The ways male and female students communicate in computer-mediated distance education courses were examined through a comparison of the communication techniques used by 15 females and 4 males enrolled in a computer conferencing course that required students to share their thoughts regarding a weekly reading assignments and related discussion questions. Two weeks into the course, the men found four main strategies that would ultimately meet their status needs: reporting, differentiating, separating, and vertical aligning. By week 10, however, the men had reverted to using only one primary strategy—reporting—to maintain their status needs. By week 2, the women had developed patterns of communication supporting the following: a sense of intimacy among participants, equal or horizontal alignment in status, symmetry based on the establishment of similar experiences, and a sense of interdependency with other group members. In view of these gender-related differences in communication. After 10 weeks, the women continued to use the first three communication strategies. In view of the observed differences in the ways men and women communicate, 19 strategies for achieving gender-sensitive instruction in distance education were proposed. (Appended are a cross-gender communication framework (developed by Deborah Tannen) and selected data from the weekly topics activity.) (MN)
Gender Sensitive Instruction
A Distance Education Issue

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University of Calgary

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Introduction

Over the past twenty years, much has been reported on gender bias in traditional classrooms, where generally, male students were perceived to experience higher quality educational experiences than females. During this period, learning through distance technology has improved, and today, regardless where they live, if people have a telephone line they can participate in at least one form of distance learning. As research reports document technological advancements, describe program design, and critique student participation in distance education, it is also important to study gender bias in distance education. Studies on how females and males experience the distance learning environment and how they meet their needs within the context of learning are important. If gender differences exist, then it is important to explore what they are and to recommend how to ameliorate gender bias into distance education teaching and program design.

Computer conferencing in post secondary education has become popular, especially in Continuing Education. What is computer conferencing? Feenberg described it as sophisticated email where, participants in a computer teleconference type their communications into computer terminals that are connected, via a special long-distance phone network, to a central computer. The central computer stores the typed message permanently and places it in a sequence with messages contributed by others. The message will be available to the conference members whenever they “sign on.” Since each participant in the “conference” so created can read the contributions of all the others, the result is true group interaction. Participants continue, sometimes for months, to contribute comments to the growing file in the central computer.

But how do adult students adjust to this medium of teaching? Fabro and Garrison frame this question as follows:

Computer conferencing is a collaborative, asynchronous, text-based communication technology which can facilitate distance education. The characteristics of computer conferencing suggest that we may well be embarking on a new approach to teaching and learning at a distance. While this may represent a new generation of distance education, little is known of the qualitative dimensions of this form of communication. That is, what

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The computer conferencing course that is reported on in this paper was organized into five activities: Weekly Topic, Pairs Article, Cafe, Private Chat, and Reflections. Each activity was designed with its own conferencing capabilities. Using FirstClass, students could “click” on a specific icon on the computer screen and access the conference that was organized appropriately so the student could participate in the activity. This report focuses on the data accumulated in the Weekly Topic as this was the core of the course and participation was required of each student. Each week all students clicked the weekly icon to contribute their thoughts and ideas regarding the weekly reading assignment on their own time. For each weekly reading, a student was assigned the responsibility to lead the discussion, summarize a reading, and pose discussion questions. All members of the class were required to respond to discussion leader’s summary. At the end of the week, another student was assigned the responsibility to summarize all the week’s dialogue.

**Purpose**

The purpose of the study is to explore how male and female distance education students meet their needs using Tannen’s framework for interpersonal communication. To achieve this purpose, the author investigated differences in qualitative experiences between female and male students as they participated in the Weekly Topics. Fifteen females and 4 males were included in the study.

**Framework for Analysis**

The framework used was drawn from the field of socio-linguistics. Studies in this field focus on typical responses of people, with the understanding that for every generalization or description of a population, there will be many exceptions. Deborah Tannen studied the impact of socialization of men and women and she describes stereotypical feminine and masculine communication patterns. Tannen’s

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framework of female and male communication may be simplified as follows (See Appendix I): Both females and males have felt needs. Females generally feel a primary need for connection while males generally feel a primary need for status. To meet their need for connection, females create intimacy with others; while males meet their need for status by establishing distant or independence from others. Females can establish intimacy by emphasizing symmetrical relationships, built upon similarities; while males can establish independence by emphasizing asymmetrical relationships, built upon differences. Females generally interact in a manner where there exists horizontal or equal alignment among others whereas males generally interact in a manner where they are one-up and others are one-down in alignment.

This framework is compatible with learning theory, in that learning is enhanced when students possess higher levels of self esteem, and self esteem is directly proportional to a person’s ability to meet their emotional and psychological needs.

Data Analysis

The data were in the form of computer files stored in a format created by the FirstClass program. After gaining ethics approval to implement the research design and permission from students to use the data, printouts of the conversations in the weekly topics were made and analyzed using Tannen’s framework. The framework, which identified meta-messages that males and females typically communicate to meet their fundamental needs, was useful in helping the researcher to understand broad meanings that transcended the particularities of dialogue.

Male Students

After two weeks in the computer mediated course, men in the program were able to meet their primary status needs through several means. Men used reporting as a primary means to maintain status, and through this means, they were able to communicate a meta-message of independence from the group by stating conclusions they had made. In addition, they communicated meta-messages that established their differences from others, their independence from others, and that created one-up / one-down alignments in status among the group. Thus, after two weeks, men found four main strategies of reporting, differentiating, separating, and vertical aligning that would ultimately meet their status needs. In comparison, after ten

5 This study is a complete re-analysis of data originally reported by Susan Hutton and Tom Gougeon as was presented at AAACE in 1996 under the title Participation in the virtual classroom: Are there differences by gender?
weeks in the computer mediated course, men only used one primary strategy to maintain their status needs, *reporting*. This suggests that their ability was reduced to meet their primary status needs. Also the content of their communication included evidence that some men felt that the computer mediated design of the course was responsible for “people feeling unconnected and alone, unappreciated, and scattered.”

**Female Students**

After two weeks in the computer mediated course, women in the program were able to meet their primary connection needs through several means. Women used communication that sent meta-messages that supported a sense of *intimacy* among the participants, equal or *horizontal alignment* in status among the group, *symmetry* by establishing similarity in experiences, and a sense of *interdependency* with other members of the group. After ten weeks in the computer mediated course, women in the program continued to use three of the four above strategies to establish and maintain a sense of *intimacy* among the participants, equal or *horizontal alignment* in status among the group, and *symmetry* by establishing similarity in experiences. Thus, patterns within the data give evidence that women were able to use consistently several strategies to meet their primary connection need whereas men were not able to support their primary needs for status.

**Conclusions**

While women were able to meet their primary connection needs while learning through a distance education computer mediated program, men were not able to meet their primary status needs. According to the data at hand, men reduce their options from several strategies to meet their status needs at the beginning of the program to one, namely *reporting* to maintain status. Women seemed to write on-line as if they might converse with other women without modifying their conversation even though the men were on-line too and were part of the audience. Thus it appeared that men were included in women’s talk during the course but this did not contribute significantly to meeting their status needs.

So how does a program designer create a program of studies and an instructor teach the program so that both men and women students are able to meet their primary needs? The following strategies are suggested to enhance the textual communication:
a) At the beginning of the course, identify the needs felt by women and men according to Tannen’s framework, and discuss how they can be met in class. Unearth the assumptions behind masculine and feminine behavior. Note that since the text medium is a limited mode of communication, students must all compensate for these limitations in their writings. Ask all students to be as personal as possible, for instance, acknowledging each other’s contributions and using first names whenever it is appropriate. They can do this by writing in response to an individual student rather than writing to the whole class. Thus, students will address people in the second person rather than the more impersonal third person.

Women in this class seemed to be able to maintain their relationships among themselves. In adapting to the text medium, they were able to adjust by using people’s first names on a consistent basis from the second to the tenth week of the Weekly Topics activity. On the other hand, men rarely used names during the Weekly Topics activity. One man, by the tenth week, observed that “there was a feeling of being fully human and alive in the beginning, (whereas now) I see signs of people feeling unconnected and alone, unappreciated, and scattered.” Men may not be able to adapt to the text medium as readily to sustain the type of interaction required to meet their needs without being taught how to.

b) Design the course with equity in mind. Ensure that women and men are able to have input into the conferences so they can learn equally well. Require that students contribute on a weekly basis. Make student contribution compulsory so that students will not lurk in the background using Private Chat and private email facilities while others take up the majority of public talk using the Weekly Topics conferences.

c) The instructor should design a grid to keep track of the students who interact during the class. The grid should include information such as when the instructor affirms or critiques the contribution of a student. Men generally like to make declarative statements and the instructor may simply affirm them, or if the context is appropriate, critique them. Women generally like to make suggestive statements and the instructor may affirm or encourage them to be more declarative. Using a grid, the pattern of the instructor’s interaction with students may be monitored with greater accuracy.

d) Describe the course goals and engage in feedback using both private chat and public cafe conferences. This enables all students to feel comfortable being in dialogue with the instructor and peers at the outset of the course. Continue with this practice as the course precedes.
e) Be explicit in weaving together other's ideas, calling students by name and encouraging others to do the same. This affirms the input of all students and recognizes good ideas regardless of whether they came from men or women, by private chat or public cafe.

f) Ask students to bring their own personal experiences into the conversations with recognition that this may make some feel vulnerable more than others.

g) Send a message to that week's discussion leader and reviewer to acknowledge and affirm their important roles.

h) Encourage students to build on the ideas presented in each conference, and to weave new ideas into existing ones.

i) Always call students by name.

j) Openly encourage students to take risks in expressing ideas, and ensure that they are rewarded by recognizing their courage and assertiveness.

k) When you are being humorous on line, indicate it clearly. For example, use a symbol ";)" or "(smile)" to alert the reader that you are attempting humor. Symbols such as these can quickly replace part of the non-verbal or relational information that is lacking in a text medium.

l) Be respectful to people; hard on the problem but soft on the people. Say "thank you" frequently. Indicate that you want to reflect more on the idea before you respond ... these short reflective statements help replace the relational information that is lacking.

m) Ask students to send you their picture and place these pictures on the wall behind the computer you are working on so you can see pictures of the people you are responding to and build a more complete image of each student.

n) Be chatty on line, even in your major assignment. You can weave this in as you present your information.

o) Respond to messages quickly. Do not take too much time to respond for students can become discouraged when they call up the course on the computer and there is no response for them to read.

p) For student responses, use definite deadlines so each student has a clear understanding of when things are expected. Students are physically separated from their peer group and require more clarity than is normally provided in face to face teaching formats.
q) Use private chats to convey recommendations for students, for example, if you want a student to participate more or not.

r) Get students on line and practicing at least a month in advance of taking the class if they have not used the technology before.

s) Set up a student help line.

The author hopes that these recommendations may enable more gender sensitive instruction techniques during computer mediated distance education programs. Only with continued attention to this problem is it possible to predict that men and women students will experience distance education in equitable ways.
Appendix I

Cross gender Communication Framework

Deborah Tannen
Cross Gender Communication

Framework for Understanding Communication between Women and Men
Adapted from Deborah Tannen (1990) You Just Don't Understand

We meet our needs through communication and studying the patterns of speech and non-verbal communication help us to understand what our needs are and how we meet them.

Pattern of communication of males indicate that males have a primary need for status and that women have a primary need for connection through relationships.

Males need STATUS

gain status by achieving INDEPENDENCE
by...
being DIFFERENT
maintaining ASYMMETRICAL relationships
UP - DOWN alignments
being FREE from others
talking to REPORT things
INTERRUPTING
only TALKING WHEN NECESSARY
public LECTURING
ritualized CONTESTS as practice
BOASTING (is OK)
considering APOLOGIES as one-down

Females need CONNECTION

gain connection by achieving INTIMACY
by...
being SIMILAR
maintaining SYMMETRICAL relationships
HORIZONTAL alignments
being INTERDEPENDENT with others
talking to create RAPPORT
OVERLAPPING conversations
talking to KEEP communication OPEN
in public LISTENING
CONTESTING only FOR REAL
NOT BOASTING
considering APOLOGIES as conveying empathy, concern
Appendix II

Selected Data from the Weekly Topics Activity drawn chronologically

Week Two:

F  Thank you [horizontal] (name) [intimacy] for your excellent summary of the 4 chapters and your personal case examples. I find these examples helpful [horizontal]...

F  I agree with you [similarity], (name) [intimacy] that a primary set of.....I further agree [similarity]....

F  Thanks [horizontal] (name) [intimacy], you raised so many points to consider [rapport]...I agree [similarity]....and as you postulate, (name) [intimacy]...

M  Like (name) [intimacy], I was struck by [difference]...I thought it would be interesting to examine if [reporting]...(Bear with me here - I think I'm tackling a thesis in two screens) [difference]... For those of you who have made it this far [one-up], thank you...

F  (name) [intimacy] I like your point that [horizontal]...It seems to me that your points (name) [intimacy] about....is another key component in this process...so maybe we get something like this [symmetrical]...

F  I'm reflecting on...some ideas coming out of the seminar discussion. I find myself identifying some questions [symmetrical]...some ideas I am exploring...

F  (name)'s [intimacy] alternative term...brings forward an idea.....historically, I would suggest [symmetrical]....

M  I had the unique experience [independence] of watching (something at work)...I'm sure I will get an opportunity to expand on this experience at great length [independence] sometime during this course...

F  (name) [intimacy]. In keeping with the request of the cohort, I will attempt to keep my response to one screen [symmetry] and I will frame my discussion around your question....

M  I took away two very strong messages from (the reading) [reporting]...the repeated mentioning of regenerative or renewal is the real “aha” for me [reporting].....

F  As I reflected on (name)’s [intimacy] comments...what awakened my thoughts about this is (a personal story follows) [intimacy]....

F  Thank you [horizontal] (name) [intimacy] for posing the 2 questions to kick off this discussion on [interdependency]...for me, the most obvious factor [reporting]...In my experience [horizontal]...my immediate response to the question [reporting]...in my mind [horizontal]...it has been my experience [horizontal]..

F  Thanks [horizontal] (name) [intimacy] for your comments and observations...the three important pieces for me [symmetrical]....

F  (name) [intimacy]...the points you raised got me thinking [interdependency]..

M  Here are some ideas from the first 4 chapters that struck me [reporting]...I accept that [one-up]...I believe that [reporting]...I completely agree [one-up]

M  My ‘offerings’ [one-up] in response to the very pragmatic questions you have posed, (name) [intimacy]...

F  Thanks [horizontal] (name) [intimacy] for the wonderful introduction to...

By the second week of the computer assisted course:

Males tended to communicate meta-messages of reporting, establishing differences, creating independence, and one-up alignments in support of meeting status needs.

Females tended to communicate meta-messages of creating intimacy, creating horizontal alignments, and symmetrical relationships in support of meeting connection needs.
Week Ten

F I know we have spirit because at various times I have experienced a sense of connectivity [interdependency]... we make room for joy in (names) [intimacy] babies, and your turn soon (name) [intimacy, rapport]...
F ...I have reached a point in my life/career where I understand who I am and feel comfortable with my leadership style [reporting]...
F (names) [intimacy]... thanks for an excellent start to this week’s topic [horizontal]...
M Response to your question: room for joy - inclusivity in birthdays, bursaries, babies...yes, yes, figuratively... [reporting]
M I perceive the spirit... moving from full spirit to devoid of spirit... there was a feeling of being fully human and alive [reporting]... I see signs of people feeling unconnected and alone, unappreciated, and scattered. [reporting] The medium seems to be playing a part in this [reporting]...
F ...I would agree [horizontal] with (name) that it is becoming more difficult over time [symmetrical]...
F Thanks [horizontal] (names) [intimacy] I enjoyed this week’s chapters and your questions... life is too tough and complex not to incorporate fun and playfulness [horizontal]...
F I’m sad to report that I too see the spirit declining to some degree [symmetrical]... we are losing some (spirit) I think, but still have a backup supply [rapport]...
M ...some relationships have grown very deep... but some have all but disappeared [reporting]. This is a difficult time for us and the strain is showing within the cohort [reporting]...
F Hi (names) [intimacy]! My sense is... speaking for myself [horizontal]....
M These are some of the discussions I perceive to [reporting]... of course, these contain my biases and reaction to situation [differences]... It will be curious to compare my response with the others. As I write this, I haven’t yet looked at the other responses [differences]...
F (name) [intimacy]... I couldn’t help but feel sad to learn that you feel the spirit is moving from “full of spirit to devoid of spirit” [intimacy]...
M (name) [intimacy]... my apologies for bringing sadness into your life [one-down]....

By the tenth week of the computer assisted course:

Males tended to communicate meta-messages of reporting only in support of meeting status needs.

Females tended to communicate meta-messages of creating intimacy, creating horizontal alignments, and symmetrical relationships in support of meeting connection needs.
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