in terms of objectivity/subjectivity.</p> <p>Discuss ideological, cluster, generic, and narrative criticism and the relative biases of these different approaches.</p> <p>Show clip of Jon Stewart on Crossfire (http://youtu.be/aQFB5YpDZE) and use what we've learned from ARCS Chapter 1 to analyze.</p>	<p>Read ARCS Chapter 2. Complete WR2 on the following prompt: Write response on the difference between Chapter 1 and the Wikipedia article. If you struggle to narrow this prompt, try focusing on what each text is trying to persuade you of.</p>
2/2	<p>Collection of IRB consent forms.</p> <p>Volunteers read WR2 aloud; discussion of ideological perspectives of the Wikipedia article versus the textbook. Students break into small groups to read WR2s and to analyze what ideological perspectives various writers in each group are coming from. Review of important terms from Chapter 1, including discussion of the difference in public and private, technical and layperson documents. Discuss ARCS Chapter 2 and the implications of kairos.</p>	<p>Read Oscar Wilde trial transcript. Write analysis of the transcript using the modes of persuasion and with explicit discussion of the fact that you are looking at this text from a different kairotic context (WR3). This response should devote at least some space to the role gender plays in this transcript.</p>
3/1	Labor Day Holiday	
3/2	<p>Give students five minutes to write short revised definitions of rhetoric given what they now know. In small groups, go over reading responses together in order to remember them after the long weekend. Three students read WR3. Discuss what qualifies this transcript as a piece of technical communication and why it's important for us to look at in a rhetoric course. Discuss pathos and humor. Discuss ethos; discuss the values of Wilde's audience and whether his purpose was to persuade them of his innocence or his good character, especially given that he had already lost his libel suit.</p> <p>Review important concepts from ARCS Chapter 2.</p>	<p>Read ARCS Chapter 3 on stasis theory.</p>
4/1	<p>Work with short definitions from last class period. In small groups, find patterns and disagreements. Ask if feminism/gender showed up in any of the definitions. Use this analysis as a text for working through stasis theory.</p>	<p>Read ARCS Chapter 4 on commonplaces and write a one-page analysis of the commonplaces that a particular bumper sticker relies upon (WR4).</p>
4/2	<p>Define and discuss topics, ideologies, commonplaces. View political commercials and identify the commonplaces and ideologies at work in them. Break into small groups and identify an ideological group all members belong to, then find the ideologies and commonplaces that underlie that affiliation. Two students read WR4.</p>	<p>Read ARCS Chapter 5 on logoi. Write WR5 on how you have developed ethos in class so far and how you might continue to work on it.</p>

Apparent Feminist Pedagogies

5/1	<p>Evaluation of rhetorical space in the classroom—who’s talking a lot, who should talk more, do we see patterns? Where do we, as a class, reach stasis on these questions? What should any resulting policy changes be? Divide into five groups with each group taking one of the following pairs from the Logos chapter: deduction/induction, enthymemes/rhetorical examples, historical and fictional examples, analogy and similar and contrary examples, maxims and signs. Define your terms for the class and offer at least two examples. Each student write an enthymeme. Volunteers read two parts out loud (usually the major premise and conclusion) and then someone else fill in the minor premise. Touch base about WR5; how is it going? Do we need some time to peer review?</p>	Read ARCS Chapter 6 on ethos.
5/2	Discuss ARCS Chapter 6 on ethos. In small groups, talk about how to develop ethos as an expert on a particular subject. Three students read WR5.	Read Chapter 7 (pathos) and “Cruel Pies” as well as responses to “Cruel Pies.” Analyze the Cruel Pies article using Aristotle and Cicero’s sets of emotions (WR6).
6/1	Continue work on ethos using recent examples of when businesses have run into ethos problems. Discuss the ways that ethos, pathos, and logos interplay. In-class work on WR6.	
6/2	<p>Break into groups answer following questions about “Cruel Pies.”</p> <p>How would you classify this article in terms of the species of rhetoric? Explain.</p> <p>This article often upsets readers. In rhetorical terms, explain why.</p> <p>Do you think gender could have anything to do with the article’s reception? Explain.</p> <p>Using rhetorical terms as much as possible, explain the difference between something professional and something technical.</p> <p>What does the status of this article as professional and/or technical have to do with the way readers think of it?</p>	Read ARCS Chapter 8 and write WR7 as a proposal for the final project.
7/1	Three students read WR6. Discussion of fatalgrams and enargeia. Discussion of technical communication as a field and its connection to rhetoric as a field: How do students understand this relationship at this point in the course?	

Apparent Feminist Pedagogies

7/2	<p>Discussion of intrinsic and extrinsic proofs. Talk about which extrinsic proofs qualify as technical communication. Talk about testimony and authorities, data, and arguments from experience. Discuss feminisms and embodied experience.</p> <p>Several students read WR7. In small groups, workshop final project ideas.</p>	
8/1	Prepare for Midterm	
8/2	Midterm Exam	
9/1	Go over midterm; collect take-home essay portion of test.	Write WR8 on the difference between rhetorical analysis and opinion in class discussions. What are some markers of a smart rhetorical analysis happening verbally in the classroom?
9/2	<p>Return and discuss take-home essay portion of midterm test.</p> <p>Evaluation of rhetorical space in the classroom—who's talking a lot, who should talk more, do we see patterns? Where do we, as a class, reach stasis on these questions? What should any resulting policy changes be?</p>	Read Augustine, Bitzer, Herrick.
10/1	<p>Three students read WR8. In small groups, discuss the following questions:</p> <p>What is the relationship between personal opinion and objectivity/subjectivity? . . . In a rhetoric class?</p> <p>If we privilege our own opinions to the point of silencing others (in a rhetoric class where we say audience is important), are we suggesting objectivity exists on the issue in question?</p> <p>How do we define objectivity? What if we exchange the term "objectivity" for "absolute preference" or "accepted premise"?</p> <p>What does experience have to do with it? We start having experiences from the moment we're born and everyone's are different, so can we ever be "objective"?</p> <p>What does this discussion mean for how we define rhetoric? Is it as much the art of judgment as it is the art of persuasion?</p> <p>What do we make of the place of objectivity/subjectivity when we are distinguishing between a skill or a talent (or a science vs. an art)? Where does rhetoric fit?</p> <p>What do these questions mean for those who identify as feminists? For those who don't?</p>	Write a feminist analysis of Augustine, Bitzer, and/or Herrick OR write a feminist analysis of one of our recent class discussions (WR9). Make sure to articulate the specific type of feminist approach you are using.

Apparent Feminist Pedagogies

10/2	Discuss Augustine, Bitzer, and Herrick. Discuss the instructor's purposes for choosing these readings. Discuss what makes a feminist class and why certain ideologies are marked while others are not. In small groups, discuss progress on final project and prepare for peer review.	
11/1	Two students read WR9. Continue discussion of bias in technical artifacts like histories, course design, university curricula.	Read Menexenus and Glenn. Write WR10 on why Glenn's work is important to read in a course like this and what you take away from her article.
11/2	Discuss Menexenus and Glenn. Answer the following questions: If we recognize that "traditional" courses are not neutral, how can we justify leaving Aspasia out? Why is it so important to have discussions about technical artifacts like these in a rhetoric class?	Read ARCS Chapters 11 & 12
12/1	Two students read WR10. Continued discussion of Menexenus and Glenn, including talking about what constitutes a "fact" and how cultural memory works.	Write WR11 as a reflection on the course. Explicitly discuss what you've learned about objectivity, technical communication, and feminisms.
12/2	Discuss ARCS Chapters 11 & 12 Preview of how peer reviews will work and what I expect. Two students read WR11.	
13/1	Draft of Final Project due. Today you should 1) Get in peer review groups 2) trade papers and frame what you need from peers 3) Skim, ask questions 4) Leave a draft for me 5) Go home and do a detailed peer review. This class period is also the last opportunity to distribute surveys/handouts if you are collecting data from classmates for your project.	Work on Final Project and Presentation.
13/2	Peer Review Discussions	Work on Final Project and Presentation.
14	Fall Break	
15/1	Panel 1 (7 presentations)	Work on Final Project
15/2	Panel 2 (6 presentations)	Work on Final Project
16/1	Panel 3 (6 presentations)	Work on Final Project
16/2	Panel 4 (6 presentations)	Work on Final Project
17	Final Examination; Final Project Due	

Author Information

Erin A. Frost is assistant professor of technical and professional communication at East Carolina University, where she has taught courses in science writing, writing for industry, risk communication, and research methods. Her research interests include gender studies and feminisms, health and medical rhetorics, and risk communication.

Tracking Our Progress

Diversity in Technical and Professional Communication Programs

Natasha Jones

University of New Mexico

Gerald Savage

Illinois State University (Emeritus)

Han Yu

Kansas State University¹

Abstract: This editorial provides brief points of consideration about the status of diversity in Technical and Professional Communication (TPC) programs. It discusses what we mean by diversity and social justice and the goals of the Council for Programs in Technical and Scientific Communication's (CPTSC) Diversity Committee. It reviews some ways the considerations of diversity and social justice are taking shape in the field of technical and professional communication and in TPC programs and considers the future of diversity in the field and TPC programs.

Keywords: CPTSC, diversity, diversity committee, professional and technical communication programs, social justice,

Until recently, diversity has not been a top priority for many technical communication programs. Instead, we were deeply involved in securing a niche within and beyond the English department, in establishing full professional status, and in bridging programmatic requirements and industry expectations. In the last decade, however, this situation has started to change. Although we still have long ways to go towards establishing and fulfilling meaningful diversity goals, we have certainly

¹ All authors contributed equally. For questions, please contact any author.

recognized the importance and urgency for our programs to celebrate and embrace diversity. In recent years, scholars have turned their attention to focus on the role that diversity impacts the research and pedagogy of technical and professional communication (TPC) programs.

Even as scholars push to continue toward more diverse and socially just scholarship, pedagogy, and service, it is difficult to gauge the status of diversity in the field of technical communication at large. In this editorial, we will provide some brief points of consideration about the status of diversity in TPC programs by (1) discussing what we mean by diversity and social justice; (2) discussing the goals of the Council for Programs in Technical and Scientific Communication's (CPTSC) Diversity Committee, (3) reviewing some ways the considerations of diversity and social justice are taking shape in the field of technical and professional communication and in TPC programs, and (4) considering the future of diversity in the field and TPC programs.

What Do We Mean by “Diversity” and “Social Justice”?

Diversity, including considerations of race, gender, sexual orientation, language, ableness, religion, nationality, and social justice for traditionally marginalized and disenfranchised populations, has been defined broadly in attempts to incorporate multiple perspectives and viewpoints and include a variety of stakeholders and audiences. Gerald Savage and Kyle Mattson (2011) assert that it is not only important to consider the aforementioned issues of diversity (among others), but to understand historical, colonial, apparent and unapparent ways that “the idea of diversity gets coded in the discourses of higher education . . . [and] applied rhetorical concerns of technical communication” (p. 9).

“Social justice” is a term that is understood and applied differently in different disciplinary, political, and social contexts. For the technical and professional communication field it is perhaps most widely associated with the idea of civic engagement (see, for example (Crabtree & Sapp, 2005; Dubinsky, 2004; Eble & Gaillet, 2004; Moore, 2013; Simmons & Zoetewey, 2012; Walton, 2013c). The CPTSC Diversity Committee has always understood social justice in terms of diversity as it relates to the goals of increasing the number of faculty, students, and practitioners in our field who are members of underrepresented populations. However, what we might think of as “visible diversity” is not sufficient. Visible diversity too often can mean simply that those minorities who can meet the existing pre-requisites for admission to the field are welcome to join the population from which they were previously underrepresented or excluded, with the assumption that they will then become “just like us.” Instead, we consider real diversity to

mean that the field will change as it merges with previously underrepresented populations. A recent survey report by a leading global executive search firm, Egon Zehnder, eloquently explains this position. Citing organizational diversity scholar and Dean of the Georgetown University McDonough School of Business, David A. Thomas, the report states that a real diversity perspective requires

actively ensuring that people perceived to be “different” in any regard by the...dominant group be allowed to go on being different—rather than assimilated into the dominant culture, as many conventional diversity initiatives seek to do. Even more, differences must be honored, cultivated, and tangibly valued, as people who are different can bring more diverse perspectives and thinking into the [organization]. (EgonZehnderInternational, 2012, p. 7)

Our field is now global in its reach and influence, if not necessarily in its perspective. This fact makes it all the more urgent that we embrace a commitment to diversity and social justice. In this sense, social justice includes intercultural and multicultural dimensions and entails immensely complex issues that require us to think well outside of traditional frameworks, or what Martha C. Nussbaum refers to as social contract theories of social justice.

Social contract theories take the nation-state as their basic unit. For reasons internal to the structure of such theories, they are bound to do so. Such theories cannot provide adequate approaches to problems of global justice, that is, justice that addresses inequalities between richer and poorer nations, and between human beings whatever their nation. To solve these problems we must appreciate the complex interdependencies of citizens in different nations, the moral obligations of both individuals and nations to other nations, and the role of transnational entities (corporations, markets, nongovernmental organizations, international agreements) in securing to people the most basic opportunities for a fully human life. (Nussbaum, 2006, pp. 92–93)

Social justice studies in TPC have already made use of such theoretical perspectives as whiteness theory, critical race theory, postcolonial and decolonial theory, cultural studies, and feminist theories (see, for example, Haas, 2012; Savage & Mattson, 2011; Johnson, Pimentel, & Pimentel, 2008; Scott, Longo, & Wills, 2006; Williams, 2010). Clearly, no single frame of reference is adequate for this work. The meaning of social justice will inevitably be

provisional and situated, an uneasy, unstable reality that we must be prepared to live with and operate in if we expect to work effectively and with justice and respect in global workplaces.

Starting Out: Goals of the CPTSC Diversity Committee

The yearly CPTSC conference provides a means for initial investigations about the incorporation of diversity and social justice considerations in TPC programs. Further, CPTSC is also proving to be an ideal forum for scholars interested in diversity and social justice in technical and professional communication. Though it is never possible to pinpoint the exact moment where cultures start to change, we can identify a landmark moment where CPTSC, as an organization, started to recognize diversity in its organizational forums—the 2003 CPTSC annual business meeting. At that meeting, Cynthia Selfe challenged CPTSC “to take up the issue of the lack of diversity in technical communication. In that meeting, a number of members committed themselves to forming an ad hoc Diversity Committee, chaired by Selfe” (Savage & Mattson, 2011, p. 6). The ad hoc committee put together the inaugural diversity report, presented at the CPTSC business meeting in 2004.

The report set the following three goals for CPTSC regarding diversity:

- “[P]romote attendance by as broad a range of faculty and graduate students as possible at CPTSC’s annual meeting.”
- “[P]romote diversity within CPTSC as an organization, our undergraduate and graduate programs in tech. communication and within tech. communication faculty.”
- “[G]ather information on the current demographics of race within the profession of technical communication: in the workplace and in the academy” (Selfe, 2004).

To achieve these goals, the report recommended the following diversity projects:

- “[G]ather current demographics on race from the technical communication profession in the workplace and in the academy.”
- Encourage and help program directors to be more assertive in recruiting underrepresented groups.
- “Send materials about CPTSC to historically Black universities or those with large populations of students of color.”
- Recruit underrepresented members to come to CPTSC.

- At every CPTSC conference, offer one or more sessions to address race/class/social justice issues.
- Invite scholars to give keynotes on issues of race/class/social justice at CPTSC conferences.
- At every CPTSC business meeting, have discussion of issues related to race, class, and social justice.
- Raise money for diversity scholarships to support graduate students from underrepresented groups who “work in the intersection of race/class issues and technical communication.”
- Host portfolio contests for undergraduate and graduate students from underrepresented groups.
- “Create a broadly instantiated culture of support for members of color/class in CPTSC” (Selfe, 2004).

These are visionary goals and concrete projects. Although we are far from fulfilling all of the goals or undertaking all of the projects, we have, in the decade since 2004, made important progress on a number of them.

Reach out to and build relationships with institutions that serve underrepresented students and invite them to CPTSC

Gerald Savage and Natalia Matveeva, two members on the CPTSC Diversity Committee, undertook the effort to reach out to Historically Black Colleges and Universities (HBCUs), Tribal Colleges and Universities (TCUs), and universities that serve primarily Spanish-speaking students. Natalia Matveeva (forthcoming) studied the available technical, scientific, or professional communication programs at Hispanic-Serving institutions (HSIs) in the United States, identifying existing programs, examining their course offerings, and exploring various peculiarities of teaching TPC courses in such institutions. Gerald and Natalia also examined 80 HBCU and 31 TCU English department websites to identify whether these institutions have a technical communication program, what technical communication courses are offered, and who are involved in these programs. Savage and Matveeva then sent CPTSC literature and conference calls for papers to these programs, inviting them to establish collaborations. This outreach did not create as many responses as Savage and Matveeva hoped for. As Savage reflected, people at these institutions have been historically exploited by outside scholars who wish to come and study them but do not bring back their studies or otherwise benefit the local people—it is understandable that they may be wary of our request.

We are, however, not discouraged. At the 2013 CPTSC business meeting, the attendees brainstormed other ways to reach out to these institutions, and a concrete idea emerged: building upon the personal contacts CPTSC members have with underrepresented institutions to reach out to them, to initiate collaboration (in any ways that they desire), and to invite them to CPTSC. These efforts are currently pursued by Diversity Committee members, in collaboration with identified CPTSC members.

Offer sessions at the CPTSC conferences to address race/class/ social justice issues and invite scholars to give keynotes on these issues

As the account below demonstrates, steady progress has been made on these tasks in recent years.

In 2004, the CPTSC conference theme was “Pathways to Diversity;” and although a number of presentations that used the term “diversity” in their titles did not address issues identified in the ad hoc Diversity Committee report, the conference did include a number of presentations on important diversity topics.

At the 2006 CPTSC conference, we did not have a panel presentation related to diversity.

In 2007, there *was* a panel titled Diversity and Representation. It was somewhat ill-fitted as all presentations in the panel did not deal with diversity in the sense we use it here. Still, one presenter (Mark Nunes) discussed issues related to international dual degree programs and the other (Gerald Savage) discussed how to take action towards diversity within technical communication programs.

Compared to that of 2007, the 2008 diversity panel was larger in size and more precise in content. Titled “Diversity in Technical Communication Programs: What Does It Mean and What is Its Current Status?,” it included four presentations that discussed diversity representation in U.S. technical communication programs as well as development of technical communication programs in global contexts.

In 2009, the site of the conference itself (Denmark) reflected CPTSC’s embracement of diversity in the global context—even though overseas traveling might have made it difficult for some of our colleagues who engage in diversity studies to join the conference and form diversity panels that year. Still, we had a number of presentations that engaged with diversity and social justice issues: Savage and Matveeva (2009) presented their HBCUs and TCUs study mentioned earlier; Alex Ilyasova and Christine Hubbell (2009) discussed the challenges of teaching and preparing

students with disabilities; and Michael Day (2009) discussed strategies to recruit international students.

In 2010, there were no obvious sessions or presentations on diversity.

In 2011, there were two diversity related panels. The first was titled "From the Academy to Industry: Issues of Diversity in Technical Communication" (2011) where presenters discussed the decolonization of intercultural technical communication (Godwin Agboka), the teaching and assessment of a new technical communication course at a historically black university (Miriam Williams), and technical communication programs in Hispanic-serving institutions (Natalia Matveeva). The second panel was titled "Can Academy-Industry Relationships Succeed for a Program Committed to Social Justice?" where two presenters (Gerald Savage and Angela Haas) discussed how to include postcolonial and decolonial perspectives in our teaching, research, and program design. The third presenter (Chelsea Moats) discussed how she applied her passion for social justice scholarship in workplace practices.

The 2012 CPTSC conference is particularly noteworthy. That year, members of the Program Committee worked with members of the Diversity Committee and the Executive Committee to place the topic of diversity at the center of that year's conference. The conference "targets the impact of communities and their practices, especially ethnic and cultural communities in the United States and abroad, on workplace communication and technologies" (Call for Proposals). The 2012 keynote speech was also delivered by a diversity/social justice scholar, Miriam Williams, who presented "A Survey of Emerging Research: Debunking the Fallacy of Colorblind Technical Communication." A group of plenary speakers, Angela Haas, Gary Kaunonen, Raeanne Madison, and Flourice Richardson then joined Williams to further the discussion on diversity.

In addition, two conference panels addressed social justice and diversity issues. The first was titled "Teaching about Culture: Challenges and Suggested Methods" (2012), where presenters discussed how to simulate aspects of class in technical communication classrooms (Gary Kaunonen), how to integrate activism into technical communication pedagogy (Natasha Jones), how to work with bicultural and multicultural students to localize information (Nicole St. Germaine-McDaniel), and how comics-style technical communication can create socially responsible discourses that benefit underprivileged audiences (Han Yu). The other panel was titled "Transgressing Business as Usual in Technical Communication Programs." In that panel, presenters (Angela Haas, Flourice Richardson, Erin Frost, Godwin Agboka, and Gerald Savage) used decolonial, black feminist, apparent

feminist, and rhetorical silence theories to transgress hegemonic notions of communities, workplaces and technologies in technical communication scholarship, pedagogy, and practice.

The 2012 conference offers us a successful intra-organizational collaboration model (spearheaded and coordinated in large part by Natalia Matveeva). Coordinating efforts across its different committees and in relation to a key activity (the annual conference), CPTSC brought the issue of diversity to the forefront of its organizational concern. This intra-organizational collaboration model can be valuable for other organizations in the field to use to raise awareness of and to promote diversity and social justice.

The 2013 conference saw a continuation of this collaboration model: members of the Diversity Committee (Han Yu), the Program Committee (Kirk St. Amant), and the Executive Committee (Lisa Meloncon) coordinated diversity and social justice efforts to foster awareness and new collaborations in two venues:

- They developed a dedicated conference presentation session in which members of the Diversity Committee (Natasha Jones, Natalia Matveeva, David Sapp, Jerry Savage, and Han Yu) presented on and discussed the Committee's actions and initiatives).
- They initiated the diversity luncheon, a new forum where CPTSC members interested in diversity and social justice issues can gather and exchange ideas in a somewhat informal setting. There is already interest in organizing another diversity luncheon at the 2014 conference, and members of the three committees (Diversity Committee, Program Committee, and Executive Committee) are in the initial stages of discussing this item.

In addition, two other panels focused on diversity in 2013. "Community-based Inquiry as Technical Communication Curricula: Approach to Encouraging Diversity" (Kristen Moore, Michele Simmons, Natasha Jones, and Patricia Sullivan) and "Programmatic Perspectives on and Projections for Social Justice Curricula & Pedagogy" (Angela Haas, Marcos Del Hierro, Flo Richardson, and Gerald Savage) addressed how to embrace social justice and diversity through curricula and pedagogy.

From no diversity or social justice panels to multiple panels, diversity initiatives, intra-organizational collaboration to promote diversity, and a diversity-themed conference, CPTSC has made steady progress over the past ten years to infuse diversity content into its annual conferences.

Raise money for diversity scholarships to support students from underrepresented groups who work in the intersection of race/class and technical communication

Such a scholarship came into existence in 2007. That year, Han Yu, a then Diversity Committee member and the current committee chair, obtained an initial funding of \$350 from Bedford/St. Martin's (an annual contribution Bedford/St. Martin's continues to make). In addition, an anonymous donor contributed \$450 to the scholarship at \$150 per year for three years (another donor has also continued to contribute \$150 a year after the initial \$450 ran out).

Natalia Matveeva then led the Diversity Committee to work on the development of the scholarship: its scope, criteria, and application process. It was decided that the scholarship should be awarded to a graduate student from an underrepresented population who shows the most potential to contribute to the field. The purpose should be to bring the winner to the CPTSC conference (with waived conference registration).

The scholarship was announced for 2008. That year, Roxane Gay from Michigan Tech was the winner. In 2009, we did not have applications to present a winner (possibly because the travel costs for attending the conference in Denmark were too high for the scholarship to be of much help). From 2010 to 2013, the winners are as follows: 2010, Janie Santoy (Texas Tech University); 2011, Joseph Dawson (East Carolina University), 2012, Flourice Richardson (Illinois State University); and 2013, Therese Pennell (East Carolina University). These winners' conference presentation titles (if any) can be found on the CPTSC website under Initiatives.

To sustain the long-term development of the Diversity Scholarship and increase its positive impact, at the 2013 CPTSC business meeting, the attendance passed the motion that CPTSC annually contributes \$1,000 (in addition to monies from Bedford/St. Martin's and other sponsors or donors) to the diversity scholarship. With a larger financial award, the scholarship can support not only the winner's trip to the CPTSC conference but also his or her research on issues of diversity and technical communication.

Create a culture of support for diversity in CPTSC

It is, again, impossible to point to specific moments, actions, or people and ascertain that a culture of support for diversity has taken place at CPTSC. But the various moments, actions, and people mentioned above add together to point to such a culture—if not fully formed, then at least emerging in our organization. And there are many other such signs and indications too. At conferences, we see diversity panels and presentations

well attended by enthusiastic audiences; during business meetings, we hear multiple members speak passionately on matters of diversity; at the 2013 conference's informal diversity lunch, we had more than 30 members (about a quarter of the conference participants) coming together to discuss diversity issues or to get to know each other.

Current State of Affairs: Status of Diversity in the Field of TPC and in TPC Programs

In addition to the establishment and progression toward the goals of the CPTSC Diversity Committee and the development of a strategic plan for re-envisioning diversity in TPC, other significant work has been done since the creation of the CPTSC Diversity Committee. This includes the creation of a diversity and social justice listserv, an increase in publications that focus on diversity concerns, and more TPC programs and courses that address diversity concerns.

At the 2012 CPTSC conference many scholars revealed a desire to see a more diverse perspective in TPC scholarship and programs. Scholars were excited and energized after hearing Miriam Williams' keynote address and participating in discussions after panel presentations. The excitement about the possibilities of progress was evident. Informal chats and discussions in the hallways at the conference served as a basis for Savage and Jones's idea to create a forum that would allow like-minded scholars to continue to engage in conversations about diversity in a dedicated space.

After the conference and throughout the following winter, Savage and Jones continued to communicate with each other their goals about integrating diversity and social justice in the field of technical communication. The primary idea was that scholars who do the messy work of emphasizing social justice and diversity within the field of technical communication needed a forum to share concerns and exchange solutions outside of national conferences and program meetings.

With the technical help of Tracy Bridgeford, the CPTSC Diversity and Social Justice Network Listserv was then created to address this need. The purpose of the listserv is to provide a forum for scholars of TPC interested in diversity and social justice issues to share research and pedagogical approaches. The listserv aims to "bring together critical discussions about various types of scholarship, with themes that include (but are not limited to) quantitative and qualitative research, pedagogy, community-based projects, and literature reviews" (Diversity and Social Justice Network Listserv). One can join the listserv by visiting the following URL: <http://lists.unomaha.edu/mailman/listinfo/cptsc-diversity>.

Currently, the listserv has over 100 subscribers from across the nation. These subscribers represent TPC programs from a number of universities and colleges. During CPTSC 2013, members of the CPTSC Diversity Committee shared updates about the success of the Diversity and Social Justice Network Listserv launch. However, it is clear that much work still needs to be done to ensure the sustainability of the listserv and increase the visibility of the listserv as a forum and resource for scholars and practitioners who seek to contribute to the conversation about diversity and social justice in TPC scholarship, pedagogy, and practice. For instance, one challenge faced by the listserv is how it is currently being used (or underused). Jones and Savage launched this listserv hoping that discussions about social justice and diversity would begin naturally. However, during the early months that the listserv was active, the number of listserv subscribers was modest. Jones and Savage then posted “discussion starters,” questions that they hoped other scholars would respond to and comments that they hoped would generate interest in social justice and diversity issues. By October 15, 2013, the listserv grew and had a total of about 90 subscribers.

Although the listserv counts 100 subscribers today, the conversation seems to lag. There have been a few posts to the listserv, but not to the level that we had originally hoped. One of the suggestions from a panel attendee at the 2013 conference was to encourage subscribers to post resources (such as syllabi, bibliographies, and in-progress research papers), and we hope some subscribers would seek to do so. The listserv was created in order to help build a network of scholars and create an online community that could help to foster and encourage research and pedagogy developments that focus on diversity and social justice. Though it has started slowly, the listserv presents abundant opportunities for encouraging critical thought and meaningful contributions relevant to diversity and social justice initiatives in the field of TPC.

The Diversity and Social Justice listserv is not the only progress that we have made in integrating diversity and social justice into our field of study and our TPC programs. Over the past few years, the number of scholars publishing significant research centering on diversity and social justice in TPC has increased. These publications include

- Haas, Angela M. (2012). Race, rhetoric, and technology: A case study of decolonial technical communication theory, methodology, and pedagogy. *Journal of Business and Technical Communication*, 26(3), 277–310.

- Moore, Kristen (2013). Exposing hidden relations: Storytelling, pedagogy, and the study of policy. *Journal of Technical Writing and Communication*, 43(1), 63–78.
- Savage, Gerald & Mattson, Kyle. (2010). Perceptions of racial and ethnic diversity in technical communication programs, *Programmatic Perspectives*, 3(1), 5–57.
- Williams, Miriam F. (2010). From black codes to recodification: Removing the veil from regulatory writing. Amityville, NY: Baywood.
- Williams, Miriam F., & Pimentel, Octavio (Eds.). (forthcoming). *Communicating race, ethnicity, and identity in technical communication*. Amityville, NY: Baywood.

By no means is the list above an exhaustive or complete bibliography of scholars who are currently publishing research related to diversity and social justice in technical communication (See more details about publications in the Future Work section below). However, this list does illuminate the increase in awareness of social justice and diversity issues in technical communication, in addition to highlighting the diverse voices of scholars in our field. Moreover, these, and other publications, represent diverse methodological approaches (for example, narrative analyses, close textual readings, and pedagogical examinations) and the many different foci of diversity and social justice consideration, including race, ethnicity, gender, sexuality, and more.

In addition to an increasing awareness in research publications for diversity issues, TPC programs have begun to integrate considerations of diversity and social justice at the programmatic and course levels. Though programs are beginning to turn attention to issues of diversity and social justice, it is still difficult to identify how many programs include in their programmatic goals and outcomes explicit considerations for these issues. To begin to gauge the number of programs that focus on diversity and social justice at the programmatic level, we did a cursory search of programs using keywords and phrases. For example, we searched phrases such as “technical writing” and “diversity,” “technical communication” and “diversity,” “technical writing programs” and “diversity,” “technical communication programs” and “diversity,” “technical writing programs” and “social justice,” and “technical communication programs” and “social justice.”

Despite this attempt, we found it difficult to locate any programs with clearly articulated diversity and social justice outcomes based on our search of program websites. We do not in any way consider this search

method rigorous. However, it is apparent that if a potential student or scholar were seeking a TPC program that emphasized diversity and social justice at the programmatic level, few of our existing programs would immediately stand out. Currently, the primary way for students and scholars to locate programs that have programmatic goals specifically attuned to issues of diversity and social justice is to know a faculty member, director, or student already affiliated with the program. This, of course, is not an effective way of increasing awareness, recruiting and retaining students, or developing a network of scholars. A solution for this concern is to encourage programs in TPC to explicitly articulate and emphasize work that is being done in the areas of diversity and social justice on program websites and in materials that identify programmatic goals, visions, and mission statements.

Similar to the challenges of locating programs in TPC with diversity-related objectives, it was also difficult to find specific courses within TPC programs that identified diversity and social justice considerations as course outcomes. There are, however, a few courses that are being and have been taught that are more visible. For instance, a course taught by Angela Haas at Illinois State University springs to mind. This course, *Race, Rhetoric, and Technology*, was more visible because Haas published her experience (Haas, 2012). In addition, other scholars shared experiences about courses that they have taught by publishing or presenting at TPC conferences. Two specific conference presentation panels (also mentioned earlier in this editorial) that allowed scholars to discuss what they are doing in the classroom to increase awareness of diversity and social justice included “Community-based Inquiry as Technical Communication Curricula: Approach to Encouraging Diversity” (Moore, Simmons, Jones, and Sullivan) and “Programmatic Perspectives on and Projections for Social Justice Curricula & Pedagogy” (Haas, Del Hierro, Richardson, and Savage) at CPTSC 2013. Publication and presentation venues provide ideal forums for highlighting diversity and social justice work that is being done at the course level. Another way to contribute to discussions about and resources for developing courses that focus on diversity issues is to share course activities and syllabi on TPC listservs, especially the Diversity and Social Justice Network Listserv.

Future Work: Miles To Go Before We Sleep

It appears that positive change is happening in our field regarding diversity and social justice. However, there is no reason for complacency. If we suppose we now have sufficient momentum for change to continue

without further struggle, we are likely within a few years to see a return to business as usual, which would mean business as it was before we began to advocate and act for diversity in programs and practice.

There are areas of diversity and social justice where virtually no change has yet occurred. In most areas, little more than token change has happened, especially if we assume what we had done is sufficient. Programmatically, perhaps the most noticeable change is in faculty diversity—noticeable because new teacher-scholars who represent U.S. racial and ethnic minorities and underrepresented international racial and ethnic populations are increasingly publishing books and articles in technical communication and participating in the conferences of the field (see, for example, Agboka, 2013; Bokor, 2011; Dura, Singhal, & Elias, 2013; Haas, 2012; Johnson, Pimentel, & Pimentel, 2008; Jones, forthcoming; Smith, 2012; Williams, 2010, 2013; Williams & Pimentel, 2012; Yu & Savage, 2013). We may well have a corresponding increase in our student populations, though that is not as easy to determine on a national scale.

As we have often argued, socially just diversity is not simply about diversifying our field demographically. Diversity for social justice must mean making the field of technical communication open and accessible to people whose understanding and experience of science, technology, professions, and institutions are quite different from the overwhelmingly Euro-American culture of technical communication academics and practitioners in the U.S. Moreover, it must mean more than a passive openness to such differences; it must mean that technical communication as a field of theory, pedagogy, and practice must change in its perspective and attitudes and ways of interacting with science, technology, institutions, and professions. The challenge is not only to bring greater diversity to the populations of scholars and practitioners but to incorporate diversity awareness in technical communication practices, to make diversity a key factor in usability and user-centered design. As Miriam Williams writes,

we lag behind our colleagues in other areas of English studies (literature, rhetoric and composition, and creative writing) in finding ways to wrestle with two core elements of American identity—race and ethnicity. In some cases... these elements of our identity shape user experiences as much as education, literacy, gender, nationality, or any of the other criteria we use to analyze audiences. (Williams, forthcoming)

Indeed, it is not only that other areas of English Studies are far in advance of technical communication in their attention to diversity. Particularly

embarrassing for our field by comparison are the number of applied fields in which extensive diversity and social justice-related research exists: communication studies, including business, marketing, and management communication, as well as health and education fields. In fields where development work is a major focus, considerable attention has been given to anti-colonial and decolonial perspectives: economics, agriculture, geography, forestry, and the broadly interdisciplinary area of development studies are some prominent examples. Technical communication shares interests with most of these fields, yet little of our scholarship has paid any attention to such studies.

The relationship of technical communication to technological, economic, and environmental development has received some attention in our field. However, the social justice implications of development activities, particularly in so-called developing or third world nations, have been largely overlooked—with a few important exceptions. Among the most promising emerging technical communication scholars examining the effects of development on marginalized populations are Agboka (2013), Dura (Dura, et al., 2013), Mattson (2013), Moore (2013), and Walton (2013a, 2013b).

The need for research in international development communication is especially critical. Many developing countries lack the legal and regulatory structure to protect their populations from the health, social, cultural, economic, and environmental effects of development activities. The United Nations has endeavored to check the kind of harmful activities that have too often accompanied global industrial development by western and multinational corporations, but with less success than could be desired (Sapp, Savage, & Mattson, 2013).

Despite frequent public outcries against international development activities that have been shown to disregard human rights, such protests too often arise after irreparable harm has been done and the reparations that may be effected in response to the negative publicity cannot compensate the loss of life, health, livelihoods, and environmental damage. Moreover, some of the corporations and governments involved in such activities may go on to engage in exploitative development in other sites.

Indeed, because so many global businesses and industries seem oblivious to the negative impact of their activities on unenfranchised and disenfranchised populations, there may be good reason for the technical communication field, which has long regarded itself as humanistic in its values, to seek other sites of practice outside of business and industry, where technical communication practitioners who are committed to

promoting human rights and social justice in the development and uses of technologies might be more effective.

The kind of work we are calling for here is going to be difficult. It is likely to require the use of different research methodologies than many technical communication scholars are accustomed to—for example, research based on participatory action and decolonial methodologies (see Blyler, 2004; Crabtree & Sapp, 2005; Dura et al., 2013; Haas, 2012; Pare, 2002). International research, especially among marginalized and unenfranchised populations, is likely to be costly in time and research funding and to require quite different communication competencies—e.g., languages, translation, intercultural rhetorics—than most researchers and most technical communication pedagogies and resources are currently able to provide. We may find ourselves turning from our conventional interdisciplinary alliances—in engineering, science, and business—to collaborations with linguists, anthropologists, economists, sociologists, and development studies experts, among others. Along with preparing our students for careers in business and industry we might develop options in our programs for working in international nongovernmental organizations (INGOs) that promote human rights and social justice in transnational corporate practices.

We believe these challenging new directions for technical communication can be highly attractive to students and even to many current scholars and practitioners for whom issues of peace, social justice, equal rights, and environmental justice represent higher values and the potential for more satisfying careers than are offered in traditional sites of practice for technical communicators. We invite students, colleagues, and practitioners to join the CPTSC Diversity Committee and contribute to some of the exciting initiatives in which the committee is engaged. A number of initiatives are currently underway, including outreach to historically black colleges and universities (HBCUs), tribal colleges and universities (TCUs), and universities and colleges that serve large Spanish-speaking populations. Interested parties can contact Dr. Han Yu (Chair of the Diversity Committee) via email at hyu1@ksu.edu. As mentioned previously, you can join the Diversity and Social Justice Network's listserv by visiting the following URL: <http://lists.unomaha.edu/mailman/listinfo/cptsc-diversity>.

References

Agboka, Godwin Y. (2013). Participatory localization: A social justice approach to navigating unenfranchised/disenfranchised cultural sites. *Technical Communication Quarterly*, 22(1), 28–49.

- Blyler, Nancy Roundy. (2004). Critical interpretive research in technical communication: Issues of power and legitimacy. In Teresa Kynell-Hunt & Gerald J. Savage (Eds.), *Power and legitimacy in technical communication: Strategies for professional status* (Vol. 2, pp. 143–166). Amityville, NY: Baywood.
- Bokor, Michael Jarvis Kwadzo. (2011). Connecting with the ‘Other’ in technical communication: World Englishes and ethos transformation in U.S. native English-speaking students. *Technical Communication Quarterly*, 20(2), 208–237.
- Call for proposals. (2012). Retrieved from <<http://cptsc.org/annual/cptsc-2012/2012call.pdf>>
- Can academy-industry relationships succeed for a program committed to social justice? (2011, October). Panel presented at the CPTSC Conference, Harrisonburg, Virginia. Abstract retrieved from <<http://www.cptsc.org/annual/cptsc-2011/2011program-abstracts.pdf>>
- CPTSC Diversity and Social Justice Network Listserv. (2013). cptsc-diversity@lists.unomaha.edu
- CPTSC diversity initiatives: Past, present, and future. A report from the CPTSC diversity committee. (2013, October). Panel presented at the CPTSC Conference, Cincinnati, Ohio. Program retrieved from <http://writeprofessionally.org/CPTSC2013/wp-content/uploads/2013/10/2013CPTSC_ConferenceProgram.pdf>
- Community-based inquiry as technical communication curricula: Approach to encouraging diversity. (2013, October). Panel presented at the CPTSC Conference, Cincinnati, Ohio. Program retrieved from <http://writeprofessionally.org/CPTSC2013/wp-content/uploads/2013/10/2013CPTSC_ConferenceProgram.pdf>
- Crabtree, Robbin D., & Sapp, David Alan. (2005). Technical communication, participatory action research, and global civic engagement: A teaching, research, and social action collaboration in Kenya. *Reflections: A Journal of Writing, Service-Learning, and Community Literacy*, 4(2), 9–33.
- Day, Michael. (2009, August). Graduate program recruitment strategies: from local to international. Paper presented at the CPTSC Conference, Aarhus, Denmark. Abstract retrieved from <<http://www.cptsc.org/previous-meetings/2009/programCPTSC2009.pdf>>
- Dubinsky, James M. (Ed.). (2004). Special issue: Civic engagement and technical communication, *Technical Communication Quarterly*, 13(3).
- Dura, Lucia, Singhal, Arvind, & Elias, Eliana. (2013). Minga Peru’s strategy for social change in the Peruvian Amazon: A rhetorical model for participatory, intercultural practice to advance human rights. *Journal of Rhetoric, Professional Communication and Globalization*, 4(1), 33–54.
- Eble, Michelle F., & Gaillet, Lynee Lewis. (2004). Educating ‘community intellectuals’: Rhetoric, moral philosophy, and civic engagement. *Technical Communication Quarterly*, 13(3), 341–354.
- EgonZehnderInternational. (2012). The leading edge of diversity and inclusion. Zurich. Retrieved from <http://www.egonzehnder.com/files/2012_iep_diversity_and_inclusion.pdf>

- From the academy to industry: Issues of diversity in technical communication. (2011, October). Panel presented at the CPTSC Conference, Harrisonburg, Virginia. Abstract retrieved from <<http://www.cptsc.org/annual/cptsc-2011/2011program-abstracts.pdf>>
- Haas, Angela M. (2012). Race, rhetoric, and technology: A case study of decolonial technical communication theory, methodology, and pedagogy. *Journal of Business and Technical Communication*, 26(3), 277–310.
- Ilyasova, K. Alex & Hubbell, Christine. (2009, August). We're just not seeing it: New challenges in teaching and preparing students with disabilities. Paper presented at the CPTSC Conference, Aarhus, Denmark. Abstract retrieved from <<http://www.cptsc.org/previous-meetings/2009/programCPTSC2009.pdf>>
- Johnson, Jennifer Ramirez, Pimentel, Octavio, & Pimentel, Charise. (2008). Writing New Mexico White: A critical analysis of early representations of New Mexico in technical writing. *Journal of Business and Technical Communication*, 22(2), 211–236.
- Jones, Natasha N. (forthcoming). The importance of ethnographic research in activist networks. In Miriam F. Williams & Octavio Pimentel (Eds.), *Communicating race, ethnicity, and identity in technical communication* (pp. 46–59). Amityville, NY: Baywood.
- Mattson, Kyle T. (2013). Intercultural professional communication: An overview of failed corporate public discourse in Malaysia. *connexions: international professional communication journal*, 1(1), 89–97.
- Mattson, Kyle, Savage, Gerald, Ding, Huiling, & José, Laurence. (2008, October). Diversity in technical communication programs: What does it mean and what is its current status? Panel presented at the CPTSC Conference, Minneapolis, MN. Abstract retrieved from <<http://www.cptsc.org/previous-meetings/2008/concurrent2.pdf>>
- Matveeva, Natalia. (forthcoming). Teaching technical, scientific, or professional communication at Hispanic-serving institutions. *Programmatic Perspectives*, 7(1).
- Moore, Kristen. (2013). Exposing hidden relations: Storytelling, pedagogy, and the study of policy. *Journal of Technical Writing and Communication*, 43(1), 63–78.
- Nunes, Mark. (2007, October). English, technical Communication, and media arts. Paper presented at the CPTSC Conference, Greenville, North Carolina. Abstract retrieved from <<http://www.cptsc.org/previous-meetings/2007/cptsc2007abstracts.pdf>>
- Nussbaum, Martha C. (2006). *Frontiers of Justice: Disability, Nationality, Species Membership*. Cambridge, MA: Belknap Press of Harvard UP.
- Pare, Anthony. (2002). Keeping writing in its place: A participatory action approach to workplace communication. In Barbara Mirel & Rachel Spilka (Eds.), *Reshaping Technical Communication: New directions and challenges for the 21st century* (pp. 57–73). Mahwah, NJ: Lawrence Erlbaum Associates.
- Programmatic perspectives on and projections for social justice curricula & pedagogy. (2013, October). Panel presented at the CPTSC Conference, Cincinnati,

- Ohio. Program retrieved from <http://writeprofessionally.org/CPTSC2013/wp-content/uploads/2013/10/2013CPTSC_ConferenceProgram.pdf>
- Sapp, David, Savage, Gerald, & Mattson, Kyle. (2013). After the International Bill of Human Rights (IBHR): Introduction to special issue on human rights and professional communication. *Journal of Rhetoric, Professional Communication and Globalization*, 4(1), 1–12.
- Savage, Gerald. (2007, October). Taking action for diversity in technical communication programs. Paper presented at the CPTSC Conference, Greenville, North Carolina. Abstract retrieved from <<http://www.cptsc.org/previous-meetings/2007/cptsc2007abstracts.pdf>>
- Savage, Gerald & Mattson, Kyle. (2011). Perceptions of racial and ethnic diversity in technical communication programs, *Programmatic Perspectives*, 3(1), 5–57.
- Savage, Jerry, & Matveeva, Natalia. (2009). Seeking inter-racial collaborations in program design: A report on a study of technical and scientific communication programs in Historically Black Colleges and Universities (HBCUs) and Tribal Colleges and Universities (TCUs) in the United States. Paper presented at the CPTSC Conference.
- Scott, J. Blake, Longo, Bernadette, & Wills, Katherine V. (Eds.). (2006). *Critical power tools: Technical communication and cultural studies*. Albany: SUNY Press.
- Self, Cynthia. (2004). CPTSC committee for diversity report. Unpublished CPTSC report.
- Simmons, W. Michele, & Zoetewey, Meredith W. (2012). Productive usability: Fostering civic engagement and creating more useful online spaces for public deliberation. *Technical Communication Quarterly*, 21(3), 251–276.
- Smith, Beatrice Quarshie. (2012). *Reading and writing in the global workplace: Gender, literacy, and outsourcing in Ghana*. Plymouth, UK: Lexington Books.
- Teaching about culture: Challenges and suggested methods. (2012, September). Panel presented at CPTSC Conference, Houghton, Michigan. Abstract retrieved from <<http://www.cptsc2012.org/wp-content/uploads/2012/07/2012abstracts2.pdf>>
- Transgressing business as usual in technical communication programs. (2012, September). Panel presented at CPTSC Conference, Houghton, Michigan. Abstract retrieved from <<http://www.cptsc2012.org/wp-content/uploads/2012/07/2012abstracts2.pdf>>
- Walton, Rebecca. (2013a). How trust and credibility affect technology-based development projects. *Technical Communication Quarterly*, 22(1), 85–102.
- Walton, Rebecca. (2013b). Stakeholder flux: Participation in technology-based international development projects. *Journal of Business and Technical Communication*, 27(4), 409–435.
- Walton, Rebecca. (2013c). Civic engagement, information technology, & global contexts. *connexions: international professional communication journal*, 1(1), 147–154.
- Williams, Miriam F. (2010). *From black codes to recodification: Removing the veil from regulatory writing*. Amityville, NY: Baywood.

- Williams, Miriam F. (2013). A survey of emerging research: Debunking the fallacy of colorblind technical communication. *Programmatic Perspectives*, 5(1), 86–93.
- Williams, Miriam F. (forthcoming). Introduction. In Miriam F. Williams & Octavio Pimentel (Eds.), *Communicating race, ethnicity, and identity in technical communication* (pp. 1-4). Amityville, NY: Baywood.
- Williams, Miriam F., & Pimentel, Octavio. (2012). Introduction: Race, ethnicity, and technical communication. *Journal of Business and Technical Communication*, 26(3), 271–276.
- Williams, Miriam F., & Pimentel, Octavio. (Eds.). (forthcoming). *Communicating race, ethnicity, and identity in technical communication*. Amityville, NY: Baywood.
- Yu, Han, & Savage, Gerald (Eds.). (2013). *Negotiating cultural encounters: Narrating intercultural engineering and technical communication*. Hoboken, NJ: John Wiley & Sons.
-

Author Information

Natasha Jones's research interests include activism, social justice, and rhetoric in technical communication and technical communication pedagogy. Her work has been published in *Technical Communication Quarterly* and the *Journal of Technical Writing and Communication*. She won the 2014 NCTE/CCCC award for Best Dissertation in Technical Communication. In addition, Dr. Jones has presented at national conferences like the Council on Programs in Technical and Scientific Communication (CPTSC) and Conference on College Composition and Communication (CCCC). She is also the co-creator (along with Dr. Jerry Savage) and administrator of CPTSC's Diversity and Social Justice Network Listserv and a CPTSC Diversity Committee member.

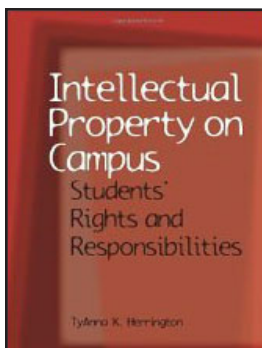
Gerald Savage taught technical communication and rhetoric at Illinois State University until his retirement in January 2012. He is co-editor with Dale Sullivan of *Writing a Professional Life: Stories of Technical Communicators On and Off the Job*; with Teresa Kynell-Hunt of *Power and Legitimacy in Technical Communication* Volumes I and II; and with Han Yu of *Negotiating Cultural Encounters: Narrating Intercultural Engineering and Technical Communication*. He is co-editor with Huiling Ding of *New Directions in Intercultural Professional Communication*, a special issue of *Technical Communication Quarterly* and with David Alan Sapp and Kyle Mattson of *Human Rights and Professional Communication*, a special issue of the *Journal of Rhetoric, Professional Communication and Globalization*. He has published numerous articles and book chapters concerning technical communication. He is a Fellow of the Association of Teachers of Technical Communication, has received the Society for Technical Communication's Jay R. Gould Award for Excellence in the Teaching of Technical Communication, and the Distinguished Service Award of the Council for Programs in Technical and Scientific Communication.

Tracking Our Progress

Han Yu is Associate Professor of technical communication at English Department, Kansas State University. Han's research focuses on visual communication, intercultural technical communication, technical communication in China, and writing assessment/training. She has published multiple articles on these topics in leading journals in the field, including *Business Communication Quarterly*, *IEEE Transactions on Professional Communication*, *Journal of Business and Technical Communication*, *Journal of Technical Writing and Communication*, *Programmatic Perspectives*, *Technical Communication*, and *Technical Communication Quarterly*. Han edited the collection (with Dr. Gerald Savage) *Negotiating Cultural Encounters: Narrating Intercultural Engineering and Technical Communication*, published by IEEE/Wiley in 2012. Her book, *The Other Kind of Funnies: Comics in Technical Communication*, is forthcoming with Baywood Publishing.

Book Review Editor

Laurence José, *Grand Valley State University*



Intellectual Property on Campus: Students' Rights and Responsibilities

Author

Tyanna K. Herrington

Southern Illinois University Press

2010. 136 pp.

Reviewed by Adam Breckenridge

University of South Florida

With constant legal wrangling over copyright law increasingly muddling the boundaries of where those laws apply to the classroom, TyAnna Herrington's book, *Intellectual Property on Campus: Students' Rights and Responsibilities*, is an invaluable guide for administrators, students and instructors who need to be aware of the parameters of copyright law and how it applies to coursework. I feel I would be remiss if I did not start this review with the same disclaimer Herrington includes in her introduction: "[this book] is not meant to offer legal counsel or specific answers to decisions about how to treat intellectual products developed within the educational setting" (8). Rather, it is intended to "provide students and their instructors with a basis for understanding how the law might affect their rights and responsibilities in treating intellectual products" (8). Herrington covers these rights and responsibilities in four sections: Students' Rights in Their Intellectual Products; Legal Effects of Student Collaborative Effort; Intellectual Products Within Educational Settings and Authorship, Plagiarism and Copyright.

The fourth section, Authorship, Plagiarism and Copyright, is perhaps the most useful for writing programs administrators. Indeed, its thorough

Programmatic Perspectives, 5(2), Fall 2013: 153–155. Contact author: <breckenridge@mail.usf.edu>.

discussion regarding the differences between plagiarism and copyright violation is relevant to writing program work because of the way it outlines at what point copyright violation becomes plagiarism (it is a question of whether someone is copying too much of others' works - which can be complicated because of the fuzzy definition of fair use - or trying to pass it off as their own). Of particular interest is the discussion of how plagiarism detection sites are unethical and possibly violate students' own copyright. Ironically, a site like Turnitin.com makes an unauthorized copy of the students' work and, if it is uploaded by a professor, could qualify as unauthorized use of a student's work. These services, Herrington argues, also tends to create an environment of distrust in the classroom. She discusses plagiarism in a social context, pointing out among other things that there are no legal ramifications for plagiarism because it is an entirely social taboo and that its social definition is not something we can even agree upon.

The other three sections of the book examine students' rights to the intellectual work they create in a university, how those rights are affected by collaborative work, and some of the pedagogical implications of these rights. The first section, *Students' Rights in Their Intellectual Products*, deals with two sides to copyright: students' use of copyrighted material and the copyrights they own to their own work. Herrington reminds us that the purpose of copyright is more for the sake of the public than it is for the author, as it protects the public's right to use copyrighted materials in certain capacities and that students need to be aware of the parameters of fair use. The author emphasizes the necessity for students to understand that copyright protects words and not ideas and so, while they have the right to build upon the ideas of others, they don't have the right to take their words.

The second section, *Legal Effects of Student Collaborative Effort*, lays out the complications that come about when students engage in developing projects with others. While Herrington breaks down different categories, she focuses particularly on students collaborating with students and on students collaborating with professors. The author analyzes these two categories in light of an important legal factor, namely that students are not employees of a university (at least, not in their capacity as students). As such, in the eyes of the law, students aren't held to joint copyright law in the same way that they would be if they had been hired to a position. Herrington also warns students of the dangers of working with faculty, citing several anecdotes where faculty stole students' work but in only a couple of instances was the student able to successfully sue for damages.

The third section, *Intellectual Products Within Educational Settings*, in-

cludes a breakdown of how copyright laws apply to various writings such as criticism, comment, news reporting, teaching, scholarship, and research. In addition, this section discusses students' free speech rights in relation to copyright law, focusing specifically on parody as a form of free speech that the Supreme Court has consistently upheld despite the many copyright infringement suits that have come about from it (in short, students are free to exercise parody in their work with little concern about legal repercussions). This is also the chapter in which the author addresses the DMCA (Digital Millennium Copyright Act) and software piracy, especially peer to peer sharing. Perhaps one of the most valuable lessons of this section is that a teacher cannot be held liable for a student's use of pirated materials in the classroom.

The book concludes with general considerations regarding the ethical, legal, and pedagogical ramifications of copyright. Herrington offers pedagogical strategies for helping students avoid plagiarism, most of which revolve around helping students understand the boundaries of plagiarism and respecting them as authors in their own right. But she also speaks of the duties of students and educators; she reminds us in particular that students have an obligation to respect intellectual products but also that we as educators have not just an ethical but a fiduciary duty to handle students' works with care. (104) The author also addresses how society has come to reinforce in the students' minds certain ideas about what an author is (the death of the author having never taken much hold outside of the academy) and that students' conceptions of authorship are going to be defined more by these societal mores than by our own conceptions of what it means to be an author (incidentally, copyright law doesn't really give much consideration to postmodernism).

Overall, *Intellectual Property on Campus* is a valuable text for any administrator who has to oversee writing curricula but also for teachers who deal with students' written material in the classroom. It could also make a good text to assign to graduate students, or to more advanced undergraduate students, though it might prove to be a bit too technical for some of them. And at just a little over 120 pages, it is succinct enough for even the busiest people to find time for it. The legal reaction to digital technologies has served only to complicate issues surrounding copyright and, since the legal ramifications can be significant, the more we can do to keep ourselves informed, the better off we will be.