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Developing Global Literacy: Best Practices for Teaching Technical Communication Internationally

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Developing Global Literacy:
Best Practices for Teaching Technical Communication Internationally

By
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An Alternate Plan Paper Submitted in Partial Fulfillment of the Requirements for
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Chapter 1: Introduction

The teaching of technical communication, well-established in the United States with 134 institutions nationwide offering programs in technical communication (Society for Technical Communication), has been expanding beyond English-speaking borders for several decades. In fact, the pedagogy and practice of technical communication parallels that of the U.S. in much of Canada, Western Europe, New Zealand, and Australia (Alred 2001) and has made impressive strides in the last ten to fifteen years (Krause 1995). However, despite the push to introduce and develop technical communication around the globe, many non-Western countries have only begun, or are still struggling, to incorporate academic programs into college curricula (Ding 2010) and to recognize technical communication as a distinct and legitimate career (Jacobson 2001).

Globalization has increased the value of and need for skilled technical communicators around the world. It is no longer feasible for products to ship without usable documentation, nor is it realistic to rely on traditional methods of technical mastery in many countries (for example, through experienced family and friends) as material possessions multiply rapidly and common products become increasingly complex. Likewise, business is less likely to be conducted locally and orally than ever before. Cross-cultural business is often conducted in a virtual environment and depends on technological innovations such as fax machines, email, and teleconferencing. Clear business documentation is often a necessity that ensures continued business growth and builds relationships between people from various countries and cultures. More than ever, skilled technical communicators have shifted from being considered a luxury to being a necessary component in the global marketplace.

The shift from nationalization to globalization has likewise increased the need for academic programs in technical communication around the world. The need for trained technical communicators will only increase in the foreseeable future as global communication, trade, and collaboration increase. However, the expansion of the field does not ensure that technical communicators worldwide are currently prepared for the work that they must do. Although the challenges differ, depending on the culture and the situation, the fact remains that there are challenges to teaching a Westernized discipline to non-Western students. U.S. faculty cannot simply export their courses to other countries to ensure that technical communication is understood and adopted uniformly around the world (Ding 2010). However, the need to globalize is not just a challenge for countries lacking a tradition of technical communication. Increasingly, educators in the U.S. are finding that their students—while comfortable with the tenets of technical communication in general—also lack the cross-cultural understanding and communicative skills necessary to succeed in the global marketplace (Maylath 1997; Duin and Starke-Meyerring 2003). Teaching technical communication across cultures is a challenge that educators continue to face and must master to ensure increasing compatibility of technical information across national and cultural boundaries.

The significance of research on international technical communication education

By studying abroad in Scotland and Spain, and, more recently, teaching an English composition course for international students, I have experienced both sides of cross-cultural education. I recognize the challenges inherent in teaching Americanized ideas to culturally diverse populations. Our form of education is based on beliefs, values, and assumptions that do not necessarily hold true for members of other cultures. This is

true throughout the educational system but especially so in technical communication. In order to guarantee the survival and expansion of technical communication education around the world, we must identify and meet the challenges facing educators in an international setting. And that is the point of this paper: to understand how technical communication education must be adapted to best serve international learners in their home countries.

Golemon states that few guidelines exist for designing technical communication programs for international audiences (2008, 171). More specifically, Roberts and Tuleja explain that the 60,000+ Chinese students studying in the U.S. have influenced the practices of U.S. instructors, but they believe that current research does not effectively address situations where Western instructors teach Chinese students in China (474). Despite the lack of resources describing best practices, cross-cultural partnerships, on-site workshops and courses, and online collaborations have been and continue to be conducted around the globe. As an English instructor and a technical communicator who has long been interested in cross-cultural relationships, I want to understand how U.S. educators can successfully teach technical communication to educators and students in other countries and from other cultures.

Initially, I intended to explore the methods used by U.S. educators to teach technical communication in different regions around the world, challenges encountered by instructors, and techniques used to meet these challenges. However, as I began to collect and read the available research, this approach did not fit my findings. It became clear that technical communication in China and the advent of Globally Networked Learning Environments (GNLEs) were at the forefront of educators' minds in international technical communication education. To accommodate these findings, I

rethought my approach and used the following research questions to guide the discussion in this paper:

1. How do U.S. instructors teach technical communication to students and instructors in China and how do these methods compare to how U.S. instructors teach it in other countries?

2. What are common challenges and solutions to teaching with each method, from the point of view of U.S. instructors?

3. What are some best practices for U.S. technical communication instructors teaching or collaborating internationally?

The answers to the first two questions will set the stage for the discussion of the third question, which is the driving force behind this paper. By seeking answers to the above-mentioned research questions and identifying teaching strategies, both good and bad, through my research, this paper will provide educators considering international teaching and collaboration with a better understanding of what has been done before, what works, and what does not work.

Given the limitations of the research—relying on published material available online, through MSU's library subscriptions and interlibrary loan, and from my personal collection and the collections of professors—it is impossible to locate every example of international collaboration in technical communication. Additionally, the research is restricted to the information that authors chose to include in their publications, so unspoken or overlooked challenges and solutions are not available for discussion here. It was also necessary to exclude some examples in the literature in order to maintain a reasonable length and consistency between chapters. Despite the limitations, the paper

strives to present a representative sample of international coursework, which educators can draw on to develop future courses.

Understanding the organization of this paper

This paper will examine three common types of courses discussed in the literature: workshops, faculty exchanges, and e-collaborations. Each chapter will examine one type of course, the challenges that instructors faced in teaching the courses, and the solutions that instructors instituted to address challenges. Finally, after discussing the types of technical communication courses taught internationally, challenges, and solutions, the paper will identify some best practices in teaching technical communication to international learners, face-to-face and through online collaborations.

This paper addresses each of the research questions using China as a touchstone for comparing practices, challenges, and solutions to teaching technical communication outside of the U.S. Because of the recent and rapid rise of Chinese technological innovations and prosperity (Barnum et al. 2001), educators have given significant consideration to the challenges of preparing technical communicators in China to communicate effectively with the rest of the world. In 1994, Lou Chengzhao, a professor at Hebei University, China, asserted that technical writing was an established, but scattered, discipline in China. However, Huiling Ding, published in 2010, examined the lack of success of American educators in China and admitted that, "technical communication has yet to become a mature discipline in China" (302). Since the late 1980s, envoys have visited and taught technical communication to Chinese educators and students with relatively little success. Therefore, China remains a country desperately in need of trained technical communicators, and the quest continues to introduce foreign

concepts—including user-friendly documentation and Westernized resumes—in a country where educators, and, more importantly, administrators, have not previously embraced this change.

In other countries, technical communication has fared much better, and, indeed, educators may have lessons to teach their counterparts in the United States (Smith 2003). Those countries and cultures that fall in the middle of the spectrum have shown progress in the teaching and implementation of technical communication. However, educators teaching in these countries, Mexico and Russia among them, may still benefit from a general understanding of best practices for teaching technical communication to an international audience. Programs, challenges, and solutions to teaching technical communication in China will be addressed first in each chapter. This discussion will be followed by a summary of programs in and challenges and solutions to teaching technical communication in other countries.

Because of the extensive published research available on teaching technical communication in China, and the prominence of that country on the world stage, this organizational strategy will demonstrate the relevance and increase the readability of this paper. Educators will be able to search for information by program type or by university and country. By regularly returning to the theme of technical communication in China, readers will be able to orient themselves and understand how challenges and recommendations are related to their own areas of interest.

The importance of place when teaching international learners

For the purposes of this paper, it is crucial to distinguish between courses delivered in the U.S. and courses delivered in the students' own countries. Chapters 2 and

3 of this paper emphasize the educators' experiences abroad, but Chapter 4 examines scenarios where instructors (and sometimes half of the student population) remain in the U.S. while collaborating with international students and faculty who remain in their home countries. Educators' and students' sense of place influences the design and delivery of the courses and an understanding of this influence will assist in understanding the challenges, solutions, and best practices described in this paper.

Colleges and universities in the United States have a long tradition of attracting international students. In fact, some of the most prestigious American universities boast astronomical levels of international enrollees, including MIT, whose international graduate students comprised 38% of enrollment in 2009 (Craig et al. 2010, 275). Given the numbers of international students studying at U.S. institutions, many instructors in higher education have encountered non-American students and non-native speakers of English in their courses. More than 15 years ago, Mohsen Mirshafiei, a native Persian teaching at California State University, emphasized the need to alter technical communication instruction to better suit international students studying in the U.S. (1994), but more recent studies indicate that international students continue to struggle in the technical communication classroom (Holmes, 2004; St. Amant, 2007). Although many instructors do consciously alter their courses with international students in mind, international students studying in the U.S. generally must cope with greater language and cultural barriers than their instructors.

International students taking advantage of the growth in online degree programs also encounter greater challenges than their instructors. As reputable universities move more and more coursework online, and deregulation removes obstacles to an international postsecondary education (St. Amant 2007, 15), it has become feasible for

international students to enroll in U.S. universities while remaining in their home countries. This has the potential for exacerbating the challenges of language and culture because students remain immersed in their native culture while spending brief periods of time exposed to the educational style and expectations of another culture. Additionally, Avery, Civjan, and Johri note that "many additional factors complicate the equation: lack of rapid sensory feedback, the often asynchronous nature of communication… and fewer opportunities for group members to get to know and trust each other in informal settings" (2005, 247). While problems and miscommunications in the online classroom involve both the instructors and the students, miscommunications are more likely to adversely affect the students than the instructors. In addition to language and culture barriers, students in their native countries also may face technological barriers such as unreliable infrastructure or the high cost of Internet access, and seemingly less significant barriers, such as unconventional meeting times (St. Amant 2007, 19-25). The challenges and solutions to online teaching will be discussed in further detail in Chapter 4.

The tables are turned when American educators work abroad. When teaching internationally, U.S. instructors often face challenges that would never arise or even occur to them while teaching in the U.S. In many cases, technology is unfamiliar, unreliable, or nonexistent (Coggin et al. 2001; Dautermann 2005; Sapp 2004). In other cases, communication and cultural barriers serve to undermine or destroy the educator's intentions. Misunderstandings with university administration and faculty may force significant changes in course plans or completely derail a project (Barnum et al. 2001; Brown 2006; Hagen 1998). In some countries, corruption leads to misappropriated resources, lack of student attendance and participation, and limited autonomy and power for individual educators (Harootunian 2007). The challenges of teaching abroad,

especially in the area of technical communication, cannot be underestimated and will be examined more closely in Chapters 2 and 3.

Implications of research on international technical communication education

Patricia Golemon calls for those in technical communication education to develop clear goals for "programs in international settings" (2008, 171). Others in the field agree that international collaboration for the purposes of education is necessary to develop skilled practitioners in the fields of business writing and technical communication (Gattis 2005; Hayhoe 2006). These sentiments are echoed throughout the research, indicating that technical communication has entered a new era and that globalization is not just desirable, it is imperative. Specifically, the literature demonstrates an increased movement toward GNLEs, by which students and educators work together internationally, often by replicating collaboration in the global workplace. This paper brings technical communication instructors one step closer to understanding how to teach technical communication to and collaborate with international students and teachers. By compiling information about a representative sample of technical communication workshops, faculty exchanges, and e-collaborations, this paper provides educators with information that they can use to develop successful courses exclusively for or including large populations of international learners.

Additionally, this paper identifies some of the most common challenges facing technical communication educators in a variety of situations, as well as recommendations for meeting many of the challenges. Interestingly, the literature indicates that many of the challenges facing educators cannot be directly linked to the teaching of technical communication. This suggests that instructors may benefit from studying cross-cultural

pedagogy in general in order to more fully prepare for teaching internationally. However, by reading about the experiences of others teaching internationally and learning about the problems that they have encountered, the solutions that they have enacted, and the recommendations being made for the future, educators planning to or currently engaged in cross-cultural exchanges and collaborations will be better prepared to avoid or readily meet potential challenges in the classroom.

Of course, technical communication education occurs between real people whose thoughts, beliefs, and actions rarely conform to simple stereotypes. The best practices put forth in this paper are meant to transcend basic cultural differences and instead focus on common cultural values, such as relationships, institutional structures, and context-appropriate education. However, the recommendations in this paper remain nothing more than recommendations until thoughtful, knowledgeable, and innovative educators put them into practice and tweak them for their own purposes. By understanding current theory and practice in international technical communication education, learning from the missteps and successes of their colleagues, and incorporating globally appropriate recommendations into their classrooms, U.S. educators will be better prepared to deliver instruction abroad and develop mutually beneficial collaborations across cultures.

Chapter 2: Workshops for international learners

Workshops are defined as face-to-face educational experiences that take place over several days or weeks. Workshops are much shorter than a traditional higher education course. Generally, the goal of a workshop is to introduce a new concept or skill and to encourage immediate application of the skill. Workshops may occur at any time during the year, though many in the literature were held over the summer (Barnum et at. 2001; Dautermann 2005; Ding and Jablonski 2001). Additionally, workshops may be part-day or full-day endeavors and may or may not require participants to complete work outside of class. The length of the workshop is the greatest commonality, as the literature presents a variety of faculty arrangements, participants, and course materials and goals. This chapter discusses workshops held in China and their associated challenges and solutions before discussing workshops held in other countries.

Workshops in China

Southeast University

One common type of workshop delivered abroad that was described in the literature was a two-week or 10-day crash course in technical communication. The teachers, students, classrooms, and materials varied from course to course, but this timeline appeared again and again. Barnum et al. introduced this format in 1999 by conducting a "10-day institute with five faculty" at Southeast University in Nanjing, China (2001, 403). Faculty from universities in the U.S. and New Zealand led the workshop. The participants included 50 high school and university teachers from a variety of departments and with various levels of English proficiency, many who attended

to fulfill their annual teacher-training requirement (Barnum et al. 2001, 402). Each day consisted of three hours of lecture followed by three hours of activities, with each faculty member presenting and leading activities for their chosen topics (Barnum et al. 2001).

Suzhou University

Ding and Jablonski replicated this two-week format in the summer of 2000 at Suzhou University, near Shanghai, China. The 27 participants displayed even greater diversity than those at Southeast University, ranging from middle-school students to teachers to business people, largely because the course had been—unbeknownst to the presenters—advertised as focusing on English conversation. Ding, a native Chinese speaker, and Jablonski, colleagues at Ferris State University, had anticipated leading a seminar for the English department faculty and students, but the class makeup forced them to simplify their material and focus on the basics of technical communication (Ding and Jablonski 2001). The authors relied on lecture and group activities and used questionnaires to gauge learning (Ding and Jablonski 2001).

Changchun

Jennie Dautermann, from Miami University, also taught several two-week workshops on business writing in Changchun, China. According to email correspondence with the author, these workshops were held every summer from 1999 to 2001. The workshops were a solo effort focusing on business communication; however, Dautermann's workshops were one in a series of four workshops designed for postsecondary instructors (2005, 142). Workshop participants consisted of 45 Chinese English instructors and, unlike the two workshops listed above, the workshop was held in

a computer lab. Dautermann emphasized practical application, so the course relied

largely on discussions, individual and small group projects, and one-on-one conferences.

Challenges encountered by workshop leaders in China

    Differing educational expectations

    The most common challenge facing the workshop leaders was the difference in

expectations of Chinese students and Western educators. The Chinese emphasis on

Confucian principles leads students and educators to view their roles very differently than

U.S. students and educators. Although this is a generalization, all of the workshop leaders

noticed that Chinese students hesitated to ask questions during class, and they were not

comfortable actively participating in class discussions. Chinese students show their

commitment to learning through reverence for the instructor and what the instructor has

to say (Dragga 1999, 372). Ding and Jablonski found that students preferred to memorize

rather than analyze or critique the workshop materials, and students were eager to quote

their instructors word-for-word (2001). Similarly, Dautermann was unable to completely

overcome the "traditions of learner passivity" (2005, 156), and Barnum et al. found that

the participants' feedback largely consisted of "giving back 'facts'" (2001, 405). Coggin,

Coggin, and Li reinforce the idea that Chinese learners expect to listen, have attention

focused on the teacher, and use memorization to demonstrate their learning (2001).

    Differing social and educational systems

    Other common challenges stemmed from working within the Chinese social and

educational system. Workshop leaders had difficulty ensuring that they would be teaching

what and whom they had originally agreed to teach. This was likely due to the largely

oral culture of China (Cibangu 2009), the curricular interest in spoken and written

English (as opposed to technical communication) (Wiles 2003, 375), and Chinese reliance on *guanxi*, which emphasizes building long-term relationships prior to collaborating (Cen et al. 2004; St. Amant 2001; Wiles 2003). For example, Barnum et al. went through several stages of negotiations prior to arriving in China. Further changes were made to their workshop plans after Barnum and colleagues' arrival at the university. Additionally, the instructors struggled to prepare materials with little information regarding the participants (Barnum et al. 2001). Ding and Jablonski found negotiations to be even more difficult. The vice president of foreign affairs at the host university formally invited them to teach technical writing to students and teachers in the English program; however, the College of Foreign Languages and Studies repeatedly requested that they focus on spoken English (both before and after the formal invitation), and advertised the workshop as such. As a result, they soon found that their original workshop plan, designed for students and faculty in the English department, would not work for the actual participants (Ding and Jablonski 2001).

In addition to struggles with university administration, all three workshops' leaders encountered resistance to change among the workshop participants. The authors identified several reasons for this resistance, but the main hurdle discussed was the current educational system in China. Due to the standardization of secondary and post-secondary education, instructors have little individual freedom when designing and implementing courses (Barnum et al. 2001, 410; Dautermann 2005, 145). Duan and Gu point to the standardization of English-language teaching through the College English Test as an example of this standardization, where students are prepared to pass a test rather than to demonstrate true understanding and practical use of the language (2005, 436). Also, because of their already demanding course loads, instructors demonstrated

reluctance to institute changes that would further increase their work. When Ding and Jablonski met with English faculty following the workshop, these professors indicated that neither they, nor their students, could feasibly adopt a more Western approach to teaching in general, and technical communication in particular (2001).

The language barrier

The third common challenge discussed in the literature was the language barrier. Chinese, a pictographic language, is much different than English (Barnum et al. 2001; Tegtmeier et al. 1999). Although students may spend years studying English, their studies focus more on grammar and punctuation than on speaking and vocabulary (Coggin, Coggin, and Li 2001), and English instruction in China often fails to meet the needs of those involved in global business (Wu 2001). In general, workshop participants lacked some of the necessary language skills to study technical communication in English. This was partly due to workshops being open to those outside of the field of English (Barnum et al. 2001), including secondary school students (Ding and Jablonski 2001). However, even in Dautermann's course, which consisted entirely of English teachers, participants often mimicked language rather than using original writing, and simple style exercises caused "more loss of face than learning" (2005, 147). In some cases participants were needlessly preoccupied with vocabulary (Barnum et al. 2001, 405), while in other cases unfamiliarity with terminology led to lessons being misunderstood or abandoned (Barnum et al. 2001, 411; Ding and Jablonski 2001).

Unfamiliarity with and unreliability of technology

The final major challenge that affected the instructors' ability to deliver successful workshops on technical communication was the lack of familiarity with technology and

lack of reliable technology. At the time of Barnum et al.'s workshop, computer and Internet access were severely limited to the average Chinese student, which resulted in corresponding limitations in technical vocabulary (2001, 402). A special topic on writing for the Internet was largely useless to an audience who rarely used computers or the Internet (Barnum et al. 2001, 414). Dautermann was the only instructor to teach in a computer lab, and this brought its own problems. Dautermann explains: "Damaged disks, puzzling software, unexpected shutdowns, lost files, and unexpected error messages were constant interruptions" (2005, 143). Additionally, lack of connectivity hampered efforts to print and distribute files (Dautermann 2005, 144). However, writing in the same year, Duan and Gu indicated that computers were commonly available for university students (2005, 438), so problems associated with technology may be closely related to lack of resources for specific universities and student populations. Presumably technology and access have improved since these articles were written, as they have around the globe, though it is no secret that the Chinese government often places restrictions on web access.

Inaccurate definitions, politeness, and self-consciousness

Other challenges discussed in the literature were relatively minor because they could be immediately dealt with or avoided, for the most part. Both Barnum et al. and Ding and Jablonski found that participants, and even English faculty, were confused about the definition and purpose of technical communication. Barnum et al.'s participants thought technical communication was writing done by and for technical professionals. Due to this inaccurate assumption, participants expected technical communication coursework to focus on vocabulary and terminology. Additionally many participants struggled to be direct in their writing and to provide feedback to their peers

(Barnum et al. 2001). Participants also wanted more rules, guidelines, and structure for their writing tasks (Barnum et al. 2001; Dautermann 2005). Additionally, participants were visibly self-conscious about their ability to perform. Ding and Jablonski had difficulty administering a simple survey because participants worried that it was a test that they would not "pass" (2001, 422), and Dautermann's participants resisted her use of interactive techniques and group work (2005).

Solutions enacted by workshop leaders in China

Flexibility and relationship-building

Although few of the challenges discussed above were remedied within the two weeks that the instructors spent in China, all of the instructors found ways to increase productivity in and out of the classroom. Barnum et al. maintained an attitude of flexibility when dealing with the Southeast University administration (2001, 403). Ding and Jablonski arranged meetings with English-language faculty so that the purpose of their visit—to communicate with potential teachers of technical communication in China—was not in vain (2001). Dautermann used private conferences to connect with the participants (2001, 146) and grouped them into consistent workgroups (2001, 149) to create an atmosphere of trust and cooperation.

Familiar classroom formats and guidance for participants

To address issues of the learning environment and language, all of the instructors incorporated lecture elements into the workshops. Barnum et al. began each day with three hours of lecture in the morning and three hours of activities in the afternoon (2001, 401) and used PowerPoint slides to visually convey the same information that was presented orally (2001, 403). Ding and Jablonski relied heavily on lectures and wrote most

of what they said on a chalkboard so that students could better follow the material (2001, 424). By allowing participants to remain in their comfort zone for a portion of each day—generally before transitioning to a more active, learner-centered style of teaching—instructors demonstrated that they understood the traditional teaching conventions, which likely increased the instructors' credibility. To deal with participants' need for guidance, Dautermann provided a default document format and taught them the "Contact, Details, Courteous Closing" pattern, which they used throughout the workshop (2005, 147). This provided parameters within which participants felt comfortable and allowed them to focus on elements of content and genre, rather than being distracted by the format.

However, despite these solutions to appeal to participants in the short term, given the time constraints placed on the workshop leaders and the unfamiliarity of participants with technical communication and U.S. teaching styles, Duan and Gu concluded that these workshops failed to produce any significant or lasting results (2005, 435). This paper will discuss the long-term recommendations made by Barnum et al., Ding and Jablonski, and Dautermann in Chapter 5.

Workshops outside of China

Petrozavodsk, Russia

Although the two-week workshop appears to be a common approach to teaching technical communication in China, this timeline is not a universal standard. In 1996, Patricia Hagen taught a series of business writing workshops in Petrozavodsk, Russia. She anticipated five or six weeks' worth of instruction for a group of English-language faculty. In contrast to the Chinese examples discussed above, Hagen found that the participant

demographic met expectations, but the timeline, and, in fact, whether the course would be held at all, was up for debate (1998, 110-111). However, the structure of the workshop was similar to those taught in China; Hagen relied largely on discussions and in-class activities (1998).

St. Petersburg, Russia; Prague, Czech Republic; and Athens, Greece

More recent technical communication workshops abroad include a series of lectures delivered to an advanced English course at Herzen State Pedagogical University in St. Petersburg, Russia (Bowen et al. 2006, 131), and what Lynne Texter describes as "40 hours of teaching over 2 weekends," which took place in Prague, Czech Republic, and Athens, Greece (2007, 353). Both of these workshops were designed for university students and relied on in-class practice and discussion. For the workshop in Russia, students and faculty requested that Bowen, a professor of rhetoric and English education at Fairfield University, focus on writing resumes and cover letters (Bowen et al. 2006), while those in Prague and Athens relied heavily on case studies (Texter 2007, 355).

Challenges encountered by workshop leaders outside of China

In the literature, workshop leaders working in Eastern Europe and Greece faced fewer fundamental challenges than workshop leaders in China. The participants generally understood the subject of the workshops, were eager to learn about American business and technical writing, and even had a role in requesting that specific topics be covered (Bowen et al. 2006; Hagen 1998). None of the authors encountered language barriers to the extent that those in China did, and, in fact, Hagen indicates that all of the workshop participants were "very fluent" in English (1998, 111). Although there were fewer problems overall, Hagen, Bowen et al., and, to a lesser extent, Texter still encountered

similar issues to those teaching in China, including dealing with largely oral cultures and lack of familiarity with U.S. business writing conventions.

Teaching a written practice in oral cultures

Russia is a largely oral culture. As Harootunian suggests, written communication in the former-Soviet system is most often used to perpetuate corruption (2007). Therefore, written documents do not hold the same sway as an oral agreement with a trusted associate, and they certainly do not hold the same sway as they do in the United States (Hagen 1998). Due to the history associated with written documentation, and the general public perception that documentation is unnecessary and unreliable, American educators in Russia and former Soviet states face a major hurdle. Technical communication and business writing are largely written endeavors, and suspicion of documentation must be overcome for students to successfully prepare for work in global communication. Another element of this oral culture is that university-level evaluations generally consist of oral exams, even in English classes. At Herzen State Pedagogical University, Bowen et al. note that of the 21 courses required of English majors, none focused on writing. As such, students had little experience with analysis, argument, and reflection, and no experience with business genres prior to the workshop (2006, 133-136).

This lack of writing extends beyond the classroom, with the majority of Hagen's English-faculty participants claiming that they had never received so much as a written memo in their careers (1998, 114). Bowen's students indicated a similar belief, explaining that even such written communication as a thank-you following a job interview would be seen as too formal (2006, 137). Clearly, a general wariness of documentation and written communication, as well as a "gatekeeping" society where those in power guard

information rather than disseminate it (Hagen 1998, 113), have influenced the way that workshop participants approach written communication. For example, Bowen found that students preferred to write resumes as narratives (1998, 132), and Hagen's participants found it necessary to preface a written request with significant personal information to establish a relationship with the recipient and increase the likelihood of a response (2006, 113).

Goal obstruction, miscommunication, and time management

Beyond differing assumptions regarding the value of written communication, instructors faced difficulties in simply performing their jobs. Hagen found her Russian connections to be unhelpful in response to her requests for information and sample documents, and the administration actively stalled the workshop's start for reasons that she could not determine (1998, 110-111). She and Texter also encountered simple miscommunications, where instructions, examples, and anecdotes simply failed to translate (Hagen 1998; 2007). However, whereas the Russian participants (especially those over 25) were confused and annoyed by collaborative learning (Hagen 1998; 124-125), Texter's Czech and Greek students relished the opportunity to collaborate in class and welcomed a change from the typical lecture style of learning (2007, 355). In fact, one of the problems associated with an excited and active classroom was that students devoted themselves to the activities and required far more time than was allotted and heated discussion in order to complete collaborative assignments (Texter 2007, 355).

Solutions enacted by workshop leaders outside of China

Language and content

Although the instructors working in Europe developed many recommendations for the future—which will be addressed in Chapter 5—the immediate solutions that they enacted were hardly innovative. Texter regularly reminded herself to slow her speech, immerse herself in the local culture, and incorporate more international case studies (2007, 354). These changes allowed the students to follow Texter's lectures and make meaningful connections with the content during workshop time. Hagen often did what any good educator would do and backed up to address participant confusion as it occurred (1998, 112), which often involved paying attention to visual and contextual cues to determine when to stop and provide more explanation or practice.

Teaching style and course schedule

Some of the proposed solutions were more culturally specific and less obvious than those mentioned above. To overcome participant skepticism and to better align with the direct, authoritarian teacher figure in Russian society, Hagen developed a direct and explicit approach to teaching. The English-language faculty whom she was teaching felt more comfortable knowing that she was clearly in charge. Hagen also provided writing prescriptions and used lecture more often than she would when teaching in the U.S. to provide participants with the structure that they expected in a workshop (Hagen 1998, 124-125). Texter found that by building extra time into her international course schedules, she allowed her Greek and Czech participants to take full advantage of the collaborative activities (2007).

Chapter 3: Faculty exchanges abroad

Faculty exchanges, as addressed in this paper, refer to a full session or longer teaching appointments where one or more instructors from a participating university join the faculty of a host university. The more time that an educator has spent teaching abroad, the more fully he or she is able to evaluate challenges and solutions to best serving international students. The authors who participated in faculty exchanges articulated many valuable recommendations for future international teaching, which will be discussed in Chapter 5.

Faculty exchanges work well when the participating universities have skilled and knowledgeable faculty members able to fill a perceived gap in the host university's curricula. Once the gap has been addressed, ideally, changes will be made to continue filling the gap after the exchange faculty returns home. In the literature sometimes the exchange was reciprocal; however, because reciprocity is not the focus of this paper, this chapter also discusses unidirectional exchanges. This chapter examines exchanges both from the point of view of U.S. and Canadian educators and the point of view of visiting international scholars. It also discusses how these exchanges function for the international institutions and describes challenges and solutions identified by educators.

Faculty exchanges with the Chinese

Suzhou University

In the early 1980s, English and business communication instructors in the U.S. recognized the potential collaboration opportunities in China (Kam 1988; Zong and Hildebrandt 1983). In fact, English and Mandarin faculty exchanges between the U.S.

and China took place as early as 1986 (Kam 1988). Despite the need having been identified more than a decade earlier, the earliest technical communication faculty exchange with China to be found took place in 1998. Ron Smith, a member of a 1997 delegation of U.S. and Canadian technical communication faculty visiting China, spent one semester the following year teaching technical communication at Suzhou University. His course emphasized "report writing, manual writing, business presentations, and cross-cultural communication" (Tegtmeier et al. 1999). Other examples of faculty exchanges in China in the late 1990s and early 2000s were limited in the literature reviewed for this paper. However, the concept of a "reverse exchange," involving Chinese faculty studying technical communication in the U.S., is worth examining.

Capital University and Zhengzhou University

Ping Duan and Weiping Gu, exchange faculty from China who taught and studied at the University of North Carolina in 1997, serve as an example of a reverse exchange (2005, 439). After returning to China, they used their experiences in the U.S. to design technical communication courses for Capital University of Medical Science in Beijing and the Medical College of Zhengzhou University in Henan Province. One course, taught in 2001, was an 18-week technical communication course in English for postgraduate students (Duan and Gu 2005, 440). A second course, delivered in 2002, is described as "an elective course in technical communication" for 73 undergraduate students (Duan and Gu 2005, 437). Both courses met for 36 hours during the semester and involved a combination of multimedia lectures and workshop activities.

The Chinese University of Hong Kong

Despite the dearth of published research on technical communication faculty exchanges with China in the 1990s, this method of teaching was presented in the literature again in the mid 2000s. In 2006, Roberts and Tuleja taught managerial communication at The Chinese University of Hong Kong. Each section of the course lasted 14 weeks and consisted of approximately 20 Chinese business students. The course itself consisted of a lecture and a tutorial each week, and the students produced both written assignments and oral presentation (Roberts and Tuleja 2008, 475).

Challenges encountered by faculty in China

Differing educational expectations

Faculty on exchange in China encountered several of the same difficulties facing those teaching workshops in China. Primarily, exchange faculty struggled with the differing expectations of Chinese students compared to students in Western countries. This difference was apparent when attempting to engage students in the classroom environment. Roberts and Tuleja initially failed to involve students in discussions and received nothing more than blank stares from the students, even though the students knew the answers when called on (2008, 483). Similarly, Duan and Gu, returning home to China after teaching and studying in the U.S., found that students disliked interacting in class and were especially hesitant to offer personal views or critiques in the classroom (2005, 444). Another challenge was the students' expectations of a "correct" answer, which contributed to their inability or hesitation to recommend solutions when analyzing case studies (Roberts and Tuleja 2008, 478).

Additionally, the conventions and expectations of the English for Specific Purposes (ESP) classroom did not match those of the educators, which led to misunderstandings and confusion for both the educators and the students. For example, many students had never considered using traditional rhetorical strategies such as audience analysis (Duan and Gu 2005, 438) and were particularly skeptical about some of the techniques presented by their instructors, including the use of deductive reasoning (Roberts and Tuleja 2008, 482). Chinese students also place less value on the ideas of individuals (Coggin et al. 2001) and often heavily plagiarized when writing reports (Roberts and Tuleja 2008, 481-482). Finally, students were often more concerned with passing the final exam—typically the sole grading method in a course—than with long-term learning or application of the material (Duan and Gu 2005, 444).

Incompatibility of the current system with technical communication

Given that exchange faculty joined the university for an extended period of time and often interacted with Chinese faculty members, the authors reviewed in this chapter were in a position to identify challenges to teaching technical communication based on the current system. Duan and Gu, Chinese faculty who had studied technical communication in the United States, emphasized that Chinese educators remain unfamiliar with the field of technical communication (2005, 437). The traditional separation between humanities and science leads ESP instructors to ignore fundamental elements of technical communication because they are unfamiliar or uncomfortable with the technical aspects of the field (Duan and Gu 2005, 438-439). The traditional shortages of teachers and reliance on lectures has discouraged collaboration between educators and departments (Duan and Gu 2005) and has allowed for a classroom environment where

students regularly hold side conversations with fellow students during lectures because faculty typically ignore these distractions (Roberts and Tuleja 2008, 483).

Solutions enacted by faculty in China

The exchange faculty in the literature recognized that change would be necessary when they taught in China. Additionally, they all intended for the exchange to lead to long-term improvements in technical communication course offerings in China. To prepare for this, Smith developed his course based on input from both Canada's University College of the Cariboo and Suzhou University and used his course to compile objectives for future courses (Tegtmeier, et al. 1999). Duan and Gu, who actually wrote the textbook for their English for Technical Communication course, taught the first section themselves to ensure that it was taught as intended (2005, 440). However, despite their preparation, the educators encountered specific challenges that required resolution in the classroom.

Preparation and group work

To address challenges such as student involvement, faculty took steps to create a comfortable classroom environment. One strategy to put students at ease was to provide them with materials before class. Duan and Gu used the campus intranet to post course materials and asked that students preview the material prior to the start of each class (2005, 444). Roberts and Tuleja went one step further. In addition to posting notes online prior to class, they provided students with a clear structure for their lectures, preselected groups and tasks for group members, and gave students time to respond to questions in writing before seeking answers (2008, 485). Educators addressed students' lack of participation in several ways. First, team activities proved more effective for successful

interaction than large-group activities. Duan and Gu took advantage of their multimedia classroom setting to encourage participation. Students could be divided into groups through the computer system and communicate with headsets (2005, 445). Roberts and Tuleja also relied on small groups, and a group speaker was responsible for reporting the group's ideas back to the class (2008, 478).

Necessity of clear expectations

The exchange faculty also addressed the differences in Eastern and Western teaching styles by providing students with clear written expectations. Students received a clear and detailed syllabus (Duan and Gu 2005) as well as extremely detailed assignment descriptions (Roberts and Tuleja 2008, 486), so that information was always available for future reference. To encourage interaction in the classroom, faculty evaluated students on attendance, homework, and participation in addition to the final exam (Duan and Gu 2005, 445). Roberts and Tuleja chose to require group and individual oral presentations to provide further incentive for students to participate. However, exchange faculty also adjusted their expectations so that students were better able to meet them. For example, Roberts and Tuleja incorporated more lectures and formalized activities than they normally would, and they held a workshop on documentation when plagiarism proved problematic for their students (2008, 482-485). Duan and Gu changed their workshop activities to better prepare students for listening and speaking in English (2005, 442). By providing clear expectations and demonstrating a willingness to adjust teaching styles and lessons as needed, the faculty demonstrated a willingness to work with their students without completely adopting the traditional role of all-knowing lecturer.

Faculty exchanges with other countries

Justus Liebig University, Germany and Åbo Akademi, Finland

Technical communication faculty exchanges beyond China include those of

Gerald Alred and Ulla Connor in the mid-1990s. Alred taught at Justus Liebig University

in Germany as a visiting professor of business writing in 1994 (1997, 354). Alred taught

both basic and advanced business writing and his courses emphasized the writing process.

He avoided a formulaic approach to business writing in favor of focusing on the rhetorical

approach to creating business documents (1997, 365). He reports that, following his time

abroad, a similar course was offered by university faculty and attracted nearly twice the

expected number of students (Alred 1997, 368). Connor taught international business

writing to classes of 9 to 20 undergraduates from 1994 to 1995 at Åbo Akademi in

Finland (Connor et al. 1997, 64). This course is also discussed in Chapter 4 because

students participated in a cross-cultural simulation exchange along with receiving

instruction on international business writing and using case studies (Connor et al. 1997).

Providence University, Taiwan

In a more recent faculty exchange, Patricia Golemon describes her experience

teaching "the only technical communication class in English" at Providence University in

Taiwan in 2005 and 2006 (2008, 172). The course was the first of its kind at the university

and particularly popular because an American instructor taught it. Although Taiwan and

China share many cultural similarities, Golemon elaborates on the differences between

the two countries and establishes why this exchange cannot be lumped with the Chinese

faculty exchanges. Golemon provides few specifics regarding the course and students, but

she mentions that the student body lacked diversity. She also indicates that the class size

was too large and that she often relied on small group work to engage students (Golemon 2008).

Challenges encountered by faculty outside of China

> *Differing educational expectations*

Similar to faculty teaching in China, faculty teaching in Germany and Taiwan faced student expectations for which they were largely unprepared. In Germany, students typically strive to achieve perfection in their work and look for direct feedback and writing formulas to guide them to this goal. Therefore, Alred found that students disliked what they perceived as insincere feedback that focused on positive aspects of their paper before addressing problems (1997, 360). Additionally, students emphasized a desire to learn specific formulas for and characteristics of successful business writing, which conflicted with Alred's educational philosophy (1997, 365). In Taiwan, Golemon found that large class sizes perpetuated the use of lectures and lack of student involvement (2008, 171). As a result of cultural and situational expectations, students were more comfortable with rote learning and found it difficult to change their mentality to that of problem-solvers in the classroom. When Golemon attempted to elicit feedback and opinions from students, she found that students lacked confidence in their judgment unless they knew what they were "supposed to find" (2008, 173).

> *Differing approaches to communication*

Communication in general also proved problematic for Alred and Golemon. German culture emphasizes directness, and Alred notes that his some of his students' honest comments could be considered blunt and rude to Americans (1997, 359). Interestingly, this bluntness does not necessarily translate to the act of business writing.

The simplified and concise writing that is often desirable in the U.S. is not a typical trait of German technical writing. In fact, Alred's students expected business writing to be complex and elaborate—relying on lengthy sentences and paragraphs—to convey their intelligence (1997, 363). The German preference for complex and lengthy sentences is supported by Weiss' research, which suggests that single sentences often "support and qualify a single idea or related ideas" (1998, 256). In Taiwan, politeness, especially toward authority figures, is essential. Politeness is shown by accepting the instructor's words without question and refraining from voicing personal opinions in the classroom (Golemon 2008). As such, Golemon's course in Taiwan uncovered many of the same challenges encountered by faculty in China. For example, students refused to ask questions in class and were reluctant to participate in discussions or individually address the rest of the class (Golemon 2008).

Solutions enacted by faculty outside of China

Teaching style

Rather than fight the expectations of students in Germany, Alred attempted to meet students where they were and introduce concepts so that they resonated with students' preconceived notions of business writing. Alred found that students appreciated the step-by-step approach to writing that he introduced and understood the revision process better when he emphasized revision as a way to "perfect one's work" (1997, 358). However, rather than provide students with formulas for their writing, Alred focused on ethos, logos, and pathos, a rhetorical approach that would better prepare students to successfully communicate across cultures and in diverse situations in the future (1997, 369-370). Golemon's students also indicated a desire for a "correct" pattern, and she

emphasized analyzing the audience and purpose of each document rather than memorizing a specific formula (2008, 173).

Group work and anonymity

To take advantage of the group mentality more prominent in both Germany and Taiwan than in the U.S., Alred and Golemon both incorporated group work into their courses. This approach, also used by workshop leaders and faculty on exchange in China, has proven successful for a variety of situations. By using group work in class, students who were self-conscious about their language abilities participated and students had greater opportunities for discussing rhetorical contexts and approaches to writing projects (Alred 1997). Golemon found that group work encouraged participation by shifting the focus to the ideas of the group as opposed to the ideas of the individual (2008, 173). Allowing for anonymity was another way that Alred and Golemon encouraged questions and feedback. Alred solicited student questions anonymously by distributing index cards for students to write on (1997, 373). Golemon relied on a similar system, called "personal notes," which allowed students to ask questions without the pressure and discomfort of speaking in front of the class (2008, 173).

Although faculty on exchange found it impossible to meet every challenge in the classroom, they had more time to institute changes than those conducting workshops. Additionally, they were better equipped to accept challenges as value-neutral differences than see them as barriers to success. Through the increased time and interaction with their students, and increased involvement in the university community, these exchanges increased the longevity of the learning and the likelihood of incorporation of future courses into the university curricula.

Chapter 4: E-collaborations

E-collaborations refer to cross-cultural work between educators and, generally, students, where little or no face-to-face interaction takes place between the different cultures. The literature includes examples of educators collaborating for the purposes of research or course improvement (Craig, Poe, and González Rojas 2010; Sapp 2004) or educators in the U.S. teaching learners in other countries who were not enrolled in U.S. institutions (Wong and Schoech 2005). Frequently, entire classes in different countries worked together electronically to achieve academic goals (Anderson 2010; Herrington 2008; Maylath, Vandepitte, and Mousten, 2008; Mousten et al. 2010; Paretti, McNair, and Holloway-Attaway 2007), a scenario which Starke-Meyerring labels "Globally Networked Learning Environments (GNLEs)" (2010, 261).

As the literature shows, e-collaborations often are established between willing participants in all involved countries and focus on the mutual benefits of a virtual exchange in the classroom. Unlike workshops and faculty exchanges, e-collaborations do not necessitate face-to-face interaction and often emphasize cross-cultural learning from peers rather than from instructors. Given this emphasis, e-collaborations tend to be more common and more successful when all sides are already familiar with the practice of technical communication. Not surprisingly, the examples of e-collaborations between the U.S. and China in the literature were limited to a course focused more generally on information and communication technology (Wong and Schoech 2005), and a business communication course in Hong Kong (Du-Babcock and Varner 2008).

The information included in this chapter is valuable to answering the research questions in this paper for two reasons. First, e-collaborations bridge the gap of place that

was discussed in the introduction. Instructors rarely or never travel to teach, but neither do students. As such, there is a greater need for students and instructors to meet in the middle than when international students study at U.S. institutions or when instructors travel abroad to teach. Second, this type of international instruction has proven increasingly popular among teachers of technical communication (e.g. Anderson, et al. 2010; Craig, Poe, and González Rojas, 2010; Starke-Meyerring, 2010). In an effort to provide hands-on experience with globalization to more students studying technical communication in the U.S. and internationally, educators have begun to incorporate e-collaborations into their classes. As such, it is wise to examine a practice that will likely be more common than workshops and faculty exchanges in the near future.

Due to the sheer amount of research on e-collaborations and, specifically, GNLEs, it was impractical to summarize all of the programs discussed in the literature. Two well-known programs, the Global Classroom Project (Herrington 2008; Herrington and Tretyakov 2005) and the Trans-Atlantic project (Rainey, Smith, and Barnum 2008) have been the subject of extensive research and have produced theses of their own. For a detailed discussion of these GNLEs and others, see Starke-Meyerring and Wilson's *Designing Globally Networked Learning Environments: Visionary Partnerships, Policies, and Pedagogies*.

E-collaboration in China

Fudan University, Shanghai and the University of Hong Kong

Wong and Schoech, instructors from the University of Hong Kong and University of Texas respectively, co-taught "Information and Communication Technology in Social Service Organizations" online to students at Fudan University in Shanghai in 2003 (2005, 121). This was the first offering of the course, and the author of the accompanying

textbook, Dick Schoech, led ten synchronous chat sessions from Texas. Wong led one

face-to-face session at Fudan University in Shanghai to introduce students to the course.

Wong also planned to be on-site in Shanghai for student presentations at the end of the

course. Deliverables included a personal web page, several papers, a final portfolio, and a

PowerPoint presentation (2005, 126-127). Students in the course were enrolled in a

collaborative program for Master of Social Service Management, which allowed them to

receive their degree from the University of Hong Kong while remaining in Shanghai

(Wong and Schoech 2005, 121).

City University of Hong Kong and Illinois State University

The one example of a GNLE between the U.S. and China to be found took place

between English for Professional Communication students from the City University of

Hong Kong (CityU) and business communication students at Illinois State University

(ISU). Students collaborated to create a "fast-food industry analysis" of McDonald's

operations in the U.S. and China (Du-Babcock and Varner 2008, 159). The collaboration

lasted one semester and required three stages. First, students planned their projects and

established communication with their counterparts via email. Second, students met for

one 55-minute videoconference to discuss their findings. Third, students debriefed and

reflected on the collaboration (Du-Babcock and Varner 2008). Communication was

conducted in English, and all communication except for the videoconference took place

asynchronously.

Challenges encountered by e-collaborators working with the Chinese

Unreliable technology

The main challenge affecting the information and communication technology course at Fudan University related to technology. Because the course was held almost exclusively online, students needed regular and reliable computer and Internet access in order to participate. However, students were unable to use the technology available on-site at Fudan University because the use of a computer lab remained unresolved in the negotiations between the collaborating universities. Additionally, in the early 2000s, Shanghai lacked widespread broadband Internet access, and students relying on "Netbar" Internet access were restricted from downloading useful software on the computers (Wong and Schoech 2005, 129). Schoech also found that students' unstable Internet connections meant that they were often kicked out of the course chatroom during the meeting (Wong and Schoech 2005, 131).

Language and information barriers

The second challenge for both classes related to students' language skills. Schoech found that many students did not read the text before class; they claimed this was because it took them too long and they often had to reference a dictionary to understand the vocabulary (Wong and Schoech 2005, 135). Similarly, students had difficulty comprehending the English-language websites that the instructor referred them to for examples. Students at ISU and CityU also encountered language barriers during the videoconferencing portion of the collaboration. Students on both sides often misinterpreted vocabulary or were confused by the sentence structure of their counterparts, and, although they recognized it as it happened, neither side expended

much effort to rectify the misunderstandings (Du-Babcock and Varner 2008, 160). In regards to information barriers, Schoech found that a lack of locally published material combined with students' limited knowledge about local IT applications made the use of relevant material difficult and influenced the immediate applicability of course content (Wong and Schoech 2005, 141).

Differing goals and incentives

The most obvious challenge that appeared in the collaboration between CityU and ISU was the difference in effort and motivation between the teams. Students in Hong Kong produced far more detailed analyses and were far more prepared for the videoconference than their U.S. counterparts. This disparity was reflected in the fact that the collaborative project was worth 80% of the course grade at CityU, compared to 25% of the grade at ISU (Du-Babcock and Varner 164). Unfortunately, this led the CityU students to view the relationship as unequal because they received less help than they provided to their teammates in the U.S.

Solutions enacted by e-collaborators working with the Chinese

Preparing for technology

Du-Babcock and Varner anticipated technological challenges and allowed sufficient time for testing the videoconferencing system prior to its use and avoided any malfunctions (2008). Schoech found synchronous chat, although technologically problematic, to be ideal for coping with the variety of language abilities in the class. Many students felt more confident composing and comprehending written English than spoken English. The chat element of the class served as an equalizer among students with limited English-speaking skills and those with more advanced spoken English abilities (Wong and

Schoech 2005, 125). The benefit of chat was further realized when the instructor recorded and posted the transcripts to the course website. Regular access to the course website allowed students to read material at their own pace and catch up on the chat portion of the class if they fell behind in real time or if their connection failed during the synchronous sessions (Wong and Schoech 2005).

Supplemental course elements

Although Wong and Schoech struggled to overcome the challenges posed by technology, they had some success by incorporating a face-to-face meeting into the course and encouraging students to help one another. Wong largely served as a liaison between Schoech, in Texas, and the students, in Shanghai. Wong met students prior to the start of the online course, and assigned students to prepare an Internet home page about themselves (Wong and Schoech 2005, 142). Both of these strategies helped students to establish a relationship between instructors and class members and feel more connected and comfortable in the chat sessions. Students were also offered extra credit to help classmates outside of class (Wong and Schoech 2005, 142), which encouraged interaction between students and created more of a community of learners than might normally be found in an online setting. Du-Babcock and Varner supplemented the videoconferencing between U.S. and Chinese students with email correspondence before and a debriefing and reflection session after the synchronous meeting. The email element allowed the students to gain confidence in their counterparts before exchanging their research, and the reflection required students to examine their behavior during the videoconference to develop recommendations for future collaborations (Du-Babcock and Varner 2008).

E-collaboration outside of China

    Åbo Akademi, Finland and Antwerp Business School, Belgium

The first example of a business communication e-collaboration to be found in the literature started in 1994 between universities in Finland and Belgium and the Indiana University-Purdue University Indianapolis (IUPUI) (Connor et al. 1997). Five instructors collaborated on the project, one from Finland, two from Belgium, and two from the U.S. The course was delivered to both undergraduate and graduate students, depending on the institution. All instructors divided the course into three sections and required a simulation component during which students exchanged business documents with students in the other courses via fax (Connor et al. 1997). Instructors met face-to-face and also communicated via email, and, for the first year, Connor, a professor at IUPUI, participated in a faculty exchange in Finland while teaching the course (see Chapter 3) (1997, 64).

    Chalmers University of Technology and Bleckinge Institute of Technology, Sweden

Technical communication e-collaborations between the U.S. and Sweden were common in the literature, with the most recent example published in 2010. Anderson et al. describe a peer-review collaboration that took place in 2008 between students in technical communication courses at Chalmers University of Technology in Gothenburg, Sweden, and Miami University in Oxford, Ohio. The exchange was conducted entirely in English and involved two sets of asynchronous responses to unlinked class assignments using Google docs (2010, 299). Additionally, McNair and Paretti have written numerous articles with several coauthors about a collaborative project between U.S. engineering majors at Virginia Tech and Swedish digital media majors at Bleckinge Institute of

Technology. The Swedish students wrote material to accompany the U.S. engineering

students' capstone projects, for which the U.S. students acted as subject matter experts

(SMEs) (Paretti, McNair, and Holloway-Attaway 2007; McNair and Paretti 2010). Each

class sent two delegates to meet with students in the other country, and the Swedish

instructor also visited the U.S. classroom; all other interaction was conducted virtually

through email, Skype™, and Blackboard™ (Paretti, McNair, and Holloway-Attaway

2007, 338; McNair and Paretti 2010).

Universidad de la Habana, Cuba and Instituto Tecnológico y de Estudios Superiores de

Monterrey and Universidad de Quintana Roo, Mexico

David Sapp initiated a collaborative partnership for business writing between

Fairfield University in Connecticut and Universidad de la Habana in Cuba, beginning in

2003. Faculty from both universities developed courses requiring business communication

students to exchange documents ranging from letters of introduction to research essays

(Sapp 2004; Crabtree and Sapp 2005). In a different exchange beginning in 2008,

technical communication faculty at MIT joined with faculty from two universities in

Mexico to study and design pedagogies and course materials for writing across the

curriculum (WAC) for non-native speakers of English. These new pedagogies, including

the use of rough drafts, conferences, and rubrics for students writing essays in technical

courses, were to be implemented in the Mexican universities (Craig et al. 2010). Faculty

made site visits rarely; the majority of the communication between participating

educators took place via Skype™ and email (Craig et al. 2010).

Challenges encountered by e-collaborators working outside of China

Technology

Similar to the challenge regarding the e-collaboration in China, technology proved problematic for those involved in e-collaborations elsewhere. However, Sapp, devising a document exchange between students in the U.S. and Cuba, was the only instructor to explicitly focus on the challenge of limited and unreliable technology on one side of the exchange (2004, 273-274). Instead, technology proved problematic largely because participants used it to distance themselves from collaborators or to participate while remaining invisible to the instructor or other participants. In the exchanges between the U.S. and Sweden, technology allowed students to ignore standard etiquette and fail to properly introduce their team members when conversing over Skype™ (McNair and Paretti 2010, 344). Students involved in collaboration between the U.S. and Sweden also chose to or were required to communicate via collaborative websites, such as Google docs or Blackboard™, rather than use technology as a team-building tool, which allowed students both in both countries to further distance themselves from their partners overseas (McNair and Paretti 2010; Anderson et al. 2010).

Lack of personal connection and relationship building

Accompanying the use, misuse, or lack of technology is the inherent challenge of establishing personal relationships and commitment to group projects without face-to-face interaction. Students' lack of personal connection with their exchange peers kept many of them from truly benefitting from the experience. Paretti, McNair, and Holloway-Attaway note that students did not take the time to learn about their international partners in the U.S. or in Sweden. Instead, the SMEs (the engineering students in the U.S.) and the

technical writers (the digital media students in Sweden) approached the collaboration as another requirement to complete. Because group members spent no time introducing themselves or learning about their overseas partners, a sense of disembodiment occurred when communicating—there was no face or personal information to put to a given name or voice. Additionally, stereotypes, as opposed to actual discussion between the groups in the U.S. and Sweden, were used to understand the position of the other side (McNair and Paretti 2010, 349).

The physical and ideological distance separating students in Sweden and the U.S. also limited their feelings of responsibility toward their partners. For example, when conducting peer review, the U.S. students focused more on grammatical issues than on issues of content and context in the papers of their Swedish counterparts, even though their education emphasized the greater importance of responding to content-related issues (Anderson et al. 2010). Additionally, these distances kept students from accepting the help of the other group or from contributing as fully as possible to the collaborative effort. The U.S. engineering students did not even considering consulting their digital media counterparts in Sweden for advice or feedback on presenting their engineering projects, even though this was the Swedish students' area of expertise, and the Swedish students did not offer unsolicited advice (Paretti, McNair, and Holloway-Attaway 2007, 347).

Differing goals and incentives

Often in the literature, collaboration participants also had different goals for the projects and did not understand the goals of their partners. Anderson et al. admit that no changes were made to either course in preparation for the peer-review exchange, so the

assignments submitted for peer review were completely different for the U.S. students and the Swedish students (2010). In the case of the collaboration between the U.S. engineering students and the Swedish digital media students, the Swedish students were completely dependent on the cooperation of the engineering students. The engineering students did not clearly understand that the digital media students' assignment was to create white papers and promotional websites for the engineering projects—or did not understand what this meant—and they often ignored the digital media students' requests that did not match their personal goals for the engineering project (Paretti, McNair, and Holloway-Attaway 2007).

Additionally, as mentioned regarding the GNLE in China, instructors provided differing incentives for their students, which resulted in an imbalance between the two sides. For example, Swedish students involved in U.S.-Swedish peer-review collaboration volunteered to participate, while their counterparts in the U.S. were required to participate (Anderson et al. 2010). Grades also proved to be problematic because of the different values placed on collaboration. Fifty percent of the course grade for the digital media students in Sweden depended on their collaboration with the engineering students in the U.S., while collaboration only accounted for 10% of the grade for the engineering students (Paretti, McNair, and Holloway-Attaway 2007).

Geopolitics and limited resources

The final challenges facing e-collaborators in the literature concerns the general relations between collaborating countries and the disparity in resources between the U.S., Cuba, and Mexico. Sapp, working to establish faculty exchanges and distance collaborations between the U.S. and Cuba, blames geopolitics for hampering

collaborative efforts between the two countries. Institutional travel licenses between the U.S. and Cuba were revoked several times due to the political climate following the terrorist attacks on the World Trade Center on September 11, 2001, and leading up to the 2004 elections. These revokations kept faculty from visiting partner institutions and increased tensions between institutions as well (Crabtree and Sapp 2005, 20). Direct mail between the two countries was also impossible, and email communication was sporadic at best. Additionally, educators in Cuba dealt with limited paper for printing and distributing material, outdated textbooks, and limited Internet access, which made virtual collaboration, especially for writing classes, difficult (Sapp 2004). In the exchange between MIT and institutions in Mexico, *faculty members* in Mexico were the limited resource. Faced with large class sizes and heavy teaching loads, faculty in Mexico were concerned about adopting MIT's approach to technical writing, including team teaching, multiple drafts, and one-on-one conferences, which was necessary to achieve the goals of the collaboration (Craig et al. 2010, 276).

Solutions enacted by e-collaborators working outside of China

Site visits

One of the most successful techniques for establishing relationships and building trust with the other institution was to make one or more site visits during the planning and implementation stages of the collaboration. Technical communication faculty from MIT visited Mexico so that they could see their interactive and process-oriented classroom practices from the point of view of their Mexican colleagues. This helped to make their previously invisible cultural biases more obvious and allowed both sides to better understand and resolve their differences in opinion and practice (Craig et al. 2010,

276). Sapp also found that his visits to Cuba helped to cement a relationship between university faculty that might not have otherwise survived the geopolitical challenges (1994).

For the exchange between U.S. engineering students and Swedish digital media students, both classes sent two student representatives to the other university for brief visits during the semester. This face-to-face exchange established a closer relationship between the classes and provided new perspectives for those who had previously seen their partners as hostile or uncooperative (Swedish students' view of U.S. students) or lacking in technical knowledge (U.S. students' view of Swedish students) (Paretti, McNair, and Holloway-Attaway 2007, 346). Connor, one U.S. instructor in the technical communication collaboration between the U.S., Finland, and Belgium, took the site visit several steps further by simultaneously participating in a faculty exchange and an e-collaboration. She spent the first year of the course's implementation teaching business communication in Finland (Connor et al. 1997).

Open exchange of ideas

The other method that worked to meet the challenges of e-collaboration was to encourage the open exchange of ideas between students and faculty and to solicit feedback about the success of the program to help shape future collaborations. McNair and Paretti opened access to their U.S. engineering course's website for digital media students in Sweden so that all participants had access to the information that they needed at all times and so that the engineering students could see and comment on progress on the white papers and websites (2010, 349). This reduced the sense of gate keeping that was so problematic in the verbal exchanges—when the engineering students ignored or

dismissed the queries of the digital media students—and also addressed the problem of conflicting schedules resulting from the difference in time zones. Craig et al., collaborating to study WAC for non-native speakers of English and to implement new pedagogies for WAC in Mexico, created and hosted a WAC website at MIT. This site provided open access to resources for those in Mexico and elsewhere in an attempt to demonstrate the value of the partnership and draw more attention to the work being done in the collaboration (2010, 285). Various authors in the literature solicited feedback from students, participants, and colleagues to determine the reception of their programs and to understand how to improve collaboration in the future (Craig et al. 2010; McNair and Paretti 2010; Paretti, McNair, and Holloway-Attaway 2007).

Chapter 5: Best practices for teaching technical communication to international learners

As the literature demonstrates, many of the challenges facing international learners and instructors in technical communication have little or nothing to do with the field of technical communication itself. This indicates that an understanding and appreciation of technical communication is no longer a strictly Western value, and that educators and students still unfamiliar with technical communication are willing and able to learn the material, given the appropriate learning environment. In a way, this can be considered good news for those interested in introducing or expanding technical communication education internationally. Additionally, this means that current research into cross-cultural education in general likely will prove valuable for improving international courses in technical communication.

This chapter will discuss best practices for meeting the challenges either completely or partially stemming from the content and requirements of courses in technical communication. Although the majority of the challenges cannot be attributed to the discipline of technical communication, many can be. Some of the challenges already discussed, such as differing expectations for technical documents, *must* be addressed in order for international education to be successful and long lasting. Other challenges, such as relationship building, *should* be addressed because technical communication is a collaborative field that is increasingly reliant on virtual exchanges in the workplace. The paper excludes general best practices for teaching internationally, as that content is beyond the scope of this paper.

This chapter is divided into three sections. The first section provides recommendations and best practices for educators teaching in China, the second section provides recommendations and best practices for educators teaching anywhere outside of the U.S., and the third section provides recommendations and best practices for educators teaching internationally through the use of online tools. Overlap certainly exists, and many of the recommendations offered under a given section apply to the other sections. Indeed, as discussed in the introduction, the best practices are based on common cultural values and are meant to be widely applicable, whether the host institution is familiar or unfamiliar with technical communication. However, because China is used as a touchstone for this paper and U.S. educators in technical communication continue to struggle to develop the field there, it is valuable to include Chinese-specific recommendations before examining more general best practices.

Recommendations for technical communication courses in China

Developing personal relationships

Establishing personal and long-term relationships with interested parties abroad is absolutely necessary to build and maintain interest in technical communication, especially at Chinese institutions. *Guanxi*, "a long-term relationship in which parties have certain expectations of and obligations to one another" (St. Amant 2001, 386), plays a major role in the development of and continued commitment to partnerships in China because of the high value placed on personal relationships (Cen et al. 2004, 150; Wiles 2003, 372; Rainey et al. 2008, 82). Especially because technical communication is a relatively new and Western field of study, a technical communication program in China must be built upon strong relationships and alliances if it is to succeed (Coggin 2001; Ding 2010, 314).

Guanxi takes time and effort to develop, so, ideally, U.S. faculty should attempt partnerships with Chinese faculty or administrators with whom they already have relationships (Yu 2011, 73). However, in situations where *guanxi* has not been established prior to an exchange or collaboration, it is advisable to portray oneself as a friend and not to assume that that a program or an opportunity sells itself (Dragga 1999). For those working in China, relationship building should be a priority, and connections should be made as soon as possible, especially with Chinese faculty who are "established and admired" (Golemon 2008, 174). By building *guanxi* with partners in China, technical communication educators increase the likelihood of a program or partnership being supported by faculty and staff in China. Support for technical communication from the home institution is necessary to establish the field as a recognized discipline, and U.S. educators can promote this by developing relationships of trust and commitment with their Chinese counterparts.

Incorporation into current disciplines

University administrators and educators in China have a long and complicated history with English in general and technical communication in particular. Now that the need for technical communication has been acknowledged, as is evident in the literature, faculty exchanges and GNLEs have a high likelihood of succeeding when placed in the appropriate university context. Workshops only briefly touch on new concepts and often lack a strong departmental association, which decrease the chances of the material being adopted and implemented. As Duan and Gu mention, two-week workshops have failed to move technical communication forward (2005). A better method would be to establish long-term relationships between the technical communication departments of U.S.

universities and appropriate departments in Chinese universities. Technical communication has an increased chance of acceptance if it can be incorporated into existing disciplines and departments at Chinese universities, rather than portrayed as a "new" field that does not fit into the current Chinese curriculum.

Technical communication already fits into a variety of departments in the U.S., so it is realistic to expect the same in China. Educators in the literature recommend several potential homes for technical communication in China, including vocational training schools (Barnum 2001) and English Related to Individual Disciplines courses (Ding 2010). The most popular recommendation is to introduce technical communication into the English for Specific Purposes (ESP) curriculum (Ding and Jablonski 2001; Ding 2010; Duan and Gu 2005; Yu 2011). ESP commonly focuses on technical vocabulary needed for specific industries, but its goal of preparing students to write in technical careers aligns with the goals of technical communication education. Elements of technical communication, such as audience analysis, document design, and ethics would be appropriate additions to the ESP curriculum, whether as supplemental material in existing courses or as more advanced, stand-alone courses in ESP (Yu 2011, 86-87). Once technical communication has an established home in Chinese universities, the likelihood of sustained interest in faculty exchanges and collaborations will increase and technical communication will cease to be a novelty topic whose tenets are introduced but never fully understood or incorporated into Chinese curricula.

Recommendations for face-to-face courses in technical communication

  Local and relevant materials and examples

Technical communication teaching materials designed for a U.S. audience tend to have a narrow focus that fails to cross cultural boundaries. As those in the field understand, document content, format, and style are largely dependent on the audience, and one approach does not work for everyone. In order to attract and keep student attention, demonstrate the value of technical communication, and promote learning in the international classroom, educators must ensure that their material is local and relevant to their students. As such, the type of course materials and examples must be altered, depending on where and to whom the course is being delivered (Starke-Meyerring 2005, 491). To better meet the needs of international students, instructors should incorporate local material with direct relevance to students' lives (Dautermann 2005, 150) and strive for diversity in the cultural examples, case studies, and textbooks used in class (Sharpe 2003, 49; Miles 1997).

Additionally, instructors will prove more successful if they are perceptive of student interests (Dautermann 2005) and use real contexts and people to help them develop courses for international audiences (Yu 2008, 100). Along with this, instructors should remain open to the idea that models and practices for technical communication differ greatly depending on culture and location. Rather than introducing technical communication as a Western idea to be spread around the world, educators should approach international technical communication education so that it fits into local interests and uses local resources (Ding 2010, 314). This approach will better ensure that

international students understand the *hows* and *whys* of technical communication in a clearer and more practical way.

Cultural norms and values

As suggested throughout this paper, international audiences often have different experiences, attitudes, and beliefs than typical U.S. audiences. Technical communication educators should plan their teaching based on the cultural norms and values of the host institution and work with these norms and values rather than trying to fight them (Alred 1997, 375). By identifying, discussing, and using practices appropriate to the host culture in the teaching process, an educator better meets the needs of students and demonstrates the applicability of technical communication for their purposes. Much of the literature emphasizes the value of orality, as well as a greater focus on context, in cultures such as Mexico, Russia, and China (Bowen et al. 2006; Cibangu 2009; Craig 2010; Ding 2003; Gu 2005; Thatcher 2010). Instructors should be open to using classroom practices that make students feel more comfortable and productive, even if they contradict methods of effective teaching in the U.S. This might include increased use of lectures (Golemon 172-173), reliance on small group discussions and one-on-one conferences (Roberts and Tuleja 2008; Dautermann 2005), or increased instruction in the various appropriate ways to prepare resumes or instructions based on the receiver or user's cultural values (Thatcher 2010; Wang 2000).

Additional structure

Another recommendation for educators is to provide more structure for international students in the technical communication classroom than might be necessary in the U.S. Especially when teaching students who are unfamiliar with technical

communication and what it involves, educators are encouraged to be specific, thorough, consistent, and clear. Students likely will appreciate sample documents for assignments, and, when appropriate a structure to follow when writing (however, see *Context and rhetorical theory* below) (Dautermann 2005; Golemon 2008). Structure is also useful in terms of course materials, including syllabi, assignment sheets, lesson plans, lectures and PowerPoint presentations, and reference materials (Duan and Gu 2005; Golemon 2008; Cen et al. 2004). By providing all of these materials online or in hard copy, the instructor ensures that students have regular access to course information and that they have sufficient guidance to complete assignments as intended. Structure is also valuable for students new to the concept of interaction in the class in the form of consistent groups and a consistent schedule (e.g. one hour of lecture followed by one hour of workshop time with a regular group), so students know what to expect each day in the classroom (Dautermann 2005).

Context and rhetorical theory

The final recommendation for U.S. technical communication instructors teaching abroad involves the actual material covered in a typical course. Because context shapes communication in ways both large and small, context analysis and rhetorical theory should be incorporated into the classroom to ensure that students can apply their learning to future situations. Professional documents are context-dependent (Bowen et al. 2006), so the value of templates and samples should not be overemphasized, and students should be encouraged to conduct context analyses and manipulate templates to fit their needs. Additionally, grammar instruction must not take the place of context analysis, even for students with imperfect English (Evia 2004, 236). Audience and purpose analysis are key

to making technical communication valuable for an international audience, and educators must actively address the context and process associated with technical writing in addition to the content (Mikelonis 2000, 212). Differences in context and how these differences shape professional documents should be discussed explicitly, whether through the use of case studies or examples in students' lives (Hagen 1998; Kankaanranta and Louhiala-Salminen 2010). Despite globalization, cultural differences remain, and students must understand that different audiences and situations require different types of writing. Additionally, students should practice and receive feedback in this type of analysis in order to truly understand and be able to employ technical communication in their own lives.

Recommendations for online courses and collaborations in technical communication

Partnerships and team building among students

Given the emphasis on collaboration in technical communication in the workplace, and the increase in virtual and international collaboration, it is recommended that technical communication instructors use the virtual classroom to introduce students to the reality of the workplace. A classroom community can be created through various types of preparation, and the investment in community building tends to pay off in the quality of discussion, quality of work, and commitment to class projects. Simple exercises, such as having students prepare personal web pages for classmates to view (St. Amant 2005, 14) or having students conduct personal interviews prior to the start of a collaborative project, can help to establish a bond and an understanding between students that often fails to develop in a virtual environment (Anderson et al. 2010; Paretti et al. 2007). Instructors can guide this team building more fully by providing instruction in

metaknowledge so that students recognize "the role of communication in supporting distributed collaboration" and "the nature of identity construction in virtual distributed teams" (Paretti et al. 2007, 348-349). By explicitly drawing attention to the communication act itself and addressing methods for improving communication in an international virtual environment, instructors will prepare students to succeed in the real world of technical communication.

Encourage the development of mutually beneficial and interested relationships

The literature strongly advises against assuming that Western countries have the greatest contributions to make to the development of technical communication. This is true for face-to-face courses as well, but it is particularly important for virtual collaborations where one group may naturally assume itself to be dominant or more educated in technical communication than the other and may have less motivation to question its assumptions (Herrington and Tretyakov 2005; Sapp 2004). In fact, for online courses and collaborations to thrive, educators on both sides should approach an online course or collaboration as a mutually beneficial endeavor and seek opportunities to learn from one another (Starke-Meyerring and Wilson 2008, 22). This requires students and instructors to embrace processes that may be unfamiliar and be receptive to ideas that they might otherwise overlook. Mutual interest and benefit can be encouraged by emphasizing cultural sensitivity and equality in the classroom (Starke-Meyerring et al. 2007, 148), actively seeking information about participants' goals and experiences as part of the exchange (Paretti, McNair, and Holloway-Attaway 2007; Mousten et al. 2010), and emphasizing the learning opportunities afforded by collaboration (Duin and Starke-Meyerring 2003). By focusing on the mutual benefit of such an exchange, educators

encourage students to learn more about the global implications of technical communication and recognize the different uses for and practices of technical communication around the world.

Emphasize experiential and global learning

In line with the above recommendations, the literature recommends that online courses in technical communication be used to support experiential and global learning by actively incorporating the different knowledge and experiences inherent in an international virtual learning environment. Global literacy should be a core component of the curriculum, not simply a textbook chapter discussed during the semester, and interaction between students should guide this global literacy by addressing participants' perspectives in case studies as well as in real life (Stark-Meyerring 2005, 493-494; Stark-Meyerring et al. 2007, 145-146). Multiple perspectives should also be encouraged and explored in an effort to engage participants in real-life audience and purpose analysis (Herrington and Tretyakov 2005; Starke-Meyerring et al. 2007). The value of online collaborations can be increased by instructing participants in how to establish "shared conventions and relational space" (McNair and Paretti 2010, 342) so that partnerships go deeper than the superficial exchange of documents. Additionally, online courses in technical communication better serve students and prepare them for the real world when the courses emphasize the study of cultural rhetorical expectation rather than allowing students to dwell on language differences (St. Amant 2002, 304). Educators must purposefully structure the learning in an online classroom to ensure that students consciously engage in experiential and global learning rather than ignore or avoid dealing with the cultural diversity that they face in such collaborations.

Chapter 6: Conclusion

Technical communication instructors from the U.S. have employed many methods to teach international students outside of the U.S., most of which fit into three categories: workshops, faculty exchanges, and e-collaborations. The literature indicates that educators are committed to preparing students for technical communication in a globalized world and that improvements have been made in introducing technical communication to students and educators in other countries. As interest in and knowledge of technical communication increase in international settings, and educators learn more about best practices for teaching technical communication internationally, the methods of instruction must and will evolve as well.

This constant evolution in international technical communication education necessitates the regular study of the associated challenges, solutions, and best practices. Much of the available research for this paper is more than five years old and may not accurately reflect the current state of international technical communication education. For example, given the ten-year-old projections for the increase in Internet access in China (St. Amant 2001, 385), it is likely that challenges related to technology are less relevant today than when much of the research was published. However, is it unlikely that the various institutional structures discussed in the research have undergone dramatic overhauls in the last five, or even fifteen, years, so many of the challenges and solutions continue to be pertinent and valuable to understand.

Tellingly, the majority of the research published in the past five years focuses on GNLEs, which emphasize collaboration between educators and students more than face-to-face educational exchanges. Although, undoubtedly, workshops and faculty exchanges

will continue, the increase in e-collaborations points to the future of technical communication education. International virtual collaborations allow for simulation of the work environment likely to be encountered by students after graduation, while workshops and faculty exchanges focus more on bringing new perspectives and expert faculty to international students, departments, and universities. As technology becomes more affordable and more reliable, and faculty around the world recognize the value of global competence for every student in the technical communication classroom, the popularity of GNLEs will increase.

Given the anticipated direction of international technical communication education, one of the gaps in the research for this paper regards GNLEs in Mainland China. The most current research on technical communication in China still indicates an urgent need for effective instruction (Ding 2010). However, as technical communication education increasingly moves online, and as educators forge cross-cultural relationships that result in international collaborations between students, it is likely that Mainland China will adopt this model. More research needs to be done to determine if and how GNLEs are developing in China and how they can be best encouraged and implemented.

Another finding briefly mentioned here, but better suited for more in-depth study, is the move to globalize technical communication education for students in the U.S. The research reviewed for Chapter 4 indicates that U.S. students continue to struggle to collaborate virtually and cross-culturally. Research into current methods and best practices for international collaboration in the technical communication classroom would advance the conversation on this important topic. In addition, the identification of best practices for GNLEs would likely result in improved instruction for students outside of the U.S. as well.

Technical communication offers various challenges to instructors teaching internationally. However, these challenges have not and cannot deter instructors from undertaking exchanges and collaborations with international students and faculty. The need has been established, and this paper identifies solutions and best practices to help educators recognize common cultural values that must be considered in course design and implementation. By building relationships; understanding and working with the institutional structures and cultural expectations of international students; and emphasizing the local, experiential, and rhetorical nature of technical communication, U.S. educators will better ensure that their instruction prepares both domestic and international students for the work required of technical communicators.

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