Intersectional Computer-Supported Collaboration in Business Writing: Learning through Challenged Performance

Dirk Remley, Kent State University

Abstract: Carter (2007) identifies four meta-genres associated with writing activities that can help students learn discipline-specific writing skills relative to standards within a given field: these include problem solving, empirical approaches to analysis, selection of sources to use within research, and production of materials that meet accepted standards. Students, especially, learn valuable skills while working on problem-based learning assignments and activities; such assignments attempt to simulate projects and tasks that employees encounter in workplace settings. Because much workplace writing occurs in collaborative settings, and because writing technologies are prevalent in these settings, students need to become facile with collaborative writing settings and with using computer technologies to do various kinds of tasks associated with producing a professional document in such settings. In this paper, I apply Carter's meta-genres to skills associated with writing technologies and collaborative writing. This paper reports on a pedagogy that engages business writing students in these meta-genre skills through assignments that involve problem-based learning pedagogy and inter-sectional computer-supported collaborative writing. I describe in detail two particular assignments and how their dynamics address Carter's meta-genres. Further, I report on certain technological dynamics that students experience in the course of these assignments. I also report other implications on using such pedagogy.

Many writing curricula attempt to guide students to understand how to write within their chosen major field. At the freshman level, students are given instruction in and practice with academic forms of writing; that is, writing that they will be expected to perform as they move through their coursework toward their degree. By the time they get to upper division courses within their major and take the requisite upper division writing courses relevant to their program, they will be applying discipline-specific discourse to their papers as they apply particular subject-specific concepts. Additionally, students may be expected to develop skills associated with using technology in similar ways that professionals in their field do.

Michael Carter (2007) encourages writing instructors in this kind of WID curriculum to help students learn how to think as professionals in their field think so that students can begin to write with similar ways of understanding how knowledge within a given discipline is created. He identifies four meta-genres that instructors can use to guide their instruction and student learning. Each meta-genre considers the application of a generalizable principle of writing to a discipline-specific discourse. These meta-genres include: developing problem solving skills, understanding empirical approaches to analysis, critically

selecting sources to use within research in a given field and being able to produce materials that meet accepted standards within that field. Further, Carter (2007) identifies specific genres of writing that entail each meta-genre. While he acknowledges that each discipline has its own heuristics for collecting, analyzing and creating knowledge and artifacts appropriate for the discipline, Carter (2007) attempts to help writing instructors identify a means by which to link these meta-genres to writing applications and assignments in order to facilitate a discipline-appropriate model for learning. As such, writing instructors must become knowledgeable about their students' major areas and develop appropriate ways to help students learn writing skills within that discipline. This is difficult to do at the freshman composition level, but should be easier to accomplish in upper division writing classes, particularly in business writing and technical writing; students in these classes tend to have a focused curriculum and are required to take the course as part of their discipline-specific coursework. However, Carter's meta-genres can be applied to writing instruction because some students in business writing classes may be majoring in marketing while others are majoring in finance or accounting or management. Consequently, while instruction can be more focused on discipline-specific kinds of writing, there are still some variations in professional expectations to consider across business disciplines. Nevertheless, instructors of business writing can challenge students to attain these meta-genres through certain writing genres typically practiced in business writing courses.

Further, as the use of technology proliferates in business communication practices, computer-mediated communication skills associated with these meta-genres also become important for students to acquire. Students need to be able to solve problems associated with writing technologies, understand how to develop empirical tools using composing technology as well as empirical research tools available to them online, and discuss analysis of research electronically. They also need to be able to select discipline-appropriate online sources to use within research and be able to produce digital materials that meet accepted standards within their field. Integrating problem-based learning assignments that engage students in practice with computer-supported collaborative writing facilitate acquisition of these skills. I will discuss this combination relative to its application in business writing pedagogy and how it meets those meta-genres identified by Carter (2007).

Problem Based Learning and Computer-Supported Collaborative Writing Assignments

Business writing courses that use problem-based learning assignments give students the opportunity to learn discipline-specific analytical and writing skills with case analyses. Carter (2007) explains that faculty can help students develop discipline-specific problem-solving skills by placing students in "situations similar to those students would encounter in their profession" (p. 396). Problem-based learning assignments in which students are expected to create a written report, such as a business plan in a business writing class, facilitate such practice. Research proposals and reports associated with business applications facilitate development of empirical analysis and researching skills (Carter, 2007, pp. 396-399). Finally, students are able to show their mastery of disciplinary content knowledge through the artifacts they produce, such as reports (Carter, 2007, p.400).

Because much writing in business and industry occurs in collaborative settings, students can learn collaborative writing skills as they work in groups on such assignments. While Flower and Hayes (1978) describe how individual writers approach the writing process, Sharples (1993) acknowledges that collaborative writing poses a challenge for many because individual writers, who may approach the writing process differently, must work with each to negotiate a single document as a group. Much has already been written about collaborative learning environments and their benefits. Wildner-Bassett (1992) alludes to the collaborative nature of knowledge-building in characterizing knowledge as "a consensus among the members of a community of knowledgeable peers—something people construct by talking together and reaching agreement" (p. 157). Though her study presents information related to graduate students, the same

principle can be applied to upper division undergraduate students, since learning is a form of knowledge-building. Knowledge is a social construct, and peers are able to develop more knowledge about a given matter through discussion. Hoadely and Pea (2004) describe the failures of various models of collaboration used in business settings; they acknowledge the success of the "learning organization" model in which people learn new skills while generating new knowledge. They characterize such a "knowledge-building community as a community with the shared goal of individual learning and shared knowledge transfer within the group" (p.324). Rickly (2004) acknowledges that students' varied abilities and experiences, "all inform their thinking, their ability to read and …their writing" (p. 37). In learning groups, students are exposed to other skills and perspectives that they would not engage as much as they would in individual learning settings. Those dynamics involved in problem-based learning activities that occur in collaborative settings can be characterized similarly.

Further, because computers often facilitate collaboration, students need practice and experience working through computer applications as they collaborate on assignments; these computer-supported collaborative writing (CSCW) applications may include emailing classmates outside of class time or the use of discussion boards or listservs. Many instructors have encouraged collaboration through open source applications such as Wikis, and email and course management systems like WebCT and Blackboard. Finally, in a global economy, collaboration often occurs with multiple sites involved, and computers facilitate this collaboration. Morris (2004) observes the necessity of linking computer skills used in school with those typically used in the workplace to foster digital literacies: "For us to ignore the practical applications of computers as literacy motivators and as an important prerequisite for obtaining a position in the workplace seems imprudent" (p. 296). Rather than use computers available to students to facilitate CMC practices with which they already engage in social settings, like IMing or e-mailing, instructors can encourage students to learn professional CSCW skills by assimilating distance collaborations using Wikis or systems like WebCT in their classes.

A number of studies have documented how students tend to use computers for collaborative writing tasks. An and Frick (2006) assert that very few studies examine the relationship of students interacting both online and face-to-face (F2F) on writing tasks. These studies, especially as in those by An and Frick (2006), Kraut, Galegher, Fish, and Chalfonte (1992) and Selfe (1992), find that students tend to prefer F2F over computer-mediated communication for most collaborative writing tasks, while also finding that students prefer CMC for particular collaborative writing tasks. While Haythornthwaite (2004) acknowledges that "the most damning (concern) from a community perspective has been the notion that CMC could not convey 'social presence'" (p. 160), Selfe (1992) observes that "characteristics of electronic collaboration, in contrast with F2F exchanges, may allow group members to experiment more freely with exploring differences in individual approaches to problems, writing tasks and issues" (p. 147). Haythornthwaite (2004) asserts that CMC capabilities for fostering communications continue to grow, as people come to recognize the affordances of asynchronous and remote communications (p.162). Strenski (2005) observes that students who may be inclined to be quiet in a classroom setting tend to be more actively engaged in electronic exchanges in small group settings (p. 206). An and Frick (2006) apply media-richness theory, which posits that "the degree of richness of a communication medium is dependent on the capacity of the medium to process ambiguous communication and suggests that richer media are more effective for equivocal tasks, and leaner media are richer for unequivocal tasks" (p. 486), to their analysis. They find that F2F communication is preferred for equivocal tasks in which multiple meaning of messages may occur and accurate interpretation of meaning may be derived from a combination of visual and verbal cues; however, CMC is preferred for tasks that are unequivocal, which may be considered simpler or routine. Kraut et al. (1992) find similarly in a study in which they apply contingency theory, which "states that successful task performance depends on matching the design technologies and social and organizational structures to the requirements of particular tasks" (p. 378). When students have the option of one over the other, they will choose F2F communication generally, though they are comfortable with CMC for certain tasks. However,

employees who work at multi-site organizations are often left without such choices; they cannot meet F2F with other group members and must use CMC for most or even all tasks.

Little has been written concerning challenging students to perform collaborative writing tasks primarily through the use of computers as they may have to in the global workplace. Students need to experience the challenge of collaborating with others whom they cannot meet F2F. The more F2F access students have to each other the less they will use computers to facilitate collaboration. However, Selfe (1992) reports that "individuals have reported success in using computers to support the generation of ideas, the discussion of ideas, and the drafting and revision of collaborative papers" (p. 160). Consequently, more can be done to challenge students to overcome what they perceive as weaknesses in CMC, which is particularly important when collaborators do not have a choice between CMC and F2F settings. This challenge addresses all four of Carter's (2007) meta-genres as they apply to business writing situations. In this paper I argue that business writing instructors should attempt to create this challenge so that students become facile with using computer technologies more to interact on a collaborative project in which a document is produced. I also identify ways to facilitate this learning, drawing on literature in the area of CSCW pedagogy as well as my own experience of using a certain approach for over six years.

Intersectional Group Assignments

I have taught business and technical writing courses for seventeen years, and I integrate several collaborative problem-based learning assignments into the business writing course, a Junior/Senior-level writing course that is considered a core course in the business curriculum at my institution. These assignments give students practice in generating documents that respond to situations that they may encounter in the workplace. Initially, I used WebCT to link two sections of business writing from two different campuses within a single university-system, and then to link two sections of business writing from the same campus. The intercampus/intersectional dynamic is created to challenge students to use CMC tools to collaborate more than they likely would if all were from the same section. In all cases, students from a single section pair up with each other; then, I group pairs from different sections with each other, using WebCT Vista's Group Manager tool, to create a grouping of four students each. Sometimes a group will wind up with three students, and other times there may be a group with five members. In only one semester did I attempt to integrate more than five students into a single group; I attempted that semester to integrate students from three sections into groups of six students each.

In each case I attempt to create opportunities for students to experience F2F discussions with at least one other member of a given student's group. Rogers and Horton (1992) observe the importance of using F2F communication to help students understand the rhetorical situation, examine their language choices, consider ethical dimensions of their decisions and reappraise their decisions in greater depth (p. 136). Consequently, student exposure to potential risks of the lack of F2F communication is minimized. I have never forbidden students from different sections from meeting with each other as a group; and, when the intercampus dynamic was involved, students rarely, if ever, met F2F with members from the other section; the thirty miles between campuses discouraged such meetings. With the intersectional groupings all coming from the same campus, students have an easier time setting up F2F meetings with the members from the section other than theirs. However, oftentimes conflicting schedules among group members tend to make F2F meeting opportunities less frequent than students would like. I acknowledge to students, further, that the inability to meet F2F cannot be used as an excuse to submit an assignment late or of poor quality.

Once I set up the groupings with the Group Manager tool, I then create topic areas for each group in the Discussion Board Tool. WebCT Vista facilitates privatizing these discussion areas, such that I can give access to each area to only that group's members. I acknowledge that the group areas are private, excluding others from the discussion topic messages. This assures minimal interference from other groups.

We use these intercampus/intersectional groups on two of the three group assignments for the class. The first of these assignments involves developing a portfolio of letters responding to five different situations; all groups have the same set of scenarios. The second assignment asks students to conduct research related to a given situation and generate a document responding to that situation; different groups had different scenarios. One group may need to develop a planning proposal while another group generates a planning proposal that also integrated a feasibility assessment, and another group develops a business plan. Lowry, Curtis and Lowry (2004) distinguish between various strategies groups can use in collaborative writing settings, and, prior to the first such assignment, I discuss various elements of CSCW dynamics, including theory related to collaborative writing approaches such as coauthoring and collaborative writing. I also provide tips related to facilitating collaboration through computers through the use of WebCT's discussion boards and email as well as the students' own email ISP. While most students already understand how to use email and many are acquainted with discussion board systems, students generally will need some kind of orientation to these tools as they appear and are used in WebCT. I will describe more dynamics of how each tool available to students affects their learning relative to the meta-genres below relative to each of the two assignments.

Before students can perform well in a group situation, they need to understand various dynamics that they may encounter and how to address those. In each case I generally discourage coauthoring of an assignment because of the limited learning that occurs and I encourage collaborative writing, in which students can learn more of the writing task and the concepts they apply to the document. Student groups have class time in which to work on the assignments, but I encourage them to use time outside of class as well to communicate with each other. To further encourage using the collaborative writing strategy, with each assignment I also provide some tips to further facilitate assignment-specific CSCW. In this paper I discuss these tips further and how student groups approached various challenges in working with group members not from their own section and with whom they had to negotiate much work via computer-mediated tools on both assignments. These approaches are varied, and they prepare students for distance, asynchronous collaborative writing tasks. I will apply Carter's meta-genres to the discussion of how the assignments meet these expectations, especially relative to the use of technology and CSCW skills.

Portfolio Assignment

With the portfolio assignment I distribute a hardcopy of five different scenarios to all students after student pairings have been identified. Students do not yet know with whom they will be paired, but my tips discourage interdependence initially. Wildner-Bassett (2002) calls attention to the interdependence among group members that emerges in collaborative environments that use computers for communication (p. 159). Depending on the writing strategy chosen students may become interdependent as they initially discuss how to approach a collaborative assignment, whether computers are involved or not. The portfolio assignment (Appendix A) makes the coauthoring approach an easy temptation. The first situation presents what can only be considered a claim letter as its response, and the second letter is the response to that claim letter. The other three situations are independent of each other. Because of this independence among situations/parts of the portfolio, students are tempted to divide the writing among each other according to each situation.

After discussing the assignment generally, I provide the following assignment-specific tips to further facilitate using the collaborative writing approach:

1. Each member should draft a response to all five situations. When you come to class next time, everyone in the group will have a response to share with other; this will encourage discussion about what may be considered by the group to be effective responses and help toward developing a best response among group members; and

2. As the group discusses each response, one person can be responsible for drafting/composing each letter for further discussion and revision. This will help divide the actual drafting and revising more efficiently.

The goal of the assignment is to have students apply various concepts of correspondence to difficult situations as well as be able to format letters and memos effectively. Concepts students should apply include audience analysis, writer/reader perspectives, tact, positive or neutral language, and specific language. While the assignment itself is not challenging—students have already experienced discussion of a few exercises in which they have applied these concepts, and they are able to respond individually to each situation—the challenge is in working with others electronically and in applying these rhetorical concepts. The assignment, consequently, meets two of Carter's meta-genre calls relative to product and process using CSCW: the call for problem-solving and the call for performance.

Problem Solving

Carter (2007) explains that the problem-solving meta-genre involves students identifying and finding ways to address a problem (p. 396). Student groups often initiate contact with members by identifying convenient times for each member for F2F meetings; however, oftentimes not all members can meet F2F, and groups have one week to produce the portfolio. This lack of convenience in meeting F2F and time creates a problem for students: how to conduct what may be considered an equivocal task of discussing drafts through CMC means. As students discuss each response with the group member from their own section, they also must compose a message acknowledging their discussion to members in the other section. To facilitate addressing the problem of CMC discussion that may be equivocal, students will also attach the draft that they worked on/revised and in the message box explain their revisions or offer critical reflections of strengths and weaknesses of a given draft. They also have to negotiate any text that causes differences of opinion. As they come to recognize each others' writing strengths and weaknesses, they may divide the writing of each situation among group members and create trust amongst each other facilitating interdependence. They may be able to count on each other to generate a final draft that will need little revision.

Performance

Carter (2007) explains that performance refers to the act and the product of performance, "but primarily the object as evidence of success in learning to perform the act" (p. 400). As each letter is developed and negotiation occurs, students are performing CSCW without meeting F2F. They are performing most, if not all, work using the computer systems to which they have access. Because they have experienced correspondence individually through the exercises and have benefited from the collaborative learning environment, the group portfolios tend to be very strong. Students learn how to use email and discussion boards for asynchronous CSCW, and they also see how others are using word processing systems (generally, MS Word) to generate letter formats and letterheads.

This assignment challenges students on only two levels within Carter's (2007) meta-genres in WID approaches to writing pedagogy; so it is effective as a starting point for helping students learn some dynamics of CSCW that lacks F2F opportunities.

Collaborative Report

Each member of each group is given that group's situation/case. These are presented in Appendix B. Students have listened to my lecture about proposals (and they have submitted a proposal for their final project), feasibility studies and business plans and integration of graphics. I acknowledge that students have

two weeks for the assignment (oftentimes I extend the due date such that the assignment actually takes almost three weeks), with the expectation that the first week is spent on researching the situation and responses while the second week is spent developing the document. The objective of the assignment is to have students demonstrate their understanding of the kinds of research expected of them with their final project as well as the kind of research that they may be expected to perform in the workplace. They also are expected to produce an effectively formatted document that integrates at least one graphic (students are also told that some groups, depending on document dynamics, may need more than one graphic).

To facilitate collaborative writing approaches, I indicate the following to each group individually, since the situations and document needs differ between groups:

1. I specify possible sections that the document may include (these are suggested alternatives; not prescribes headings and subheadings, and
2. I suggest possible empirical forms of research as well as secondary sources. Groups, however, are expected to create their own tools and pursue that research.

This assignment addresses all four of Carter's (2007) meta-genres.

Problem Solving

A number of problems are inherent in this assignment. As shown in Appendix B, each assignment outlines a problem that must be addressed. Students have to generate their own potential responses; usually, this involves each pair discussing ideas with each other, then sharing with the other pair; and discussion ensues. Students tend to be able to manage this part of the assignment because they are facile with e-mailing each other or posting to the WebCT Vista message board by now. Also, there is considerably more equivocal discussion occurring as members discuss research tools and sources.

However, once research tasks are divided amongst members and research is discussed, groups then must negotiate the document itself. This becomes nightmarish for some because of frustrations they experience in conducting the communication electronically. Document-specific discussions tend to occur more slowly as each pair discuss the other pair's draft text and suggest revisions. They also have to negotiate how to discuss a sustained text, something they have little experience doing with social CMC. In fact, one group decided to have each group member compose a draft of the entire document to be shared and discussed to ascertain which one seemed to be the best.

Students will be expected to be able to identify alternative solutions to a problem and address problems they encounter within that pursuit. It is important for students to understand how to solve technology-related, CMC problems within a group dynamic since much of business writing occurs within such environments.

Empirical Research

Carter (2007) acknowledges that students will need to understand how to develop empirical research methods appropriate for their field and draw conclusions based on data derived from such research (p. 396). This assignment explicitly challenges students to design their own research tool(s); and most generate surveys, which are often used in business-related research—surveys of employees, customers and employers are commonplace in business environments. Students can create surveys using the online service of SurveyMonkey.com, which offers basic services for small surveys for free. Students can also analyze data from these surveys, and draw conclusions, recognizing that their sampling will need to be small, and consequently, reliability issues are likely. They often ask if I will have an issue with the sampling size; they reflect on this dynamic, even though they draw conclusions from that small sampling. Students are challenged to apply specific kinds of empirical study associated with their major. They use the Internet to

search for studies to help them understand practical issues with survey design, and they can also use free online survey applications such as SurveyMonkey.com to facilitate data collection and analyses.

Secondary Sources

Carter (2007) indicates that students need to understand how to locate reliable sources and to critically examine any sources that they use. While I identify possible kinds of sources (e.g.: "you can look at administrative sciences publications," or "Professor (name) is the Marketing Department's international marketing person and its ethicist."), students still bear the responsibility of locating specific sources and approaching that professor. Students also scan the Internet for other sources, often times finding practitioner-oriented material. This gives them some exposure to the differences between academic and practitioner discourses, and it gives students practice in applying critical examination of sources. Practitioners tend to be less interested in theoretical grounding of certain applications and approaches, but they also like to know if any other companies have applied a given approach successfully and how that may help them (Ekbia and Hara, 2006, p. 17). Students can find practitioner-oriented publications like BrandChannel.com online. Most of the articles that appear in this publication minimize any discussion of business or marketing theory and focus more on applications that have worked well in different situations. Nissum's (2008) piece about advertising using Second Life is an example of such an article; there is no reference to any scholarship about Second Life or marketing theory. Students come to understand that their audience may not appreciate much discussion of theoretical grounding. They, also, can begin to understand what counts as reliable sources in their field. Because they speak directly with professionals in a given discipline and consult journals associated with that discipline that are read by practitioners and academics, students are exposed to different professional discourses; they hear and read the language that professionals in a given field use. Blyler (1996) encourages teachers of business writing to engage students with the discourse that professionals use; students are "enculturated" into the discourse.

Performance

Students act together (excepting the one group) to formulate research tool(s) and analyze their data as well as develop a document integrating that information. This assignment also assimilates what is expected of them individually with the final project in terms of research expectations and document production (complete with an executive summary). It is still a learning tool, but students demonstrate that learning with their final project. While the final project does not entail a collaborative environment, students have received practice with CSCW applications that they can apply professionally. They produce a digital document and work with digital graphics. Students may produce their own graphics, working with group members to understand how to construct certain kinds of graphics using different tools, and they also can copy and paste graphics from other sources into their work. They also get a fuller understanding of how a group collaborates to produce a document product.

Summary of Outcomes

With the two assignments, students learn valuable computer-supported collaborative writing skills, and they also learn how to perform as an individual within a team environment; others expect you to perform your responsibilities, and the student is held accountable for his or her level of participation and contributions.

Figure 1 summarizes the technology-related learning associated with Carter's meta-genres for each assignment facilitated through problem-based learning tasks and computer-supported collaborative writing.

Much as Carter's meta-genres encourage critical thinking and writing skills that are discipline-appropriate, problem-based, CSCW applications encourage critical evaluation of and performance with CMC, online tools and sources as well as digital writing tools that are also discipline-appropriate.

Figure 1: Technology-related CSCW Learning

Correspondence Portfolio

1. Problem-solving:
    a. Negotiating meeting time/place through CMC
    b. Overcoming lack of F2F cues in CMC
    c. Negotiating writing responsibilities through CMC
2. Performance
    a. Discussing draft-text through CMC
    b. Sharing drafts and revisions through e-mail or discussion list

Collaborative Report

1. Problem-solving:
    a. Identify potential responses through CMC
    b. Negotiate research approach through CMC
2. Empirical Research
    a. Develop tool through CMC
    b. Potential to develop online tool
    c. Negotiate research approach through CMC
3. Secondary Sources
    a. Evaluate and select online sources
    b. Consider online scholarly sources or online practitioner-oriented sources
4. Performance
    a. Communicate with group members through CMC
    b. Negotiate research and document needs collaboratively through CMC
    c. Develop digital document that integrates appropriate graphics

Tool Usage

Levin and Cervantes (2004) describe various stages that a networked community experiences in a particular case study. In their analysis, CMC activity varies relative to each stage. I have not done this analysis of tool usage; however I have observed that students tend to use the CMC tools available to them in WebCT Vista for certain purposes based on their ability to meet F2F.

While WebCT Vista documents messages posted to its discussion board system, I do not restrict students to using only WebCt Vista for the assignments; students may also use their own email ISP and/or meet F2F. Consequently, it is difficult to document frequency of messages that occurred in e-mailings or how often groups met F2F. However, students tend to use the system toward either collaborating electronically or using the system to coordinate F2F meetings.

An example of a group's use of the system to collaborate electronically throughout the course of the writing process is the "Group 1 report" listing in Appendix C. There is no mention of a meeting time or place suggested in a message's subject line, and the subject lines suggest progres through the writing process

toward completing the document. Group 1 may not have been able to meet F2F much, so they used the system considerably over the course of the assignment to manage electronic collaboration.

Pedagogical Challenges

While this pedagogy poses a number of challenges for students in helping them to learn how to use the computer to engage in and perform equivocal tasks, there are some challenges for instructors. The most challenging dynamic is balancing expectations between the two sections involved. Instructors who teach multiple sections of a single business writing course or can develop a cooperative pedagogy with other instructors at their institution or outside that institution can create and manage this challenge by linking multiple sections with each other. Because I teach multiple sections of the course annually, I am able to manage the groups and expectations.

Another challenge is assessing participation and contributions, understanding that student groups tend to include socially passive students as well as those who experience grade-anxiety; both of which are minimized to some degree in the workplace. I have students critically assess each other's participation and contributions, and these affect individual grades on these assignments. Students understand that they are accountable for their level of participation, which discourages students from being passive and minimizes potential for animosity amongst members when one or two members have to assume another member's responsibilities because of their lack of participation.

Student evaluation of instructors presents an additional challenge. Students who do not like collaborative assignments will have one more reason to hate the instructor and indicate to what degree they disliked the instructor on the evaluation form. Students who did not like the challenges or did not do well with them may also convey their frustrations on the evaluation form. To address both of these issues, I limit the risk students have relative to their course grade; that is, the two assignments combine to comprise 1/4 of the total course grade. There is one other collaborative assignment, which includes only students from a single section; and the other assignments are individual ones. As long as students feel they still can have control over their own learning and grade performance, they will be less inclined to express such frustrations. Nevertheless, if one's institution places emphasis on student evaluations in the review of teaching, one should approach their supervisor (WPA or Assistant WPA) about their intent to use this pedagogy and potential implications related to student evaluations prior to implementing it.

Additionally, instructors who have performed computer-intensive CSCW activities should share narratives of those experiences. An and Frick (2006) acknowledge that "students believe that CMC will be more effective if instructors use it themselves and if there are practical consequences to students themselves" (p. 497). As students hear of instructors' experiences and understand that CMC can be effective with equivocal tasks, they will be less inclined to perceive it as a hurdle that cannot be overcome. For example, I often share my experiences in collaborating via email with colleagues toward developing a conference CFP or conference schedule. These narratives are intended to give students confidence that they can do it as well.

Finally, there remains a challenge that is well out of the instructor's control, but which the instructor and institution can address: that is the students' prior experiences with certain technologies. Much has been written about the technological divide; the limited access that minority students have had to technologies, limiting their ability to use it in classes. Schendel, Neal and Hartley (2004) assert that technology is "culturally situated": it is not a "value-free tool" (p. 201). Minority students who participate in a collaborative setting may feel further marginalized because of their lack of skills with the technology. Power within a collaborative group can be exercised by those who know how to use the technology better than others know how to use it (Anderson, 2005). The technology that is used in collaboration will contribute to shaping the nature of collaboration itself. Consequently, these dynamics must be considered as minority students participate in this kind of pedagogy; they may appear to be contributing little, when in fact their contribution is mediated by other parties who are more visible.

Another pedagogical dynamic that ought to be recognized is the use of faculty from other disciplines. I explained the assignment to the Marketing professor to whom I refer students for the international marketing case situation so that they are aware of the related assignment. That professor also has been very helpful in engaging students in thinking about the situation as an international marketer would need to think about it. I have sent the professor follow-up 'thank-you' messages just to recognize their assistance and express my appreciation for their help. It is always beneficial to let faculty from other disciplines know when students are being referred to them for a given class project and to recognize their assistance.

Conclusion

Pedagogy is meant to challenge students to develop new skills and understand applications of concepts. When students are challenged beyond a certain degree or are faced with a new pedagogical approach with which they are unfamiliar, they will experience additional frustrations that may hinder their learning and affect their ability to apply skills. Carter's (2007) four meta-genres identify particular areas that WID pedagogy ought to address in helping students develop writing skills that they will need in their prospective workplace. Intersectional problem-based CSCW pedagogy challenges students to develop particular technology-related literacy skills that will be applied in their workplace, but it should be applied carefully. Instructors implementing it should have assignments that include some F2F dynamics as well as minimal risk to the students' grade. These will help make the assignments more malleable for students to use in their learning.

Appendix A. Correspondence Portfolio Assignment

CORRESPONDENCE PORTFOLIO

Write a letter which responds to each of the following scenarios. Consider appropriate letter formats and use tact in each letter.

Situation 1

You recently went on a three day business trip, booked through an airline operator that offers services for business trips; and during this trip you encountered several less than pleasant events which negatively affected your experience.

First, you arrived at the hotel late in the evening and wanted to get some rest because you had an early meeting the next day; however, just before going to bed you encounter a toilet in your room that is unable to flush. Rather than call the front desk to be moved or have someone fix it at that time (again it's very late at night) you decide to deal with it overnight, and call the next morning. This is fixed the next morning after your call, however, you had to remove the toilet's shelf to flush the toilet manually overnight. Secondly, you were told by the trip operator that the hotel had a moderately priced restaurant, but when you stop at the restaurant for breakfast the first morning you're there, you see that the prices are considerably more than moderate. Consequently, you have to go across the street for breakfast each morning, rather than enjoy the convenience of staying inside the hotel building. Also, you were told by the operator that a nearby historical city (a busy place during the mid-1800s) is well worth visiting, since many of the original buildings are still standing and there are several activities for tourists there. On the second day of your trip, since you have some free time before that day's meeting, you rent a car and drive the thirty minutes to get to the city, only to find that the city is a tourist trap; a number of buildings are closed to the public and most of the historical buildings require a large "donation" for admission, and you decide that the tour of the building is probably not worth that price, so you do not participate in any building tours. While you did have some nice experiences, these stand out in your mind.

Upon returning home you decide to write a letter to the trip operator (make up name and address information) regarding your dissatisfaction with the general experience. Remember to include as much details as possible.

Situation 2

Respond to the above letter.

Situation 3

At a recent meeting one of your colleagues tried to propose implementing a Just-In-Time inventory program at your company. While no decision was made at the meeting, you were concerned about the proposal. The program, it was stated, would increase efficiency by lowering inventory costs. The colleague presented much data demonstrating potential savings. However, a risk you saw in the program, that was not addressed, was that demand for the product was inconsistent over the fiscal year, and it could change from year to year. You also understand some other issues associated with JIT inventory programs, and you are concerned about being placed in a position where the shipper has the power one would have in that program.

Write a memo to this colleague (make up name) acknowledging your concerns and encouraging him/her to revise the proposal accordingly.

Situation 4

A former employee whom you supervised has written you a letter asking you to write a letter of recommendation for him/her. He/she states in this letter that the recommendation letter is needed in order for him/her to get into a certain academic program which would help advance his/her career. However, you recall that this person was frequently late to work, misinterpreted several of your instructions, and seemed to be more concerned about his/her social life than about the job he/she was to perform.

Write a letter rejecting the request (make up name and address information).

Situation 5

For the past two months, you worked in a group of four (4) people on a particular task. One of the members of this group contributed significantly less to the group's efforts than any of the others in the group. Others had to compensate for his/her lack of effort by doing more than they ought to have had to do, thereby causing some tension within the group. The outcome of the project was a considerable success, and each of the members of the group is to receive an award of appreciation, which includes a raise in salary, because of the group's success.

Write a memo to your supervisor (make up name) acknowledging this tension and the apparent injustice. You may create any reasonable details.

Appendix B. Collaborative Report Scenarios

Scenario A

You are a group of marketing managers for Discounts R Us, a large discount retailer, and you have been assembled to address a problem Discounts R Us faces as it tries to enter a new geographic market. Richberg's local council has called a special meeting that will be open to the public, because many local citizens are concerned about the impact that your store will have on the area's property values and economy; and you have been asked to respond to these concerns so that council can decide whether to permit Discounts R Us to build and operate in Richberg.

The area has experienced considerable economic growth in the last five years, and Discounts R Us wants to be a part of that growth. When it initially presented its proposal to the council it acknowledged that the

large store would bring much revenue to the area through business and income taxes, and it also would encourage people outside of the area to spend money there, adding to the city's economy.

However, many citizens have voiced their concern over having a large discount retailer in the area; they're most concerned about how it may change Richberg's affluent image, but they're also worried about hiring practices--two years ago Discounts R Us was sued by a few employees over labor practices in two markets, and there was an article published that conveyed a general perception by employees that the company is more concerned about profits than its employees' safety.

Discounts R Us addressed these labor issues internally, and there have not been any lawsuits since the article was published. In fact, there are even employee reward programs. The citizens' concerns are based on past publicity, and you feel that you can overcome their objections. You are to prepare a proposal seeking approval to operate in this city that addresses the citizens' concerns. You may create/add any other reasonable details and include them in your report. The document will serve as the basis for a presentation to the council and the citizens at this special meeting.

Scenario B

You are a group of Human Resource managers for Widgets R Us, a large manufacturer of widgets. Productivity has been down for the last year despite a strong economy. In fact, Widgets R Us is losing market share in the competitive widget market to Widget Corp, and one reason that Widgets R Us thinks that this is happening is that there seems to be low employee morale among the hourly employees. You have been assembled to determine how to implement an employee reward program to improve morale.

Preliminary research suggests that employee reward programs, such as 'Employee of the Month' and 'Employee of the Quarter', can have a dramatic impact on productivity. But there are a variety of such programs and ways to implement them. Brainstorm for three kinds of employee reward programs, and develop a proposal in which you recommend one program and how to implement it. You may add any other reasonable details to develop your proposal.

Scenario C

Your company, ASU, Inc., is an exporter of widgets, and your primary customer is AXI Corp., which is a domestic producer in another country. Seventy-five percent of your sales revenue is from AXI. The widgets you supply are used in AXI's production of its primary product. This product is in great demand in this country and in a neighboring country in which AXI also sells the product.

You are AXI's exclusive widget supplier, and you have had this relationship with AXI for the last five years. However, a recent political event has affected this relationship, posing an ethical dilemma, and you must assess what to do.

Your domestic government has implemented an embargo against products from your country. You will lose considerable revenue if you cannot supply widgets to AXI.

The country neighboring AXI's domestic country still maintains good political ties to your domestic country and AXI's country, too. You do not know if you should ship your product through that country since, ethically, it may be wrong to do so; however, legally it can be done.

Companies in AXI's home country have relationships like the one you are considering because it is ethically and legally permitted, and the country's political instability almost requires that such relationships exist. A domestic competitor of yours that also does business in AXI's country is ready to take your place as a supplier should you decide not to continue shipping widgets to AXI.

While it appears reasonable to simply use the other country as an intermediary, your shareholders and government may view the practice as unethical.

Write a report to your shareholders in which you convey to them the situation and how you have decided to handle it. Present at least three possible responses to the situation and acknowledge and justify your decision. You may invent any reasonable details consistent with the information above and include these in your report.

Appendix C. Nature of Message Posted

group 1 report

Display:
⇨Threaded
⬇Unthreaded
📧All
📧Unread

Expand All   Collapse All

Select All/None ☐	Subject	📎	Messages	Date	options ?
☐	⊞ Business Plan 🖉		2	October 4, 2007 3:05 PM	✗
☐	management plan 📎			October 14, 2007 5:07 PM	✗
☐	⊞ New management plan 🖉	📎	3	October 14, 2007 10:51 PM	✗
☐	website for inflation			October 15, 2007 11:27 AM	✗
☐	The table 📎			October 15, 2007 11:37 AM	✗
☐	last one i promise 📎			October 15, 2007 8:37 PM	✗
☐	Marketing Plan 📎			October 16, 2007 11:02 PM	✗
☐	Audit Schedule 📎			October 17, 2007 1:57 AM	✗
☐	Introduction 📎			October 17, 2007 9:35 AM	✗
☐	📎			October 17, 2007 11:30 AM	✗
	revised copy[b8]				

☑ Delete   Mark as Read   Mark as Unread   Create Printable View

group 1 report

Display:
⇨Threaded
⬇Unthreaded
📧All
📧Unread

Expand All   Collapse All

Select All/None ☐	Subject	📎	Messages	Author	Date	options ?
☐	Introduction revised/finished 📎				October 17, 2007 2:42 PM	✗
☐	one more thing...				October 17, 2007 2:43 PM	✗
☐	Hey				October 17, 2007 2:46 PM	✗
☐	Product and Service Description 📎				October 18, 2007 2:06 PM	✗
☐	one thing...				October 18, 2007 2:13 PM	✗
☐	All 5 Sections 📎				October 18, 2007 3:02 PM	✗
☐	⊞ Hey 🖉		2		October 19, 2007 11:26 AM	✗
☐	hey this is everything revised 📎				October 25, 2007 12:02 AM	✗
☐	hightlighted part				October 25, 2007 2:15 PM	✗
☐	Here 📎				October 25, 2007 3:00 PM	✗

☑ Delete   Mark as Read   Mark as Unread   Create Printable View

group 1 report

Display:
⇨Threaded
⬇Unthreaded
📧All
📧Unread

Expand All   Collapse All

Select All/None ☐	Subject	📎	Messages	Date	options ?
☐	Finished Project 📎			October 25, 2007 3:03 PM	✗
☐	turning it in				

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Contact Information

Dirk Remley
Department of English
Kent State University
Kent, OH 44240
Email: dremley@kent.edu

Complete APA Citation

Remley, Dirk. (2009, January 19). Intersectional computer-supported collaboration in business writing: Learning through challenged performance. [Special issue on Writing Technologies and Writing Across the Curriculum] *Across the Disciplines, 6*. Retrieved from https://wac.colostate.edu/docs/atd/technologies/remley.pdf