

# Research to Practice Online: Conditions that Foster Democracy, Community, and Critical Thinking In Computer-Mediated Discussions

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## Abstract

*Although computer-mediated discussions (CMDs) have the potential to be ideal forums for fostering dialogue, research on listservs and in college composition classes has found that the discourse tends to be dominated by a few individuals, often men, and is sometimes abusive. In contrast, results of our study in a teacher education course revealed that both men and women used a range and a mix of discourse strategies. With a few exceptions, both men and women were inclusive, supportive, personalizing, receptive to others' ideas, and attenuating. They were also willing to be critical and to challenge others' assumptions, images, beliefs, and positions, which they usually prefaced with supportive and attenuating remarks. In addition, both men and women were equally likely to mock and exclude those who did not abide by the conventions of the group norms, although such comments were uncommon. Based on our own research and a review of the literature, we discuss what we learned and offer recommendations for instructors around four themes: planning, netiquette, the role of the instructor, and assessment.*

## INTRODUCTION

Computer-mediated discussions (CMD) have increasingly become an integral part of teaching in colleges and universities. Because physical bodies are absent in electronic space (e-space), CMD can potentially eliminate inequities related to gender, race, class, and other socially constructed categories, and many educators believe that CMDs can create ideal forums for students who feel marginalized in classrooms (see Flores, 1990; Selfe, 1990). In contrast to face-to-face discussions, all students—and especially females—can be heard because everyone can post without interruption and hold the floor for as long as they wish (Selfe, 1990; Hsi & Hoadley, 1997). Thus, CMD has the potential to allow for divergent perspectives, to balance power relations between teacher and students, to give a voice to marginalized groups, and to provide opportunities for the thoughtful, reflective discourse that characterizes critical thinking (Bonk & King, 1998a; Faigley, 1992; Selfe, 1990).

However, despite the potential of CMD to create ideal discussion spaces, research indicates that some of the same problems that women and other marginalized people in society have experienced in face-to-face discussions persist (Boese, 1999; Herring, 1994, 2001; Wilson, 1999). Not all computer-me-

diated discussions in education have been found to promote effective dialogue (Levin, 1996). There have been conflicting findings on whether equality among discussants, especially among men and women, is enhanced or hindered in on-line discussions (Guzzetti & Fey, 2001; Lockard, 1996; Takayoshi, 1994). Prior research has found that men tend to dominate online discussions and that men's discourse styles do not foster open dialogue (Herring, 1994; Takayoshi, 1994). Instead of promoting equality and effective dialogue, CMD may perpetuate inequalities of power and influence.

In a study we conducted to examine the discourse strategies used by women and men online (Wade & Fauske, in press), we wondered whether the types of gendered discourse that others have found would be evident in the CMDs that were part of an issues-based education course. Results of our study revealed few patterns of stereotypically gendered discourse; instead, we found that both women and men regularly used discourse strategies that were supportive, community building, and inclusive. Further, both women and men engaged in critical thinking in which they questioned their own assumptions and perspectives and challenged those put forth by other participants. We concluded that a supportive, inclusive orientation toward other participants in the discussion was necessary to promote both sustained participation and the risk-taking inherent in challenging assumptions and positions. Our findings prompted further investigation of CMD structure and content in the context of instructional considerations, which is the focus of this paper. The issues to consider and the recommendations that follow are based on findings from both our study and a review of the research we conducted that examined gendered discourse in online discussions. We first present an overview of prior research on gendered discourse in CMD, and then briefly describe results of our own study. Next, we offer recommendations for instructors that deal with planning, netiquette, the role of the instructor, and assessment. In developing these recommendations, we found that they raised additional questions for research and practice, which we have included in our discussion.

## OVERVIEW OF RESEARCH ON GENDERED DISCOURSE IN CMD

Herring's (1994, 2001) review of the research on gender differences in electronic discussion found that men and women have recognizably different styles in electronic postings and that they also have different ethical standards for what are appropriate and desirable postings. Herring found that men's postings tended to be lengthy and frequent, characterized by strong assertions, assertiveness, distancing, self-promotion, and in some instances *flaming*—that is criticism, ridicule, and put-downs. In contrast, the postings of the few women who participated regularly were characterized by *attenuation*, as in making suggestions rather than assertions; a personal orientation, which revealed thoughts and feelings; and supportiveness, which helped others feel welcome and accepted. In describing these gendered styles of electronic discourse, Herring does not mean that all or even most participants of either sex exhibit these characteristics but rather that “the styles are recognizably—even stereotypically—gendered” (p. 3). These findings are consistent with Tannen's (1990) earlier notions of relational/feminine and hierarchical/masculine discourse styles.

Guzzetti and Fey's (2001) examination of 10 empirical studies of gender and electronic text revealed three major themes: (1) electronic discussion only sometimes empowered females to develop voice, (2) preventing gender bias in electronic discourse was problematic, and (3) groups or partners could either help foster or deter gender equity in electronic discussion. Interestingly, the tone and culture of the group seemed to temper a tendency toward hierarchical language in several of these studies (Guzzetti & Fey, 2001).

Studies of CMD in college composition courses have produced similar findings. In Monroe's (1999) study of tutor training in a seminar that was evenly balanced in gender, a flame war developed, causing the discussion to disintegrate. Boese (1999) reported that in chat rooms in a college composition course, the all-male groups engaged in abusive, misogynist, and homophobic language. Groups that included a woman engaged in more serious discussions, but discussions in these were dominated nevertheless by a small number of men. Faigley (1992) described the hostile and aggressive tone in computer-mediated small-group discussions in a college course he taught, and partially attributed the hostility to group composition. An earlier, predominantly female class (17 women, 4 men) had never engaged in flaming, but this predominantly male class (13 men, 7 women) regularly engaged in disagreement, aggression, and open hostility online.

Findings of differences in gendered discourse in online environments are consistent with research done in other contexts. In studying conversations, Tannen (1990) found that *relational* language that promotes community was associated with feminine discourse, whereas *hierarchical* language that promotes independence and accruing power was associated with masculine discourse. Similarly, Kendall and Tannen's (2001) review of cross-cultural research found that women tended to use strategies that are more polite and attenuated and that focused on connecting to others by finding similarities and sharing or mirroring similar experiences. In contrast, men tended to focus more on negotiating one's status in the group through opposition, which involved teasing, playfully insulting one another, playing devil's advocate, challenging, and debate. Kendall and Tannen argued that these differences in discourse styles are both a resource and a constraint, and that discourse styles are pragmatic strategies used to achieve particular goals (e.g., connection or status) in context-specific circumstances. Although neither style is superior to the other because both have an underlying logic and are strategic, gender-related differences in style may create and perpetuate unequal power relations.

As simplified versions of "reality," stereotypical differences between women's and men's speech represent binaries that are polarized, fixed, and sex-exclusive, without an appreciation for their complexity and sophistication (Litosseliti, 2002). Yet, such views do exist in society and govern the way women and men perceive how they are *expected* to think and interact (Weatherall, 2002). Thus, we began with the assumption that in any social interaction people have a purpose in mind about *what* they say and a range of discourse strategies in the *way* they say it. However, we also recognized that, although people are purposeful and strategic in their discourse, they are constrained by their perceptions of what is gender-appropriate speech, among other societal norms (Kendall & Tannen, 1997, 2001).

## OVERVIEW OF OUR OWN RESEARCH

Our study was guided by a central research question: What were the discourse strategies that male and female prospective teachers used as they discussed educational issues in CMD groups that were balanced in size and gender? We recognize that in certain contexts and in certain professions, such as education, assumptions about differences in women's and men's discourses may not hold. In the present study, the discourse that we were interested in researching was that of new teachers at the secondary level, who had successfully completed student teaching and were about to embark on their teaching careers.

The study population was 29 prospective secondary teachers who had completed student teaching and were enrolled in a required course titled "Teaching Diverse Students in Inclusive Settings" at a large public university in the western United States. The students were European-Americans; 15 were female and 14 were male. The researchers, one of whom was the instructor in the course, are European-American women. The course relied primarily on small-group and whole-class discussions about cases and issues related to inclusion of students who have traditionally been excluded from success in the mainstream because of disabilities, language, culture, and gender. Weekly discussions also took place outside of class on the Internet in five newsgroups of five or six students each, without participation or facilitation by the instructor. The newsgroups were electronic discussion forums that allowed participants to read and write messages online. After first responding online to questions the participants had created each week (after the initial practice weeks when the instructor had posted the questions), participants were asked to then read the earlier responses of others before posting their subsequent responses. When a participant replied to a question or comment in the newsgroup, the new message was added to the discussion in a way that showed the relationship of the new comment to the existing discussion structure. This enabled participants to follow the "threads" of the discussion as they developed over time.

Criteria on which students' participation in the newsgroups would be judged, which was 20% of their final grade in the course, were discussed in class and listed in the syllabus as follows: Posting at least twice each week, active listening, incorporation of ideas drawn from readings in this and other university courses and from participants' experiences as students and as teachers, sensitivity to equity issues, and well reasoned positions, although not the nature of those positions. These criteria had been developed by students in a similar course the year before. The instructor (second author) did not participate in the newsgroups except initially to help students select the questions they wished to discuss during the first two practice weeks. By the third week, the class asked that they be allowed to develop the questions on their own, which they did as a whole class on three occasions and once in their individual newsgroups during the class meeting time. To personalize the newsgroups, the newsgroup members were required to always post their names to their responses. Further, newsgroups occasionally met in class for face-to-face discussions, and students were aware that the instructor could read their discussions.

Transcripts of the discussions of all five newsgroups provided the data sources for analysis. We electronically transferred the newsgroup discussion files to the NVivo qualitative data analysis software program for coding and analysis. The electronic nature of NVivo allowed us to code in multiple ways with double and triple coding of a single data excerpt, a necessity given the volume of data and numerous questions that both guided and emerged from our inquiry. The NVivo program gave us the ability to compile and categorize responses across all of the newsgroups. At this time, we gave each participant a pseudonym that corresponded to his or her gender. We read printouts of the discussions, coding responses individually. We then met to compare and agree upon coding. Although we coded all the data together, we also coded a subset of the data separately to determine interrater reliability. The result was 83% agreement. Any instance of disagreement in coding was resolved through discussion throughout the analysis.

The findings from the study emerged from a constant comparative analysis. The first three categories in the matrix comprise a stance that is inclusive, supportive, and connected, corresponding in many respects to Tannen's (1990), Herring's (1994, 2001), and Kendall and Tannen's (2001) characterization of feminine discourse. These categories are described in more depth below:

*Supporting:* Agreeing with earlier statements, expressing appreciation and thanking, and acknowledging what others have said.

*Perspective-Taking:* Considering a perspective offered by another participant, considering multiple points of view or alternative interpretations offered by others.

*Inquiring:* Asking a question of the group that does not serve as a rhetorical device in making an argument.

The next two categories reflect a critical stance toward one's own and others' assumptions and views:

*Self-Questioning:* Questioning one's own assumptions, offering alternative possibilities to one's own point of view, making disclaimers about one's own knowledge or understanding. This category represents both open mindedness (see Burbules, 1993) and in some instances may represent a kind of hedging and doubting that Herring (1994) considered to be more characteristic of women's discourse.

*Challenging:* Disagreeing with earlier statements made by other participants; offering counter evidence; and criticizing course texts (including media presentations), course activities, and the teacher education program in general. Some have described challenging responses as

involving a kind of distancing (see Burbules, 1993), which is often characteristic of men's discourse styles (see Herring, 1994; Kendall & Tannen, 2001).

In addition, we found a small number of postings that were nonsupporting, isolating, and community eroding. This category corresponds with Herring's characterization of flaming, which she found to be more characteristic of men's discourse than women's (see also Kendall & Tannen, 2001):

*Nonsupporting:* Mocking, putting a group member down, and isolating a group member by aligning with others against that person.

A final category that emerged from the data is similar to the authoritativeness that Herring (1994) and Kendall and Tannen (2001) associated with stereotypical male discourse styles:

*Posturing:* Assuming an exaggerated pose by lecturing and/or using unfamiliar or technical language; assuming the role of an authority in ways that separate oneself from the group.

In contrast to some of the prior research, we found in our study that both men and women used a range and a mix of discourse strategies. This overall finding is illustrated in Table 1, which displays responses in each category by groups and individuals. With a few exceptions, both men and women were supportive, receptive to others' ideas, and attenuating, although women tended to engage in perspective taking, inquiry, and self-questioning more than did men. A microanalysis of the data also revealed that both men and women also personalized their postings and made explicit connections to one another by addressing postings to individuals by name and reflecting what others had said, often excerpting quotations into their own responses. At the same time, they were also willing to challenge others' assumptions, images, beliefs, and positions. When women and men did challenge one another, they usually prefaced their challenges with hedges such as "I think," "You made a good point, but . . .," and "I may be way off here, but . . .," as well as modifiers such as "might," "maybe," and "perhaps." However, despite evidence of perspective taking, inquiring, self-questioning, and challenging, this did not necessarily mean that participants changed their views when alternative ideas conflicted with strongly held beliefs. Two other findings are that men offered a few more nonsupportive postings than did women, although the total number was small, and only one of the 14 men posted responses that were coded as posturing, which invoked nonsupporting comments from other group members. (See Wade & Fauske, in press, for a full report of the study.)

The findings in this study corroborate Guzzetti and Fey's (2001) conclusion from their review of the literature that a group's culture can enhance the democratic possibilities of CMD. This finding prompted us to return to the study and to prior research to answer emergent questions about the role of the instructor in facilitating group culture that in turn supports a democratic forum,

*Text continued on page 144*

**Table 1. Data display by category of response, groups and individuals.**

	Supporting	Perspective Taking	Inquiring	Self Questioning	Challenging	Non- Supporting	Posturing
<b>Group A</b>	21	13	45	14	14		
Matt	2		1	1			
Rod	5	3	6	4			
Angie	4	2	9	3	4		
Mary	7	4	21	4	6		
Stacey	3	4	8	2	4		
<b>Group B</b>	56	2	20	21	14	8	5
Brad	11	1	5		1	1	
Charles	5		6	3	1	2	5
Vic	13		1	10	1	2	
Karen	5		1	2	2	2	
Kim	5		3	5	1	1	
Tara	17	1	4	1	8		
<b>Group C</b>	25	3	21	13	18	1	
Mike	5		4	4	8	1	
Tom	5	1	4	4	2		
Kevin	7		1	3	3		
Candace	6	1	4	1	1		
Jennifer		1		1	2		
Jan	2		8		2		
<b>Group D</b>	41	2	15	10	24		
Dan	2						
Andrew	5		3		5		
Jon	13	1	2	5	15		
Becky	8	1	3	3	4		
Melony	7		4	2			
Wendy	6		3				
<b>Group E</b>	109	37	49	42	57		
Daniel	19	8	14	3	7		
Chris	19	1	4	1	5		
Sean	18	3	1	1	11		
Barbara	28	10	15	17	21		
Tammy	12	5	4	4	5		
Julia	13	10	11	16	8		
<i>Men's:</i>	129	18	52	39	59	6	
<i>Women's:</i>	123	39	98	61	68	3	
<i>Total:</i>	252	57	150	100	127	9	5

community, and critical thinking. Based on both our findings and our review of the literature on gendered discourse in CMD, we present below some recommendations for instructors, which are organized around four questions.

## EMERGENT QUESTIONS AND CONSIDERATIONS| FOR INSTRUCTORS

1. *During the planning stage in course development, how can instructors create online environments that foster democracy, community, and critical thinking?* To answer this question, instructors might begin by critically examining what they see as their role in planning the course syllabi, structure of the course, class activities, and methods of assessment, as well as the extent to which they want to guide students' thinking. Given the view that CMD is largely socially constructed meaning making (Althausser & Matuga, 1998; Duffy, Dueber, & Hawley, 1998), what can instructors do to promote democratic dialogue without a "one right" answer or an "instructionally correct" view? How do instructors mediate the tension between their instructional purposes and allowing space for divergent perspectives or dialogue incongruent with the instructor's intent?

Instructors in traditional delivery modes make many implicit and explicit decisions about the content, texts, learning activities, and assessment practices for their courses. It is usually the instructor's prerogative, for example, to select the texts and related readings, to delineate the form and content of in-class and out-of-class assignments and activities, and to outline requirements and standards for assessing learning outcomes. Implicit in these decisions is the prerogative to select one position or stance over another. As a result, the instructor may largely control what is acceptable and "correct" thinking in the course.

CMD can provide interactive learning environments that redefine the roles of instructor and student. Faigley (1992) wrote that "electronic discussions both invite participation and seriously limit a teacher's ability to control the direction they take. Just as the authority of the teacher is decentered, the authority of the text is also decentered in electronic written discussions" (p. 185). Faigley argued that as students see different interpretations of course content and issues in the postings of others, they confront different perspectives and understandings and begin to negotiate meaning that is socially constructed and goes beyond course content. When such discussion is in print and asynchronous, it increases the likelihood that participants will reflect and edit their postings (Daiute, 2000).

In the study presented here, students offered alternative viewpoints, such as how difficult it is for teachers to respond to special-needs students with so few resources, and they disagreed about how to frame problems as well as the solutions that might best resolve the problems they were discussing. Challenges tended to be directed toward one another rather than to the instructor or the course content. The students, then, may have monitored their own discussion to a degree, and the discussion was also bound by the assignment structure and the content of the course.

Implicit in these findings and observations is the notion of power differential in the classroom. Many of the same prerogatives of instructors in traditional

classroom settings apply to the use of CMD, thus requiring the need for greater care and awareness of power differentials and clarity in instructional purposes. If the instructor seeks to create a democratic forum through CMD, then that suggests a mutually respectful culture among equally empowered participants. Yet the very act of assessing the students' work creates a power differential between instructor and student. Thus, a genuinely democratic forum may not be possible, with or without CMD. However, we offer the following issues to consider and recommendations for planning an e-space that invites a democratic forum:

- Instructors can assess their own philosophy of teaching against the expectations and requirements of CMD activities. Instructors who embrace a constructivist paradigm might have a greater degree of comfort with social construction of meaning.
- The composition and demographics of the learners as well as the nature of the course content may dictate desired levels of intellectual freedom. Learners who are novices to the field may be less able to reflect on and synthesize course content than those who are more seasoned, as are students in a capstone experience. Learners who are homogenous in race, culture, or gender may need instructor guidance in exploring issues of social justice.
- Asynchronous, as opposed to synchronous, responses allow students to think through what they post, thus reducing the potential for unexamined, disrespectful, or ill-informed responses. This observation corresponds with Daiute's (2000) finding that asynchronous responses offered higher levels of reflection and thoughtfulness.
- There are differences in the varied uses of CMD in instructional settings. Some courses supplement face-to-face course meetings with online discussion, as in the study we conducted. Other courses are partially or totally conducted online. Because students in our study met weekly in addition to the CMD, the norms and expectations established in the classroom carried over and moderated online responses. Considering the structure of the course and the level of face-to-face student contact may help instructors anticipate the nature of responses and the norms for student participation. Some studies that have been conducted on chat groups in which the participants have never met nor will likely ever meet indicate a tendency for disrespectful postings and "flaming" (Levin, 1996).
- Students in our classes whom we surveyed said that they preferred small-group CMDs consisting of five to six students rather than whole-class CMDs. However, small groups only work if all, or at least most, of the members participate regularly.

2. *Should rules of "netiquette" be established for CMD in college classrooms? If so, what should they entail and who should establish those rules?* As mentioned earlier, analysis of the postings of our student groups revealed little flaming. Few postings showed anger or strong emotion directed at other participants, although some students were passionate about the topics they were discussing,

such as inclusion and teachers' low pay. We asked ourselves the reasons for the low incidence of problems online—e.g., flaming and posturing, which others have encountered in the literature on gendered discourse in CMD in their college composition courses.

CMD is expected to provide a democratic forum characterized by a collaborative and mutually respectful culture among participants (Herring, 1994; LeCourt, 1999). Instructors often set rules of netiquette when using CMD that specify the tone and content of responses. As the instructor, the second author had done this in the course we studied by presenting and discussing rules of netiquette that had been established by students in a previous course (for details, see page 140).

However, not all attempts at creating a democratic forum based on rules of netiquette have been successful. Wilson (1999) presented one such example in a description of CMD that called for the use of a protocol of care with five elements: reflection, care, concurrence, format, and professional courtesy (p. 136). The protocol was meant to prevent flaming and personal attacks, yet the postings evolved into angry and hurtful exchanges between men and women. Women became the care givers and men the cared for, creating relationships that were asymmetrical. As a consequence, several women became resentful. One claimed that some of the men used CMD to "further their own projects, to make themselves seem better teachers, to fend off any varieties of feminism that seemed too threatening or dangerous" (p. 141). Another claimed that the men displayed their postings in ways that "had more to do with self serving interests than in ending oppression" of women. The men became defensive and several volatile exchanges were posted. Faced with such deterioration of the CMD activity, the instructors removed the postings after consulting the authors—four women and two men. However, the class protested and the postings were later distributed in hard copy to the students. This act of censorship by the instructors had many unexpected repercussions with considerable implications for instructors using CMD. Both males and females were left with feelings of anger, and some refused to participate in CMD any further. In sum, anger and emotion were essentially prohibited from CMD in this course and, when such postings appeared, were removed. This study revealed that instructors' attempts to establish netiquette can easily fail and inadvertently promote an atmosphere that discourages a democratic forum defined as giving voice to all participants (Wilson, 1999).

In our study, several measures were taken to assure appropriate online netiquette. Students were requested to use their names when posting, a means of reducing flaming due to anonymity (Levin, 1996). Also, students knew each other from face-to-face meetings in class, and they earned 20% of the final grade for participating in CMD and following the rules of netiquette. In addition, the discussions were structured around the questions that they had formulated in class. These factors and requirements may have helped avoid flaming and related discourtesies.

From our review of the literature and data from our own study, several recommendations emerged about structuring and setting expectations for online netiquette, along with questions for instructors to consider:

- It is important to establish rules of netiquette to make expectations explicit. If possible, instructors might develop netiquette collaboratively with students to give them a sense of ownership and responsibility.
- Some educators have called for “reasoned opinion” in CMD (Duffy et al., 1998), yet an instructor’s focus on reasoning may eliminate emotion and related experience and, thus, limit e-space for “voices” that fall outside the rational paradigm. Instructors need to determine what is the appropriate level of structure and direction in CMD for their particular course and student population.
- CMD structured around questions, as opposed to open ended chat room discussions, may reduce flaming by keeping the discussion focused on issues important in the course. However, students did not like the questions posed by the instructor in the initial practice sessions and asked that they be allowed to create their own. Eventually, they asked that they be allowed to have discussions with no guiding questions. We wondered, if CMD is to invite discourse, does such structuring inhibit the development of a democratic forum? We concluded that instructors might consider beginning CMDs with structured questions, but respond flexibly to students’ requests to reduce or eliminate such structure once the CMDs are underway.
- Students knowing each other in a face-to-face setting, in addition to their on-line exchange, may temper tendencies toward flaming. Flaming is even less likely when students are required to include their names in their postings (Levin, 1996).
- If CMD is viewed as a forum for socially constructed meaning that can be restricted by the level of structure imposed by the instructor, then whose meaning is constructed and for what purposes? Ethical implications for instructors are considerable for inviting discourse, on one hand, and excluding certain discourse, on the other. We recommend that instructors examine their own teaching goals and assumptions and make these explicit to students.
- As in the classroom, the meanings that are constructed are temporally bound. Comments cannot be retrieved or eliminated and are thus incorporated into the meaning making. Classroom discussions are often monitored by instructors, and inappropriate or discourteous comments and misconceptions can be immediately addressed in the same class session. Thus, such comments have little time to influence meaning making or elicit responses. However, does the instructor have the same prerogative and responsibility in online discussion? Does such a responsibility imply continual reading and monitoring of student postings?

These considerations and conclusions led us to consider the role of the instructor as participant in CMD.

3. *Should instructors participate and/or intervene in CMD? If so, in what ways and under what circumstances?* Instructors can employ a range of monitoring approaches, from no intervention whatsoever to full participation as a member of the discussion group. The degree of instructor participation can be guided by the content of the course, learning objectives, student population composition, and other

factors. The omnipresence of instructors' continual monitoring of postings can be inherently oppressive to certain students and ideas, yet to remove oneself may abdicate responsibility for overseeing a required learning activity. Participants in our study and in subsequent courses have remarked in surveys and in-class discussions that they preferred not having the instructor participate in the CMDs, although they did not express concern about the instructor reading their postings.

In addition to issues of netiquette, several instructional and ethical dilemmas emerged from our review of the research and our own study regarding the instructor's role in monitoring of CMD, such as whether and how to respond when a group ostracizes a member or a negative stereotype is left unchallenged. LeCourt (1999) suggests that teaching provides opportunities for "disrupting the discursive norms" that may perpetuate stereotypical responses (p. 172). Below are several recommendations regarding the role of the instructor in monitoring online discussions as they are occurring:

- Data analysis in combination with a review of related studies suggests that instructors exercise the same habits of monitoring in class discussion when teaching in an online CMD environment (Bonk & King, 1998b; Guzzetti & Fey, 2001). Just as an instructor may have expectations for civility, regular contributions, thoughtful challenges, and receptiveness to new ideas in classroom-based discussion, that instructor can have those same expectations for CMD. Setting such expectations can lead the class to refrain from flaming or related discourtesies but may not prevent them completely (Wilson, 1999). Modeling responses as the instructor or sharing exemplary responses from other discussion groups may set clearer expectations for tone and content (Guzzetti & Fey, 2001).
- In addition to instructor responsibility for monitoring responses, studies show that students monitor both themselves and other discussion group members with social conventions that are familiar in conversation (LeCourt, 1999; Levin, 1996). For example, students cajole, support, challenge, empathize with, or withdraw from group members online just as in class; thus, discussion groups establish their own norms for communication.
- If CMD is a part of a course that is completely online, are there methods for enhancing the interpersonal relationships of students? Alternative means of communication such as telephone calls or scheduling meetings among small groups of distance learning students who live close to one another may offer some recourse for enhancing student interpersonal relationships and thus reduce the potential for problems in online communication.

In sum, relying on good practice in classroom-based teaching and learning can guide CMD, but CMD can also create situations that call for refinements in practice that require openness and vigilance on the part of the instructor and a willingness to set and modify expectations collaboratively with students.

*4. How can CMD be assessed along with other class activities and discussions to encourage the discourse strategies necessary for a democratic dialogue and*

*critical thinking*? This question raises other related questions: How does assessing online postings differ from assessing other written or spoken products? What do instructors look for in assessing CMD? In our study of CMD as an instructional tool, we examined the alignment of assessment methods with the purposes of CMD in the course.

Our coding of responses emerged from the data and thus was not given to students at the outset as a rubric for “grading” their responses. Instead, the instructor evaluated participation, evidence of critical thinking, and netiquette. After analyzing the data, we asked ourselves many questions about using such a method of assessment. Although it is somewhat non-threatening to students for them to know that only two postings were required for each question (one to answer the question and at least one to respond to others in the group), we noticed that some students gave the minimum number of posting while others were more prolific and forthcoming in their exchanges. Those students who offered minimal postings were often silent in the e-space that was intended for open dialogue and democratic forum. Such subtle aspects of postings are difficult to assess, which brings us to the following questions and conclusions:

- How do instructors interpret or make sense of silence? How can instructors differentiate silence from withdrawal or identify patterns of gendered discourse, such as attenuation, which may be manifest in online silences? Making sense of silence may mean allowing students space to say nothing (LeCourt, 1999). LeCourt maintained that students may have nothing to offer at a given time, and silence may be a more honest choice. One of the students in her study stated, “Maybe I wasn’t confused after all. I have nothing else of importance to say” (p. 172). Without seeking an explanation from the silent student, instructors can only speculate and interpret the silence.
- Assessment is an interpretative process. Just as instructors may interpret silence, they also interpret and assign meaning independent of the intended meaning of the student or the shared meaning assigned by the discussion group. Instructors can look for evidence of critical thinking and use of language that reflects understanding as a means of assessment. Yet a student’s use of terms does not necessarily reflect an understanding of them, and an increase in verbal activity may not indicate a corresponding increase in learning (Grigar, 1998; Moje, Remillard, Southerland, & Wade, 1999). Unlike classroom discussion, CMD allows instructors little synchronous opportunity to probe for understanding. Instructors interpret CMD dialogue from their own situated awareness and position of relative power, and this differs little from the typical relationship of the instructor to students and their work.

Our findings and further review of the literature indicate that expectations regarding content in CMD can create tension between the notion of a democratic forum and the inherent power of the instructor. If CMD is intended to provide a democratic forum for discussion, then assessing the content of postings from the situated position of the instructor may inhibit alternative views and voices.

## INSTRUCTIONAL OPTIONS

Instructional responses to the considerations that we have discussed are not simple; they require ongoing reflection and refinement by instructors who use CMD. Below, in Table 2, we offer a continuum of instructor involvement in CMD in the classroom as a matrix of choices. The range of options from which instructors can choose is related to the intended learning outcomes in CMD as well as the course content and characteristics of the learners.

**Table 2. Continuum of Instructor Involvement In Computer Mediated Discussions**

	<i>Less structure</i>		<i>&gt; More structure</i>
Planning & Structuring	Synchronous, participation is voluntary, meaning emerges, instructor not involved, no rubric or guidelines	Participation required, frequency of posting counted, guidelines set by students and instructor	Asynchronous, specific requirements in both frequency and content, clear and shared expectations/rubric
Participating & Monitoring	Students self-monitor, no participation of instructor, (in the extreme, no reading by instructor)	Instructors structure and read but do not participate, establish netiquette	Instructor reads and assesses all postings for content, may choose to participate and intervene in inappropriate postings
Assessing	None or frequency/counting only	Some expectations for reflection of course content and frequency	Evaluation as written class assignment with rubric/expectations

## CONCLUSIONS

We have raised several questions and discussed considerations that emerged from our analysis of data in our own study and from prior research. Many educators believe that e-spaces can provide "ideal public spheres for students who feel marginalized in the classroom" (Flores, 1990, p. 109) and can develop a "community in which each and every student has a voice and can engage in dialogue with each and every member of that community" (p. 109). Indeed, decentering the power and authority in the classroom can be enhanced by technology and specifically CMD, but only with good instructional practices (Bonk & King, 1998b). Issues of balancing instructor prerogatives and decisions with the creation of a democratic forum can challenge instructors' interpretations of teaching and learning theories or practices. Adapting to emergent instructional methods implies a willingness for self study and refinement of one's own teaching, and a willingness to question the efficacy and appropriate application of technology to teaching practice and learning outcomes (Grigar, 1998). But Grigar raised an important issue in asking the question: "How can we best assure that the use of technology is actually enhancing learning and not, in fact, undermining our students' education?" (p. 257). Although CMD appears to

promote a democratic forum, community, and critical thinking, such an assumption should not go unexamined, and the connections among electronic communication and course content, objectives, and assessment should be continually assessed against theories of teaching and learning.

### Contributors

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