

**"Through a Glass, Darkly":
Exploring Student Community in Electronic Learning Environments**

by

Karen Dawn Clarke


B.A. (Honours), University of Waterloo, 1986
B.Ed., University of Toronto, 1989


A Thesis Submitted in Partial Fulfillment of the
Requirements for the Degree of


MASTER OF ARTS


in the Department of Communication and Social Foundations

We accept this thesis as conforming
to the required standard


Dr. Margaret Robertson, Supervisor (Department of Communication and Social Foundations)


Dr. Laurie Rae Baxter, Departmental Member (Department of Communication and Social Foundations)


Dr. Geoffrey D. Potter, Departmental Member (Department of Communication and Social Foundations)


Dr. Leslee Francis-Pelton, External Examiner (Department of Social and Natural Sciences)

© Karen Dawn Clarke, 1998

University of Victoria

All rights reserved. This thesis may not be reproduced in whole or in part, by photocopy or other means, without the permission of the author.


Supervisor: Dr. Margaret Robertson

Abstract

This study explores the nature of students' electronic interactions in on-line courses and the extent to which those interactions contribute to a sense of "community" among learners.

A qualitative research methodology was used to analyze data collected from participants who completed a questionnaire and who subsequently engaged in electronic mail dialogues with the researcher regarding their on-line learning experiences. All data were collected electronically.

Study findings point to the unique nature of computer-mediated communication (CMC) and to its role in developing a sense of "community" among electronic learners. Most participants agreed that feeling part of a community contributed to their learning.


Dr. Margaret Robertson, Supervisor (Department of Communication and Social Foundations)


Dr. Laurie Rae Baxter, Departmental Member (Department of Communication and Social Foundations)


Dr. Geoffrey D. Potter, Departmental Member (Department of Communication and Social Foundations)



Dr. Leslee Francis-Pelton, External Examiner (Department of Social and Natural Sciences)

TABLE OF CONTENTS

ABSTRACT	ii
TABLE OF CONTENTS.....	iii
TABLE OF FIGURES.....	vi
CHAPTER 1 - INTRODUCTION	1
Forming the Questions.....	1
Through the Glass.....	4
Overview of the Study	5
Theoretical Framework	6
Significance of the Study.....	7
Limitations of the Study.....	8
CHAPTER 2 - LITERATURE REVIEW.....	10
Distance Education	10
Technology.....	12
Computer-Mediated Communication	13
Electronic writing.....	15
Disadvantages of electronic writing	16
Advantages of electronic writing	17
Electronic "Presence"	19
Defining Community	20
Social Constructivism.....	22
Summary	23
CHAPTER 3 - METHODOLOGY	24
The Qualitative Method	24
DESIGN OF THE STUDY.....	27
Criteria for Selecting Participants.....	30
Invitation to Participate in the Study	31
The Questionnaire.....	32
The E-Mail Dialogue.....	33
Electronic Mail.....	33
Dialoguing.....	34
Duration of the Study	36
Response Rate and Attrition.....	36

CHAPTER 4 - DATA ANALYSIS	38
QUESTIONNAIRE SUMMARY	38
Questionnaire Clusters.....	38
Significance of Participants' Electronic Backgrounds.....	40
Developing Rapport Among Students Electronically	40
Whole-Group vs. Sidebar Communication.....	42
Effect of Relationships on Course Work.....	44
Making Electronic Coursework Public	46
Contributing Factors for Meeting Course Objectives.....	47
Factors Necessary for On-Line Rapport	49
Repeating the On-Line Learning Experience.....	51
PROBING PARTICIPANTS' EXPERIENCES.....	53
The Participants.....	53
Coding Categories	55
PERSPECTIVE CODES CATEGORY	58
Learning and Electronic Learning	58
Characteristics of Electronic Communication.....	64
RELATIONSHIP/SOCIAL STRUCTURE CODES	67
Rules	67
Trust	69
Support.....	70
Electronic Audience.....	71
Collaboration.....	71
Nature of Electronic Communication	72
CHAPTER 5 - CONCLUSIONS AND RECOMMENDATIONS	76
SUMMARY AND CONCLUSIONS	76
Role of the Researcher	78
Findings.....	81
RECOMMENDATIONS.....	83
DIRECTIONS FOR FURTHER INQUIRY	85
REFLECTIONS	86
REFERENCES	88

APPENDIX A - Questionnaire	93
APPENDIX B - Ethics Committee Certificate of Approval.....	96
APPENDIX C - Table of Coding Categories.....	97
APPENDIX D - Coding Categories.....	121
APPENDIX E - Sample Data	122

LIST OF TABLES

Table 1: CODING CATEGORIES	54
----------------------------------	----

CHAPTER 1

Introduction

*For now we see through a glass, darkly;
but then face to face ... I Corinthians 13:12*

Computer-mediated communication is fascinating both because of its increasing popularity and because of the potential benefit to students and educators alike, particularly with respect to distance education. Computer-mediated communication, or CMC, is defined as “any form of organized interaction between people, utilizing computers or computer networks as a medium of communication” (Romiszowski, 1997, pp. 32-3). Through reading and reflecting on this relatively new learning environment, I have come to believe that having a sense of community among all participants of a CMC course could be an important element in their academic success.

Forming the Questions

The concept of electronic community became gradually more compelling for me, particularly following my participation in an interesting on-line discussion that was part of a master’s project involving two students from Brandon University. The whole event took place over four days. A summary of their project, which dealt with the question “What is in the narratives of our CMC experiences that will help others teaching and learning on-line?” was posted on the Internet, and during the first three days, participants were invited

to send questions or comments about the project to the researchers, who would then reply individually. A list of all participants' e-mail addresses (twenty-four in total) was sent on the third day. On the fourth evening, at a pre-arranged time, everyone logged on and the discussion continued synchronously. Originally, this final discussion was intended to last two hours; however, by the time the last few participants (including myself) finally logged off, almost three hours had elapsed.

During this session, it seemed to me that an instant community had sprung up whose members were largely unknown to one another, and yet in very little time the community was cohesive enough that a provocative exchange of ideas and questions took place. I was surprised at how fluidly the questions and answers went back and forth, and at one point I received over thirty e-mails in a ten-minute interval. As the e-mails arrived, I read them all and responded to those that I wanted to comment on; any time I was not writing I checked my mail for new messages, which usually came in at a rate of between ten and twenty at a time. Some of the incoming messages were quite brief - perhaps a one-liner or a joke about something a participant had read. Others were more lengthy and serious, and I could read the passion in the writer's lines. A couple of participants remained on-line and read the messages but did not respond.

At one point, one participant asked a question about the definition of "community." My response to him was:

Consider this evening's exchange. I would say there is a fairly strong "community" forming and evolving right under our cybernoses! What is making you want to contribute? What is making you feel comfortable (or, maybe, uncomfortable) in this exchange with everyone else? We have had less time than students in a regular CMC course would have to get to know each other, and yet there has been an amazing amount of significant communication happening.

I had genuinely felt that I was sharing and learning with this group of people, none of whom I knew before the session. However, that same participant wrote later in response to my own and others' comments, *"I keep thinking that we are still dealing with pseudo-community and are still at the 'gee-Whiz look at what we're doing with tech' stage."* I pondered what might have made the difference between his experience and my own. How was it possible for me to feel connected to others in the discussion group, while he seemed to feel a distance between us?

Not long after this experience, I read some of my preliminary thesis writing to members of a class who then provided me with feedback. Of those who commented, most seemed to agree that my writing lacked "voice," but I did not realize how ironic the comment would be until I thought about it in relation to the Brandon group's asynchronous and synchronous sessions. How odd that in a f2f class my own voice could not be heard, and yet in a discussion whose participants were geographically scattered, I felt as though I had come "face to face" with others *through the glass* of a computer screen!

Through the Glass

I reflected on a book called *Life on the Screen* (Turkle, 1996), in which the author discusses the inspiration William Gibson had for his 1984 novel *Neuromancer*. After watching the behaviour of adolescents in a video arcade, he claimed these adolescents develop the belief that they can enter a physical space behind the computer screen when they are completely engaged in the game. In other words, these video game players could quickly forget their real life presence standing in front of a computerized machine to enter into the pixelated world depicted in front of them. Although the Brandon group's on-line discussion was not a "game" in this sense, I nevertheless experienced the phenomenon Turkle describes: I had come to some common place that had a "physical" feel to it, where I was able to be *with* some of the other participants.

It was while reading Turkle's book that I remembered the metaphor from I Corinthians. It seemed appropriate because throughout an electronic discussion, I spend my time staring at a "glass" of a different kind, but one which is equally capable of containing obscured (or darkened) answers. During the Brandon session, my engagement with the medium became so complete that not only did I feel I had come *face to face* with some of the other participants, I also felt that, like Alice in Lewis Carroll's novel, I myself had gone *through the glass* to some common meeting place. To me, that "place" was community.

As I became more interested in the nature of electronic interaction and its impact on learning, I was faced with the difficulty of how best to understand the

phenomenon when I had not taken any on-line courses myself. My own experience was limited to the electronic discussion with the group involved in the Brandon master's project and to on-line exchanges (or *virtual extensions* of classroom discussions) with classmates from f2f courses; while these experiences were valuable, what I needed was access to the experiences of others, so that my understanding could benefit from a multiplicity of perspectives.

Overview of the Study

As a result of this series of events, I decided to further explore electronic communication and learning by focusing on two key questions that would guide my process of inquiry:

1. What is the nature of student electronic communication?
2. What is the effect on learning of student-to-student interactions in on-line courses?

To help me answer these questions, I invited students who had taken on-line courses to share with me their experiences of communicating and learning electronically. These students had been enrolled in university-level courses that were conducted entirely on-line during the Fall 1997 term. One course was on English composition and the other two were in nursing.

The invitation to participate consisted of a letter explaining my study, a consent form, and a questionnaire, all of which I sent electronically to the students from the courses listed above. There were seventeen items on the questionnaire ranging from straightforward, fact-gathering questions at the

beginning to open-ended questions towards the end (see Appendix A). Students indicated their willingness to participate in my study by typing in their names at the bottom of the consent form, answering the questions on the questionnaire, and e-mailing both back to me. A total of twelve participants from the three courses responded.

I designed the questionnaire to function merely as a jumping-off point from which could follow further semi-structured discussion on issues raised by the participants in their responses. I called this discussion *electronic mail dialogue* to differentiate between it and the interview method, which typically occurs in a face-to-face context or by telephone. Because my participants' courses had been conducted entirely by electronic means, I wanted my exploration of their experiences to occur the same way.

Theoretical Framework

As with any research endeavour, I needed to determine which theoretical lens would best help me to understand and interpret the meaning of my participants' experiences. The beliefs I brought to the study were the product of reflections both on what I observed in my teaching practice and on what I learned as a student engaged in meaningful dialogue (on-line and face-to-face) with peers throughout my own learning process. One such belief was that individual students can have very different perceptions of the same learning event. Students' backgrounds and perspectives shape the way they understand and interpret the world around them. Because no two students have had the

same life experiences, it follows that they will not develop the same interpretations.

A second belief I brought to the study was that the transmission pedagogy is inappropriate for students who must learn critical problem-solving skills in the context of the community in which they live and function. The transactional position places emphasis on knowledge as process rather than knowledge as content (Miller & Seller, 1990), and considers knowledge “in relation to the knower and, particularly, in relation to the *procedures* the knower uses to explore and verify knowledge” (p. 111). Learning is both social and individual, and a constant interplay between the two takes place within the learner.

The literature on social constructivism offered an appropriate epistemological framework for examining these issues as they relate to electronic communication and learning. Husserl tells us that the relationship between human consciousness and its objects of experience is actively constituted (Holstein & Gubrium, 1994); by applying a constructivist paradigm I hoped to engage with my participants in a process of active re-constitution of their experiences, in order to more clearly understand what it is to learn on-line.

Significance of the Study

The option to learn on-line offers flexibility and greater equality for learners (Kahn, 1996); students can now take post-secondary courses without having to relocate or even commute. However, this type of distance education can also be isolating because of the limited interactions Simonson (1997) points to

as being so highly valued by students. Therefore, we need to develop greater understanding of how electronic communication can influence learning through this medium. If students' experiences are not positive, they will seek out alternatives for continuing their education.

This study attempts to discover what role student interactions play in an electronic course. It further promotes a new option for gathering data, called electronic mail dialoguing.

Limitations of the Study

The invitation to participate in the study was initially sent to all members of each of the three courses used for this study by the courses' respective professors. While the number of students who agreed to take part is lower than the total number of students who were invited to do so, this study does not indicate the percentage of participating students from the three courses.

Because of the relatively low number of participants, the degree to which the study results may be generalized to the larger population of all students taking electronic courses is naturally more limited; I cannot infer anything about those students from my three target courses who chose not to participate at all. In addition, by using self-selected participants, I cannot generalize my findings to those students who have not taken electronic courses. However, the quality of the data gathered for this study helps to balance these perceivable shortcomings and offers instead a richer, more in-depth examination of the participants' experiences.

Self-selected participation presents a further limitation on my ability to determine whether those students who chose to participate were also those most comfortable with the electronic medium. It is possible that those non-participating students never became comfortable with electronic learning and communication, but without their input, I cannot confirm this.

My research was also limited to the electronic interactions among students, and was not intended to consider the effect of instruction on participants' learning outcomes. While instruction can be a key element in a student's experience of a course, it would be better handled in a separate study.

Finally, gathering data electronically is a new research process. Because little is known about e-mail dialogue as a method for data collection, it should be considered an exploratory method only.

CHAPTER 2

Literature Review

*That virtue only makes our bliss below:
And all our knowledge is, ourselves to know.*
- Alexander Pope

Distance Education

Increasingly, post-secondary educational institutions are looking for program delivery alternatives in order to accommodate the diverse needs of a geographically widening student body. The so-called “traditional” delivery model, with its characteristic time- and place-bound features, is appropriate for fewer and fewer students who require greater flexibility in their education and, indeed, greater control. Out of this changing educational landscape has emerged the phenomenon known as “just in time” learning (Romiszowski, 1997), which involves a learner’s acquiring only the knowledge needed for a particular situation, and at a time when it is most needed. This type of learning is necessarily highly individualized and self-directed, and it is well accommodated through the technology of a computer-mediated communication (CMC) system (Locatis & Weisberg, 1997).

In an article entitled “Distance education: Does anyone really want to learn at a distance?” Michael Simonson (1997) cites a study in which researchers found that students prefer to learn in a f2f environment rather than via distance

education. He further writes of how students appreciate the more informal communications among classmates before, during, and after the f2f class as “valuable components of the total learning experience” (104). These informal communications would include conversations on topics other than those covered by the course itself, such as discussions about family or social activities, for it is these sorts of informal conversations that help establish a classroom community. Most people feel more comfortable sharing their thoughts and ideas when they have developed a sense of rapport with their classmates, because the fear of having one’s ideas thought of as silly or inconsequential would be diminished as friendships are formed.

It is not surprising that many people see distance education and co-present learning as dichotomous. At one time, traditional distance education involved learners’ receiving packages of materials in the mail and then sending assignments in return. Few opportunities for learners to discuss issues relating to the course with anyone other than the instructor resulted in a potentially very isolating experience for each course participant. There was no sense of *community*. Now, however, e-mail, chat rooms, and topic-specific discussion groups called bulletin board systems allow course participants to connect with classmates or anyone else having an interest in similar issues. In this way, it is possible that a community of learning can develop among CMC learners wishing to participate in these electronic options.

Sometimes with groups of co-present learners, not all students get an opportunity to join in the discussion, particularly if the group is large. In an on-line course, however, the asynchronous characteristic of e-mail communication allows a learner the luxury of responding when and how she wishes to the comments of others, and of really forming responses carefully. By including parts of previous electronic discussion in her own work, the student can write in response to an issue that was raised a week or a month ago. In this way, the issue remains relevant and the learner is able to add to the discussion when she feels ready rather than having to respond "on the spot" as is often the case in a classroom context. At the same time, the student can benefit from the work, comments, and ideas of others through the community of the CMC course. The element of isolation which characterized earlier distance education models is diminished, and the student can enjoy regular interaction with any other CMC learner, and indeed, with anyone else connected to the Internet.

Technology

Any discussion of technology must begin with a definition of the term, although the ubiquitous nature of technology may impede our ability to develop a single definition (Hickman, 1990). If we stop to consider the number of times in an average day that we encounter one sort of technology or another without being conscious of it, we realize how apt is the analogy of being unable to see the forest for the trees. Still, many people would speak of technology in terms of the physical machinery used to create objects that make our lives easier (McGinn,

1990), such as automobiles or air conditioners. However, as some authors point out, technology encompasses more than merely the tools by which certain activities are performed more (or less) efficiently.

Franklin (1992) tenders a definition of technology that promotes a provocative dualism: "Technology is a multifaceted entity. It includes activities as well as a body of knowledge, structures as well as the act of structuring" (p. 14). If we consider computers in this regard, then we must take into account more than the dizzying array of electronic nodal impulses operating faster than the mind can fathom, for the technology of computers would also encompass *how* we use them and how aspects of our lives are affected *because* we use them. This means that while we can communicate over great distances using a computer and a modem, we must recognize that there will be a concomitant change in the nature of that communication as a result (Hiltz & Turoff, 1993; de Kerckhove, 1997; Miller, 1993; Negroponte, 1996; Rheingold, 1992). McGinn's (1990) definition of technology as "a form of human activity" (p. 10) is similar to that of Franklin, whereby greater emphasis is placed on the *how* and *why* of technology rather than the *what*.

Computer-Mediated Communication

One of the most obvious and prevalent forms of technology available today is the computer. Sherry Turkle (1997) traces the evolution of computer technology over the last 20 years and describes its impact on our lives as a shift from a "culture of calculation to a culture of simulation" (p. 22). Whereas once

computers were thought of as instruments for logically processing data and providing answers to computational questions, they are now valued more highly as tools of navigation, simulation, and interaction. And whereas computer use once was typically an individual endeavour, now modems enable computer users to feel connected to others in a way never before possible. This shift has necessarily resulted in our having an altered perception of ourselves and of our relationships with others (Ihde, 1990; Rheingold, 1992; Tapscott, 1998; Turkle, 1997). And one of the most noticeable ways in which this altered perception is manifest is in our communication.

Communicating by writing involves a reflective process that plays a critical role in the discovery of knowledge (Kress, 1989; van Manen, 1994; Richardson, 1994). When we write, we are engaged in creating a product, a text, out of otherwise abstract representations of our experiences:

Writing fixes thought on paper. It externalizes what in some sense is internal; it distances us from our immediate lived involvements with the things of our world. As we stare at the paper, and stare at what we have written, our objectified thinking now stares back at us. Thus, writing creates [a] reflective cognitive stance ... (van Manen, 1994, p. 125)

Of course, when we write using a computer, the "paper" on which our thoughts are fixed remain in pixelated form, at least until we choose to print them. But the same reflective posture embodied in our paper-bound process is also an inherent part of electronic writing, and through that process we are equally capable of

turning a critical eye to our experiences, and to examine them from arm's length. Van Manen (1989) elevates writing to an ontological level when he tells us that the process is "a kind of self-making or forming. To write is to measure the depth of things, as well as to come to a sense of one's own depth" (pp. 126-7). But is electronic writing like paper writing in other respects also?

Electronic writing. At first glance, computer-mediated communication in the form of electronic mail would seem to fall wholly under the rubric of written communication. However, in some situations electronic writing may not be as characteristically "written" as we might think. Kolb (1996) examines the nature and rhythm of computer-mediated communication and posits that it is more akin to oral discourse than to other written forms. He points to the nature of electronic mail exchanges which are "typically rapid and short" (p. 15), and which mirror the features of an oral conversation wherein individuals can develop their ideas by questioning each other and by elaborating on or clarifying responses on the spot. The rhythm of regular mail, by contrast, is much slower, and therefore each communication tends to be longer, more in-depth, and broader in scope.

While there is certainly some merit in this viewpoint, the problem with it is that it seems to assume those persons engaged in such rapid-fire exchanges as Kolb describes are sitting at their respective computers, hands poised above the keyboard, expectantly awaiting the arrival of the next message in order to respond posthaste. It also assumes that as a new message arrives, the recipient

feels compelled to respond at once; although the technology certainly makes this possible, without the face-to-face context of an oral conversation, an immediate response is not always forthcoming.

Other authors have identified CMC as embodying the characteristics of both oral and written communications, resulting in a unique medium for exchanging ideas and for sharing experiences. Shank and Cunningham (1996) use a semiotic framework for examining the nature of communication on the Internet, which, they believe, falls outside existing communication models. They cite two reasons for the perception that electronic communication is “far more powerful than just the experience of reading words on a screen” (p. 29). First, the individual is in one sense distanced from the process and thus is able to maintain a certain amount of control over the extent to which he or she interacts with the flow of information. In this way, electronic communication functions as a kind of Cartesian method of acquiring information.

Secondly, CMC can be viewed as a semiotic system of communication in which pixelated phosphor dots on the screen signify the larger, more complex act of meaning negotiation between two or more people sharing a common goal. Shank and Cunningham (1996) use the term “multiloguing” to characterize the nature of electronic conversations which allow for the participation of many persons without their having to take turns, but with an equal opportunity to have their individual voices heard. In this situation, meaning negotiation requires a greater commitment from the participants because the sequence of

communication (known as the “thread”) may move in a myriad of directions over the course of the conversation.

Disadvantages of electronic writing. One of the potential difficulties with electronic communication is that it is a “stripped” communication because it lacks the visual and vocal cues that normally assist us in making sense of a message. Hiltz and Turoff (1994) comment on the problem this presents for the beginner of CMC, noting that the novice will often supplement an e-mail message with a telephone call. Absent is the immediate feedback of a f2f exchange which can be so valuable in determining how our message is being received. Instead, we are forced to wait (though briefly, at times) for a respondent to send a message in return before we can begin to negotiate meaning.

A further disadvantage of electronic writing for some users resides in the issue of van Manen’s (1989) “objectified writing.” When we write, our thoughts are put down on a document of one sort or another. They become, in a sense, more real because we can actually see them. Taking the next step - sharing with an unseen partner whose reaction cannot be gauged until a response is sent in return - can be exacerbated for some by the fact that they are not sure exactly where the e-mail goes when sending it. Sending one’s thoughts *through the glass* into a darkened netherspace can be an intimidating experience.

Advantages of electronic writing. Communicating over the Internet can also be an empowering process. The writer of an electronic message can

maintain complete control over the length of the message as well as the time frame within which to respond. Kress (1989) underscores the deliberate nature of writing which

encourage[s] and permit[s] distancing - from the immediate context, from the audience, and from the subject matter. All of these permit a greater degree of reflectiveness and deliberateness; the writer is freed from the pressing contingent demands of all aspects of the immediate context. (p. 97)

For those persons who are naturally more reserved in a group setting, on-line communication offers a medium that allows them to take the time they need to think about and contribute to a discussion without the pressure created by the co-present situation and without the fear of being interrupted before they have had the chance to fully form a response. There is also less pressure to conform to the ideas of others, and the frequency with which one or two people can dominate discussions is reduced in CMC (Hiltz & Turoff, 1994).

Another advantage unique to electronic communication is a process de Kerckhove (1997) calls "evolving consciousness," which is characterized by the mental flexibility required to move between the internally- and externally-oriented consciousness. An internal orientation exists when one is reading and the mind's eye creates a three-dimensional world in which the "contents" of the text are situated. An external orientation is typical whenever meaning is controlled by some outside source, such as when we watch television or attend a lecture (p. 149). In a CMC discussion, we can have considerable impact on the

type of information we receive electronically, and subsequently process, by asking questions and responding to the questions and comments of others.

Young (1992) puts it succinctly: “Somehow we must think for ourselves *and* be part of a community of thinkers who help each other and check each other’s tendencies to purely idiosyncratic or self-interested thinking” (p. 8). Ultimately, this interaction will heighten our ability to think critically.

Electronic “Presence.” Electronic communication is also curiously dichotomous in that it fosters connections to others with a like interest or a common goal at the same time that it fosters individualism, a phenomenon de Kerckhove (1997) has labelled “web-connectedness.” In order to feel connected to others, however, we usually need a sense of their “presence,” regardless of how far away physically they might be.

According to de Kerckhove, certain conditions must exist for presence to be felt in a telepresence environment, including shared evidence of the source of the presence, and shared space (p. 59). These conditions also exist in an electronic environment. Whenever we receive a message from someone, the message serves as evidence of the sender’s presence, particularly if it arrives in “real time.”¹ However, even if a message were retrieved a day or two after being sent, the recipient may still get a lingering sense of the sender’s having been “there.” This second condition, shared space, is akin to the virtual “place”

¹ The Brandon session described in Chapter 1 is an example of this. Although participants were in several different time zones, everyone was logged on at the same time (in “real time”) so that messages were being sent/received nearly simultaneously.

Turkle (1997) refers to in *Life on the Screen*. Both conditions can help foster a sense of community.

Defining Community

Traditionally, being part of a community involved sharing the same geographic locale, wherein all members of the community followed (more or less) a set of agreed-upon cultural norms. But, as Cerulo (1997) points out, “the developing technologies are creating an expanded social environment that requires amendments and alterations to the ways in which we conceptualize various social processes” (49). A community is not necessarily a place to be, but a group of people seeking to achieve certain goals, “through commonality of interests ... than by accidents of proximity” (Licklider & Taylor, 1968; as quoted in Jones, 1997, p. 10). Ironically, a person may have only a passing acquaintance with a neighbour living twenty-five feet away while being quite intimately connected (at least, electronically) to someone from halfway around the world. Such a situation causes one to question which community is the more “real.”

Community, then, can be thought of as a social phenomenon. Common definitions of community include concepts of shared ideas, knowledge, and interests (Rheingold, 1992; McGee; Purcell, 1997), as well as centralization around a hub of work, recreation, medical, and other day-to-day activities (Martorella, 1996). The common denominator for all such definitions seems to be *social interaction*. If this is so, then a community could exist anywhere such interaction takes place.

Since the rise in popularity of the Internet and electronic communication, much has been written about the concept of community (Cerulo, 1997; Jones, 1997; de Kerckhove, 1997; McLellan, 1997; Rheingold, 1992; Turkle, 1995; Student Communities). Rheingold (1992) writes of the “surprising intersection of humanity and technology” that generated virtual communities, noting that people are highly adaptive to new communications technologies and will use them in unexpected ways. The Internet itself is an evolution of ARPAnet (Advanced Research Projects Agency of the US Department of Defense), which was originally designed as a military network for safeguarding against a breakdown of communication during a war-time invasion. Jones (1997) gives us an account of how the Internet would evolve from its original purpose:

The Internet ... was to result in a community free of the constraints of space and time, and so free us to engage with fellow humans irrespective of geographic proximity and the clock, and it would construct that community from *communication*, rather than inhabitation and being, which do not guarantee communication.
(p. 10)

We now use the Internet for business transactions, artistic endeavours, information exchanges, and idle gossip, to name just a few of the functions it supports. As Rheingold (1992) points out, it is not the software or hardware that will always drive CMC, but basic human needs. And judging from the popularity of e-mail, chat rooms, multi-user domains, and bulletin board systems, interacting with others is one such need.

Within a community of learners, having the opportunity to communicate with others helps us to become clearer in our own minds about our work.

Douglas Barnes (1976), one of the leading researchers in determining the value of students' conversations (called "exploratory talk"), demonstrated how talking helps learners come to an understanding about issues or concepts that otherwise remain less clear. Many of us have had the experience of "discovering" knowledge we did not know we had until we began to articulate our ideas about some topic. Although Barnes' work focused on younger children, his idea of exploratory talk is nevertheless a valuable tool for learners of any age.

In an on-line course, that "talk" would be in the form of electronic exchanges among students. This social process that leads to a shared or collectively-derived understanding of a course's materials fits within the constructivist paradigm.

Social Constructivism

Schwandt (1994) tells us that a constructivist approach to human inquiry has as its goal an "understanding [of] the complex world of lived experience from the point of view of those who live it" (p. 118). Social constructivism distances itself from the objective, unbiased perspective espoused by the modernists who believe that all facts in the world exist independent of our knowing them (Guba & Lincoln, 1994). Instead, the constructivist philosophy offers a means by which the participants in a study can present an account of their experiences as they understand them, for such accounts of the life-world

“... take place within shared systems of intelligibility - usually a spoken or written language. These accounts are not viewed as the external expression of the speaker’s internal processes (such as cognition, intention), but as an expression of relationships among persons” (Gergen & Gergen, 1991; quoted in Schwandt, 1994, p. 127). In the electronic environment, these epistemological underpinnings can form the basis for a generative learning milieu.

Summary

The traditional distance education model is no longer as appealing to many students who value interactions with their classmates. Advances in technology now allow them to communicate with one another over vast distances, but we must recognize the unique nature of computer-mediated communication. While CMC can facilitate greater deliberation and improve students’ ability to think critically, it can also be an intimidating medium for many because it is a “stripped” communication. Once students get past this difficulty, however, their interactions can generate a sense of community in which learning is shared, and thus, enhanced.

CHAPTER 3

Methodology

The world is but a school of inquiry.
- Michel de Montaigne

The purpose of this study is to examine the type and nature of the interactions that occur among students in computer-mediated communication (CMC) courses, and to determine the way in which those interactions affect students' learning.

The Qualitative Method

Because I was interested in learning about students' experiences from their perspectives rather than by testing *a priori* assumptions about what such learning might entail, I determined that qualitative methods would best suit my inquiry. Denzin and Lincoln (1994) discuss the nature of qualitative research and its place in the broader research spectrum that once was dominated by positivistic approaches. They describe how qualitative researchers

stress the socially constructed nature of reality, the intimate relationship between the researcher and what is studied, and the situational constraints that shape inquiry. Such researchers emphasize the value-laden nature of inquiry. They seek answers to questions that stress how social experience is created and given meaning. (p. 4)

Unlike when using quantitative methods, then, the qualitative researcher considers the elements of a particular situation or phenomenon to be embedded in the social world, impossible to extricate, or, at least, meaningless if so attempted. Giarelli and Chambliss (1988) explain the germane nature of context, which is “a major determinant of a sense of question; that is, one may understand and be able to formulate a question or problem in one context or situation, but not in another” (p. 34). Context becomes essential for understanding the life-world of an individual; without context, the inquiry would stall like the painting of an artist who has neither landscape nor canvas.

Once the researcher has identified the context for qualitative study, the full depth and meaning of an individual’s experience can be explored. Sherman and Webb (1988) outline the purpose of qualitative research, which is not to verify an existing claim or hypothesis (called deductive inquiry), but rather to engage in an inductive process of discovery that arises out of the phenomenon being explored and that can lead to greater understanding of the human condition. Clandinin and Connelly (1994) point to the potential for qualitative methods in educational research: “Our imagination as educators has been captured by the possibility of studying experience rather than using experience as a contextual given for educational discourse” (p. 414).

Of course, this epistemological position is not new, for John Dewey believed in the primacy of experience as a focus for learning and as a means of fostering personal growth (Noddings, 1995). Growth, according to Dewey, is not

only the process in which one engages, it is also the most important educational outcome. Dewey (1929) reminds us, however, that in order to keep open to this kind of growth, we must remain vigilant about the extent to which we are already predisposed to accept certain “realities” of experience,

not because the things are so, but because we have become habituated through the weight of authority, by imitation, prestige, instruction, the unconscious effect of language, etc. We learn, in short, that qualities which we attribute to objects ought to be imputed to our own ways of experiencing them, and that these in turn are due to the force of intercourse and custom. (p. 14)

This is not to dismiss experience as an unreliable or otherwise inferior method of inquiry; instead, it is to recognize that the individual is by nature at the centre of his or her life-world and cannot, therefore, be separated from the ways and means of encountering and gradually understanding that life-world through the most significant manner possible: *experience*. And because the way one interprets experience is influenced by cultural norms (such as the language used to re-present it, for example), experience must be considered a social construction.

Gruender (1996) tells us that educational constructivism is “animated by the powerful recognition that knowledge begins with individuals, and that an enormous amount of human constructive effort goes into its creation” (p. 23). He stresses, however, that in spite of the enormous benefit of this position to educational research, it should be considered only a beginning point for examining the process of knowledge acquisition within the larger context of the

social world. This sentiment is echoed by Schwandt (1994) who describes the focus of social constructivism, which is “not on [the] meaning-making activity of the individual mind, but on the collective generation of meaning as shaped by conventions of language and other social processes” (p. 127).

If we are to marry these two definitions, we would understand that an educational inquiry framed by the constructivist paradigm considers the individual as *cynosure*, inasmuch as the individual’s experiences in the life-world are a product of his or her socially-derived interpretive ability. The inquirer must search for the meaning of experiences through an understanding of the symbiotic relationship between parts (the myriad life-events of the individual as each is lived) and a whole (the social world); in other words, the inquirer must seek to understand how the parts form the whole, and how the whole informs the parts.

DESIGN OF THE STUDY

As researcher, the question I next needed to ask was which method of data collection would be best for exploring the experiences of my participants and their relationships, or interactions, with their electronic classmates. Fontana and Frey (1994) promote the interview as “one of the most powerful ways we use to try to understand our fellow human beings” (p. 361). They outline the variations situated within this method, from the structured interview with its pre-determined sequence of questions and its scripted inflexibility, to the

unstructured form that inhibits *a priori* categorization, otherwise a constraint on the inquiry process.

While the structured interview is designed to reduce errors and to elicit truthful responses, its inability to fully explore the affective components of a phenomenon render it less appropriate for this study. What I sought in my design was the means to explore the participants' electronic interactions without dictating the course of the dialogues or limiting the scope of their responses. I wanted instead to find a method that would give as much control as possible to the participants, in order that I might more fully understand their experiences from their perspective.

The unstructured interview, then, was another consideration. Fontana and Frey (1994) identify the essence of the unstructured interview, which hinges on "the establishment of a human-to-human relation with the respondent and the desire to *understand* rather than to *explain*" (p. 366). Such relations are best established by gaining access to the setting in which the particular phenomenon takes place, but this presented a difficulty for me since my participants were geographically scattered. The closest I could come to the "setting" of their respective electronic classrooms was to conduct my interviews via e-mail; this would at least give me a glimpse of each participant's on-line mannerisms.

The unstructured interview is further characterized by greater methodological latitude wherein the researcher is immersed in a particular culture and can make present-time observations about the norms and behavior

that are typical of that culture. A salient shortcoming of this interview method is the claim that the researcher can remain neutral and unseen in reporting on the data and, in fact, that the data can speak for themselves (Fontana & Frey, 1994). Decisions made about how and when such interviewing should take place, or about the extent and order in which data are reported, have built-in biases that will affect the final product. As researcher, I am inherently a part of my research.

I determined that a semi-structured interview was best for my study because it would incorporate elements from both methods discussed above. While I wanted to be careful not to dictate the course of the dialogues I had with my participants, it was necessary to ask questions at times in order to probe their experiences more deeply. Wherever possible in my own questions and comments, though, I would use a term or phrase that a participant had earlier supplied in an attempt to show that I wanted to understand the experience rather than to name it. My goal was to allow as much latitude as possible for my participants, recognizing the constraints of research study.

Semi-structured interviewing also has the built-in flexibility that enabled me to pursue certain avenues of exploration, while remaining open to any new possibilities my participants might suggest. Because I had never taken an on-line course myself, I knew issues could emerge from my participants' reflections that would not have occurred to me otherwise.

Criteria for Selecting Participants

The first criterion used for selecting participants for this study was that they had to have completed at least one on-line course at the post-secondary level. Course completion was important in that it eliminated the chance participants would feel their course marks could be affected by their participation. I also decided against soliciting participation from students who were currently enrolled in on-line courses at the time of this study because I was concerned that my questioning them about their electronic interactions with other students would impact the “natural” evolution of their on-line relationships. Furthermore, having completed a course meant that participants would be able to reflect on their individual experiences as a whole, rather than to examine them in an on-going manner throughout the course’s duration.

The second criterion was that participants had to have completed an on-line course within the six months prior to their taking part in the study. This time frame allowed some time-distance for participants to reflect on their experiences, while ensuring that their recollections would be recent enough to be reasonably accurate. As it turned out, I began distributing the questionnaire during the last week of February, which was approximately two months after the courses were completed in the previous term.

Finally, it was important that participants be willing to examine their own experiences with a critical eye, for only through authentic self-reflection would the essence of their on-line learning become clearer. Although I put careful

consideration into the creation of the questionnaire, I intended to use it only as a starting point in order to get participants thinking about the nature of their interactions with others in the same course. Further e-mail dialogue based upon the participants' responses would arise out of the data they initially provided on the questionnaire. Participants also had to be willing to engage in a certain amount of self-disclosure throughout their participation in the study.

Another possible criterion not considered relevant was the course grades attained by the participants. This study examines the nature of student interactions using electronic communication, which may be characterized by both positive and negative experiences resulting in higher or lower grade achievement. If I used only those participants who received, say, a "B" or higher grade in their course, the resulting data analysis would be incomplete and would present an inaccurate picture of the on-line learning experience. For this reason, course grades were not part of the selection criteria for participants.

Invitation to Participate in the Study

Three faculty members from the University of Victoria were contacted in December 1997 to request their assistance by forwarding information about the study and a questionnaire to the students from their respective Fall 1997 on-line courses. The faculty members agreed to do this once approval from the Ethics Committee had been obtained (see Appendix B). Because the questionnaire was going to be sent electronically to potential participants, it was necessary to procure the faculty members' assistance before the end of December. In this

way, the listservs which had been set up for their classes could be maintained until the questionnaire could be forwarded to the students.

Initially, a letter of explanation, a consent form, and a questionnaire were sent electronically to the students of the three on-line courses I targeted for my study. Interested participants were asked to return the consent form along with their completed questionnaires to me via e-mail.

The Questionnaire

The questionnaire contained seventeen questions (see Appendix A) and comprised a combination of closed and open-ended questions. I designed the questionnaire to have straightforward, fact-gathering items at the beginning, which I hoped would encourage students to participate in my study. The questions then became gradually more open-ended, as I wanted to invite participants to think about their experiences in a more reflective way.

The content of the questions was derived partly from my readings on CMC and community, and partly from my knowledge as an educator. I grouped the questions in clusters to find out what experience participants had with computers and CMC; what activities or assignments were designed to help students become acquainted with one another; what type of communication occurred in their courses and how it affected their work; and how participants felt overall about communicating and learning electronically.

The E-Mail Dialogue

Electronic mail. When I first considered using electronic mail for my data collection, I had to weigh the benefits I believed could be derived from this medium against potential drawbacks. For some people, sharing their experiences with a faceless, voiceless stranger would be too intimidating to attempt. Others might choose to participate in the study, but might never feel comfortable enough to open up to the extent that their disclosures could contribute to my research.

Without the nonverbal cues that assist face-to-face communication such as proxemics (the use of interpersonal space), chronemics (the pace of speech; the use of silence), kinesics (physical movement and posture), and paralinguistics (the use of volume, pitch variations), the opportunity increases for miscommunication to occur (Gorden, 1980; in Fontana & Frey, 1994). For this reason I used electronic-verbal cues whenever some aspect of my communication called for them, such as variations on the smiley face¹ [:-)], or full caps for emphasis [I didn't mean it like THAT!], to name only two.

I had also considered posting a webpage on the Internet containing a picture of myself and a bit of information about my interests aside from my graduate work. This idea was reinforced by a participant during an electronic conversation² we had about the efficacy of collaborative work:

¹ The collection of these smiley face variations are known as *emoticons*, and can be used to indicate a full range of emotions from happiness to anger to resignation to insouciance.

² This "conversation" actually took place over three separate electronic mail transmissions; however, because comments from a previous message can be captured and included in a new one

P: It would have been nice to have a picture of the group members to get a better sense of who they were.

K: This is interesting! Can you elaborate a bit on how "seeing" the other group members would have helped you?

P: I guess I am a visual or auditory person. I feel I know someone's personality better if I have an image to attach them to. Hearing their voice gives me another image. It's hard to get inflection or personality in a typed message.

Eventually, however, I decided against posting a webpage until my interviewing was finished and most of my writing completed. I felt that because my participants had not seen each other during their courses, my remaining unseen throughout the data collection phase of my study would more closely parallel their earlier on-line learning experiences. When I finally posted the first complete draft of my thesis on the Internet and asked my participants for their feedback, I included photos of myself on the webpage, a gesture of sharing which I hoped would be interpreted as a sign of my appreciation for the trust they had placed in me by sharing their experiences.

Dialoguing. As each completed questionnaire was returned to me, I responded as quickly as possible to the new participant either with follow-up questions and comments or with a brief message acknowledging the participant's effort in providing information about his or her experiences in an on-line course. I felt that, particularly at the outset, I needed to be cognizant of

(as is the case here), this series of comment/question/comment did appear within the same message.

the impact electronic silence could have on my relationship with my participants. I tried, therefore, to determine the character of each participant by looking for cues in the manner and content of the responses provided, and then to approach my continued discussion with the dialogical comportment that I believed would be most agreeable to each participant. Fontana and Frey (1994) discuss how important it is for the researcher to “understand the respondent’s world and forces that might stimulate or retard response” (p. 364).

For example, one participant joked at the beginning of the questionnaire that I would owe him a beer for participating. Viewing this as an opportunity to establish a good rapport with him, I visited a website that allows one to send a virtual beer to anyone with an e-mail address. The next day I received an e-mail from the participant who wrote, *“Hey thanks for the beer. That shows some type of effort and that counts big!”* Following this early exchange, the participant proved to be one of the most forthcoming with respect to his experiences while learning on-line.

Typically, my initial follow-up to the questionnaire responses was to ask a participant to elaborate on something she or he had written, or to ask how a participant felt about a situation that had been described to me regarding interactions with others in an on-line course. I was attempting to increase my understanding of the phenomenon, but the difficulty I encountered was in determining how I could explore without supplying the terms that would name the participants’ experiences for them, and without leading the dialogue too

much. Wherever possible I would use their own terms and expressions when I responded, and I tried to allow the space for participants to discuss any aspect of their experience that was important to them.

Over the period of time that our multiple dialogues took place, my relationship with most of the participants evolved noticeably. With a couple of exceptions, the participants were more distant and brief at the beginning, but gradually they opened up and were able to provide valuable insights into their experiences learning on-line. A few of them never did disclose very much about their interactions with classmates, and eventually they dropped out of the study.

Duration of the Study

The first set of questionnaires was sent out on February 24, 1998, the second was sent on March 3, and the third, on March 6. I received the first response to the questionnaire on February 25, while the last I received on April 21. Extended e-mail dialogues stemming from questionnaire items took place between me and individual participants over approximately three months beginning on February 25.

Response Rate and Attrition

The final item on the questionnaire asked participants if they would agree to my contacting them again for elaboration or clarification of any information they had provided. All twelve participants said "Yes," but three of them did not respond to any more of my e-mail messages. Three others did respond to follow-

up questions, although their responses were somewhat briefer than those of the remaining six participants whose experiences became the focus of this study.

CHAPTER 4

Data Analysis

*All Nature is but art, unknown to thee;
All chance, direction, which thou canst not see;
All discord, harmony not understood;
All partial evil, universal good:
And, spite of pride in erring reason's spite,
One truth is clear: Whatever is, is right.*
- Alexander Pope

QUESTIONNAIRE SUMMARY

Questionnaire Clusters

The questionnaire items were clustered in groups according to their purposes, and these groups formed the structure for the first part of my analysis.

The first three items on the questionnaire were designed to situate each of my participants on the broad electronic spectrum known as "computer user." The first question asked participants how many previous on-line courses they had taken, while the second inquired into their experience with computers and electronic communication in general. The third question sought to determine how quickly participants became comfortable with the medium.

Questions four through eight asked participants about how and to what extent they became acquainted with their electronic classmates. I was interested to know what kinds of collaborative activities students engaged in both at the

outset of and throughout their courses, and I further wanted to know how “connected” participants felt with other students.

The next three questions were designed to examine the nature of the communication that took place among the on-line learners in their respective courses. I wanted to probe participants’ experiences of one-to-one and one-to-many message transmissions to determine if any differences existed in their perceptions of these two communication modes. I was also looking for signs that the type and nature of student interactions affected their course work in some way. Questions twelve and thirteen explored to what extent participants’ course work was made public and how they felt about sharing their work with others.

The subsequent three items on the questionnaire were constructed to sound out participants’ overall perception of electronic learning. Question fourteen asked them to consider what features of their on-line experience helped them to meet their courses’ learning objectives; the fifteenth question inquired about salient factors for developing on-line rapport with classmates; question sixteen asked if participants would consider taking another electronic course.

The final question on the questionnaire, which asked if participants would mind being contacted again for clarification or elaboration of their responses, was included to ensure that they would feel their participation was entirely voluntary. Although I had no control over whether or not my participants

would continue to provide insight into their learning experiences, I strove to make it clear that they could dictate the terms of their participation at all times.

Significance of Participants' Electronic Backgrounds

While most participants who had experience with computers and electronic communication felt more at ease more quickly with the on-line format for their courses, that factor alone was not enough to influence the comfort level of all participants. In spite of Tessa's "*good knowledge*" of operating systems, computer programming, and the Internet, it took her a week before she felt comfortable with her course, and she wrote of the difficulty in getting to know her electronic classmates without the co-present context of a regular classroom. At the same time, Holly "*liked the format immediately,*" even though she had only minimal computer experience and had purchased a home computer only two months prior to taking the course. The distinct experiences of these two participants indicate that skill with computers is not necessarily a prerequisite for a student's feeling comfortable learning and communicating electronically. They point instead to the need to understand what other factors may influence the learner's ability to use the medium to his or her best educational advantage.

Developing Rapport Among Students Electronically

One such influential factor may be the perceived depth of relationships students feel they share with others in the same course. The students in two of the courses used for this study were divided into smaller groups by their

professors, and many participants from these courses felt this helped to alleviate some of the anxiety they otherwise would have experienced over having to discuss issues with a large group of unknown and unseen individuals. Only two of the twelve participants (Meredith and Monica) indicated that they knew a classmate prior to enrolling in their courses. Interestingly, Meredith wrote that she felt a connection only with this previously-known classmate, although it is possible this relationship diminished the need for her to get to know others in her group on a deeper level.¹

Eight participants wrote about feeling a sense of rapport with at least two other classmates; again, this appears to be due primarily to the higher frequency of contact among small-group members. Several participants stressed the value of regular contact and support for each other with respect to course and non-course issues. Sarah found discussions on *“other work (i.e. job related) or struggles in other courses”* to be helpful in developing group cohesion. Anne wrote about the benefit of being able to *“bounce ideas off each other or commiserate,”* while Holly pointed to the sense of support and teamwork fostered by group members who *“all participated but at times ... picked up the slack and covered for others who were behind or held up by family or other distractions.”* For these participants, knowing there were other students who could understand their struggles and provide

¹ I attempted to discover in my follow-up to the questionnaire if, in fact, this were the case, but unfortunately this participant did not respond to any further e-mails.

genuine support during difficult times made a positive difference in their outlook for the course.

Three participants (Simon, Eve, and Monica) gave specific reasons why they didn't feel a connection to some of their classmates, which mainly resulted from these classmates' limited or non-participation in electronic conversations. Diana also wrote of her sense of estrangement from those students who would discuss topics on a discussion page that were of no interest to her, such as prostitution or male jokes. Another participant, Tessa, believed strongly that *"real rapport was [not] possible on a computer. Conversations seemed forced without eye contact, body language, etc., to guide."* Tessa's viewpoint undoubtedly affected the extent to which she communicated with her classmates, for in response to the question regarding the frequency of communication, she wrote that she communicated once a week with the group because it was a requirement of the course, and never in a sidebar with one other student.

Whole-Group vs. Sidebar² Communication

Tessa's perspective is unique among this study's participants, but the type and frequency of communication in the other participants' experiences varied considerably also. Tom, Simon, Holly, and Diana contributed to whole-group discussions three or more times per week; of these, however, only Holly found

² *Sidebar* is a term I use to label the type of communication that occurs between only two people who are members of a larger group such as a listserv or a bulletin board discussion. It is the electronic equivalent to "speaking behind one's hand," as the expression goes.

such discussions to be equally comfortable to sidebar discussions. Tom found the sidebars to be *“more personal and focused ... There was a lot of talk about [the prof] in the shadows.”* Eve preferred the sidebar type of communication because *“you knew who you were talking to and it was easier to be frank since you knew the instructor was not reading the personal e-mails.”*

In spite of communicating only a couple of times a week to her small group, and only three or four times total in sidebars, Brenetta found the two formats to be similar in terms of her comfort level and wrote of how they provided an opportunity for her to examine her own communication style:

If I was not comfortable saying something to the group, it encouraged me to consider ‘why’ and reconsider my position in a way that fostered my abilities to work on my skills at open, non-threatening communication -- and that was a useful process.

Anne and Carole both used the two communication styles equally (about once a week to the whole group, and about twice a week in sidebars), but their feelings about them were completely different. Anne explained her disaffinity for big groups by writing, *“I feel intimidated in a crowd of people whom I don’t know so talking one-on-one feels less threatening ... easier to share thoughts and ideas when I sense that only one person is going to read it.”* Conversely, Carole’s experience of communicating with the larger group proved to be a more positive one:

Although I had more personal contact with people in my small group, I felt comfortable discussing things with all members of the course through [whole-group] format. I write much more easily than I talk in group

situations but sending an e-mail to the large group was not like talking in a large group. I had lots of time to compose and think about my response before sending it and could respond or not as I wished to.

Effect of Relationships on Course Work

Five of the twelve participants wrote specifically about the benefits they derived from having input from and discussion with other students regarding course materials and assignments. Simon incorporated the comments and suggestions of his classmates resulting in *“assignments [that] were always better after the second draft.”* He also valued having access to the work of others, which offered alternatives that might not have occurred to him otherwise. Holly’s experience was similar to Simon’s in that her work came to reflect the contributions her peers made through their electronic exchanges. She explained that her *“knowledge and understanding of the course requirements were greatly enhanced by the opportunity to have group discussions through e-mail.”* Anne referred to a course in which she was currently enrolled at the time of my data collection, and she lamented the absence of an e-mail component which had helped to alleviate her sense of isolation in her previous course. Eve and Carole also felt their work was positively affected by their relationship with classmates.

Conversely, Tessa, who communicated to the whole group once a week as required by her professor, and never in a sidebar with another student, did not feel that her work benefitted from the feedback of her classmates and wrote that her essays *“rarely changed”* because of their input. Sarah echoed this sentiment,

and although she enjoyed the interaction with other students, she explained that she had taken all her courses through distance education and had never “*relied on interaction with the classmates unless it was dictated by the course itself.*”

Diana’s experience with incorporating the suggestions of her classmates was the most potentially disadvantageous compared with the experiences of all the other participants, but she was able to turn the situation around and learn something that became important to her:

My initial workshop student feedback I incorporated in my assignment, due to my lack of confidence in my English, and I failed the assignment. I then viewed my fellow students not as English experts, but as equals. I knew then I had to pass on my own merits [and] not by getting corrections through workshops.

In spite of this first negative experience, Diana was enthusiastic when asked if she would enroll in another on-line course, citing the electronic communication as a significant factor.

Meredith wrote of the frustration she felt over her small group’s perceived inability to work together on assignments before posting them to the whole class. Students became “*paired off,*” and at times “*some of the group had not finished readings or others would read ahead and go ahead and post answers to the larger group without consulting the rest of the group.*” As Meredith was one of two participants in this study who knew a classmate prior to taking the on-line course, she and her friend would discuss course issues “*over the phone more often than on-line.*”

Making Electronic Coursework Public

Among the three courses used for this study, requirements varied with respect to students' posting their writing or other work for classmates to see, although it appears some participants were not clear on those requirements. Simon and Sarah were in the same course, for example, but when asked about whether or not they had to post their work, Simon said "No," while Sarah said "Yes."

Tom's electronic course was the first one in which he had ever shared his work with others, as he had always believed his work was not good enough for that. Having to make some of his work public proved to be a strong motivator for him: *"When I do have to hand things over [for the rest of the class to see] ... I assure you I work harder and that is what the course did for me!"* Simon, Monica, Sarah, and Carole all had positive experiences as well, and all felt that the input they received from classmates on their assignments was valuable and contributed to their learning. Simon found he benefitted from seeing the work of others and commented that, *"You can learn almost as much from your classmates' efforts and the corresponding grading marks and remarks as from your own submissions."* Sarah described her experience as *"rather interesting ... having more than one person offer suggestions about one's writing."* In Carole's course, the sharing of assignments was "strongly recommended" rather than required, but she and her classmates

conveyed both *“positive feedback and positive criticism [which] helped me in my analysis of my own assignments.”*

Diana and Anne were the only two participants who wrote about feeling nervous or intimidated at first with respect to posting their work for others to see. Anne articulated the self-doubt she experienced initially: *“Was I doing it right? Were my ideas ok? Was I understanding the material the right way or would I make a fool of myself on-line?”* In spite of these early fears, however, both women overcame them once they started receiving feedback from other students and their instructors.

Contributing Factors for Meeting Course Objectives

Of all the items on the questionnaire, the one that produced the most consistent response was the one asking participants about what aspects of their electronic experience helped them meet their courses' learning objectives. With the exception of Tessa who remained skeptical about the value of the interactions among her on-line classmates, all participants cited some aspect of communicating with others as a key factor for their learning.

Carole felt that *“gaining other people's perspectives”* was significant throughout her course. She wrote, *“Getting timely responses to my questions as I worked through the course helped my learning and kept up my interest.”* Brenetta and Eve both stressed the importance of the frequency of interactions they had with classmates; Eve referred to these interactions as *“on-going discussions.”*

The notion of mutual support came out strongly in the experiences of several participants. Tom wrote of how the “*sharing of ideas and the reading of people’s comments*” contributed to his meeting the course objectives. Holly’s experience mirrored that of Tom, and she commented on the change her group underwent as the course progressed, stressing

the ability to see the many different responses we had to a question, and to consider how each of us came to our conclusions. As the course progressed I began to notice that many of our initial responses to questions became more alike as we went along. That was neat to see it all come together.

Monica felt her learning was enhanced through interactions with other students because they provided “*reinforcement of my interpretations of the materials.*” She compared her on-line experience with a teleconference setting where she is less comfortable communicating, and she emphasized, “*It is easier to clarify my thoughts before posting them [on-line].*”

A number of participants also stressed the importance of the instructor’s role to keep discussions moving, to challenge and encourage students, and to provide insights into the various courses’ materials (Simon, Brenetta, Eve, and Meredith).

Tessa was the only participant in this study who believed that student interactions made no difference to her learning outcomes. She supported her

comment that her course work “rarely changed” after receiving feedback from others by explaining her perspective of electronic learning:

I don't think the on-line aspect facilitated meeting the course objectives. It just made the class more flexible (no set working hours). I don't think I learned anything significant with regard to college composition that I didn't already know.

Tessa viewed the on-line medium only as a convenient means of receiving and sending course materials, and not as a vehicle for connecting to classmates.

Factors Necessary for On-Line Rapport

Not surprisingly, Tessa dismissed the notion of electronic rapport in her response to a question asking what factors were needed in order to feel a connection to fellow students. She wrote, “*I honestly don't think an on-line rapport can be as worthwhile as actual face to face relations between students.*” She punctuated her opinion with: “*Virtual communities can't really be communities.*” Despite her lack of rapport with any other student, however, Tessa's electronic experience was positive enough that she wrote she would take another on-line course in the future.

Answers to the above-noted question were varied from the remaining participants, but there were some common threads among them. Several participants, including Brenetta, Diana, and Carole, suggested that a sense of rapport could be developed among electronic learners if they could be given the opportunity to share information on a personal level, and not just on a level

relating to the course material. They felt that this sharing was best initiated by some kind of introduction of fellow classmates at the beginning of the course.

Carole explained,

The introductory bios were very helpful in establishing us as a group of nurses from various fields, all taking distance courses through UVic. This 'common ground' and the personal information shared between course members made for a more 'open' learning environment.

Meredith wrote, *"It is important that you have some kind of chit chat before getting into the core issues of the course. I think this helps people get comfortable being on line."*

Anne, who felt intimidated at first until she began to get feedback from others, wrote about the value for her of *"personal sharing,"* because it could help her to *"visualize the person on the other end of the screen."*

Tom referred to *"willing students"* as a key element for developing on-line rapport among classmates. Holly's response was similar to Tom's, and she added that *"being willing to share thoughts and ideas with others ... can empower the group as a whole."* Brenetta also believed regular contributions to discussions were beneficial, although she referred to the mutual sharing as the individual's *"commitment to participating in discussion/process."*

A few participants made reference to what they felt was the best way to approach the work that others had posted. Monica emphasized that students should *"not discredit or undermine anything that is posted ... [Students] should feel free to post their opinions and have acceptance."* Holly's view of developing rapport

among classmates stemmed from the same supportive premise: “[Show] genuine interest in what others’ thoughts are, be cheerful and encouraging, not negative, be patient and realize that different people have different priorities and stressors, help them, don’t shut them out.”

Repeating the On-Line Learning Experience

Except for Tom, who qualified his “Yes and no” answer by commenting that it would depend on the professor, all participants were enthusiastic when asked if, based on their experiences in their respective courses this time, they would take another on-line course in the future. Simon insisted he would not enroll in another distance course unless it was offered electronically; he plans to complete his management program this way, or he will “go somewhere else to finish [on-line]” if he must.

Brenetta also said that she would “continue to do as many of the courses as possible this way,” comparing her experience to that in another distance course that did not have the on-line component:

When I did my first courses, I had weekly contact with a student from each course to discuss the materials Often it was difficult to keep the phone calls focused on the course materials, because [two fellow students] were also living in isolated areas and had social needs in addition to course needs. I really enjoyed that process, but did not get a lot of course related work done during that time. I like the e-mail, because I can make my point without interruption, not have the hour-long long distance charges, and still achieve some of the social aspect.

Meredith lamented not having an electronic component in a course she was currently taking at the time I was interviewing her, and she wrote that she had nobody with whom she could discuss course issues but would *“very much like to talk with somebody.”*

Tessa emphasized the convenience of on-line learning, and both she and Tom mentioned their profs' management of the courses as being a significant reason for their positive viewpoint. Sarah also wrote of the positive influence her instructor had on her overall learning experience: *“The instructor played a large role in the enjoyment of the course. He was prompt with his responses, and the experience of that immediacy is difficult to replace in other distance formats.”*

Having work and family commitments to handle in addition to their course loads, Holly and Sarah appreciated that the on-line format provided them with the flexibility to learn when it suited them. This turned out to be particularly advantageous for Holly:

It is the only on-line course [I have taken] and I still know very little about computers, and I know that if it had not been an on-line course I would not have finished the course. I have two young children (2 and 5), I have been out of school for ten years, never having had a great mark in college, and I got 85% for a final mark in this course! It has given me the confidence ... to go on with a University education. On-line gave me the ability to work at the times that I had available - 10pm to midnight!

PROBING PARTICIPANTS' EXPERIENCES

After returning their completed questionnaires to me, not all participants responded to my follow-up questions and comments; however, six did provide further insights into their on-line learning experiences. A brief description of these six follows.

The Participants

Tom has been studying part-time over the past few years while working full-time as a computer network specialist. His electronic course was the first of its kind he had taken and was also the last course he needed to complete his university program requirement. Tom describes himself as a "*confrontational, in your face, get things done*" kind of person.

Simon, the second of two males in the total group of twelve participants, has had extensive experience with distance education over the past ten to twelve years. He completed the CGA program in this manner and has taken several other distance courses as well, but only one other course was offered electronically.

Tessa is also an experienced computer user, although this course was the first electronic course she has taken. Tessa remains skeptical about the whole notion of virtual communities and believes that the face-to-face context is the only one in which real rapport can develop between individuals.

Holly has been out of school for ten years, and her electronic course was only the second university-level course she has taken since returning to school (the other was not an on-line course). With two small children and a demanding career, Holly attributes her being able to finish the course to its flexibility, which allowed her to study and learn when it fit her busy schedule. Encouraged by her success with this course, she plans to continue with a university education.

Monica has also been away from school for many years and was initially concerned about her ability to manage the "*foreign*" material. She had not taken an electronic course previous to this one, although she does have some computer experience with word processing software and e-mail. Monica characterizes herself as a "*visual or auditory person*" and feels that she can know others better if she can attach an image of what they look like to their words.

Brenetta is an entirely self-taught computer user whose experience includes the design of a program for monitoring tuberculosis in a remote area of Ontario. As with most of this study's participants, Brenetta was working and juggling family commitments while she took the on-line course.

Of the remaining six participants, most did not respond in depth to the questions or comments I sent as follow-up to the questionnaire items. For this reason, their contribution to this study consisted mainly of the questionnaire responses and was only occasionally included in the analysis of the extended discussions that developed beyond the questionnaire.

Coding Categories

As I wanted to examine the nature of electronic learning from the perspectives of my participants, I tried to avoid making premature speculations about what their experiences would reveal before I had collected my data. But, as Bogdan and Biklen (1982) point out, "Because reflecting about what you are finding while in the field is part of every qualitative study, researchers only approach this mode [of collecting data *before* doing any analysis]" (p. 146). Once the first questionnaire responses started coming in, I found I was eager to make connections between participants' responses and to look for definitive aspects of their experiences that would clearly reveal the characteristics of on-line learning.

I realized very quickly, however, that I would need some kind of coding system with which to approach my data. Such a system would not only help me to arrange the data in a more accessible manner, it would also help me to think critically about the value of my participants' experiences. Bogdan and Biklen (1982) suggest several possible categories of codes, two of which I modified slightly for this study (see Table 1). My categories included codes related to participants' perspectives and to electronic relationships/social structure.

Table 1

CODING CATEGORIES

Perspective Codes	Relationship/Social Structure Codes
<p>LEARNING & ELECTRONIC LEARNING</p> <ul style="list-style-type: none"> ♦ product orientation ♦ process orientation ♦ openness ♦ feelings of inadequacy ♦ personal meaning ♦ classmates as resource ♦ computer fluency ♦ comfort level ♦ confidence ♦ isolation 	<p>RULES</p> <ul style="list-style-type: none"> ♦ “social rules” ♦ equal participation ♦ answering e-mails ♦ freedom of speech ♦ “chatting” <p>TRUST</p> <ul style="list-style-type: none"> ♦ personal sharing <p>SUPPORT</p>
<p>CHARACTERISTICS OF E-MAIL</p> <ul style="list-style-type: none"> ♦ permanence ♦ deliberation ♦ electronic silences ♦ liberating ♦ directness ♦ efficiency ♦ “uninterrupted forum” ♦ empowerment ♦ “meaningful conversations” ♦ stripped communication (“put a face on classmates”) ♦ anonymity 	<p>AUDIENCE</p> <ul style="list-style-type: none"> ♦ presence of prof <p>COLLABORATION</p> <ul style="list-style-type: none"> ♦ input from others ♦ mutual experiences ♦ instructor’s role <p>NATURE OF COMMUNICATION</p> <ul style="list-style-type: none"> ♦ off-task talk ♦ “put a face on classmates” (stripped communication) ♦ one-to-one vs one-to-many communication

The perspective codes category focused on individual participants' world views and attempted to reveal what is important to them (Bogdan & Biklen, 1982). I examined how participants felt about learning in general, and I looked for ways in which they defined electronic learning. I also sought to determine how participants viewed themselves in relation to the computer-mediated communication process.

In this category, I further included "codes oriented toward ways of thinking that all or some subjects share which are not as general as their overall definition of the situation but indicate orientations toward particular aspects of a setting" (Bogdan & Biklen, 1982, p. 158). I searched for information that pointed to shared values among participants, particularly in common words or phrases that revealed mutual understandings of specific aspects of electronic learning.

The second code category, encompassing relationship/social structure codes, deals with different levels of relations among people. By examining my data through these codes, I hoped to move toward a description of the social structure of the electronic learning environment as experienced by my study participants.

PERSPECTIVE CODES CATEGORY

Learning and Electronic Learning

During one of several lengthy electronic discussions with me on the definition of learning, Tom described his view in terms of personal relevance when he wrote, *“The most important part of learning is the practical side of it all When I learn something I actually do not feel much of an accomplishment The learning process means nothing unless it has some meaning to my life.”* When those connections aren’t evident, Tom feels frustrated: *“One thing I hate about English is you have to write how the prof wants you to write. Not how you feel like writing.”*

At another point in our dialogue, Tom explained that he knew he had really learned something,

When I remember how to do it later. When I use what I have learned and the theory works out. When I can use what I have learned to extrapolate against another idea and come up with a positive solution to a problem.

For Tom, then, the process of learning is very much one of looking for ways to make personal connections to the information presented. His comment that he *“like[s] the people who earn their way with hard work”* underscores his own approach to knowledge acquisition whereby, *“If I desire to understand something I will fight tenaciously to get to a level of understanding.”*

Tom’s approach to electronic learning is as utilitarian as is his approach to traditional learning. He views the Internet as an instrument he can use to find

what he needs quickly: *"The Web is a great tool for me. That is what it is. A tool. I can find my way around the Web in seconds ..."* Tom's comfort with the medium is obvious, and he cites the on-line course format as an *"instant advantage."* At one point I asked him about a phrase he had used - *"personal touch"* - in describing his course, to which he replied, *"What is so cold about computers? They run hot for me, not cold Just because [the medium] is electronic has nothing to do with being impersonal."*

Like Tom, Simon's extensive experience with computers and electronic communication meant he was comfortable with the on-line format for his course. His description of himself as a *"consumer of distance education"* underscored his openness to alternatives for course delivery. However, Simon differentiated between two types of courses, including those that are

merely necessary evils to overcome in the quest for the degree ... For those courses in particular the most important part was surviving to the end and getting a high enough mark to pass the course ... [This course was] interesting, fun, enlightening in many ways, and the mark, while satisfying, was only incidental to the whole experience and the knowledge gained.

Simon described himself as a *"mostly better-than-average student ... too lazy to be a top level student."* It is clear through his writing, though, that he was committed to getting the most out of his electronic course by using his classmates as a valuable resource for learning. As he explained, *"A learning process that requires*

thinking, exploring and discovering seems to be much more enhanced when other people are incorporated to expand our own imaginations and knowledge."

Simon's notion of learning, like waves emanating from a water droplet, is a *"continual process in which cumulative knowledge enhances previously stored information and eventually you develop a clue."* That this knowledge accumulates from the input of and interaction with classmates is an integral part of his attitude and was pervasive throughout our discussions. Simon explained his view that *"learning is always enhanced when others help to expand the different directions that we take when we explore any subject."* He was happy with the format for his electronic course which involved students' sharing their work on-line, and wrote, *"You can learn almost as much from your classmates' efforts ... After all, the point of the whole exercise is to learn."*

Simon's approach to learning was sharply contrasted by that of Tessa, who *"took the course because it was required, not because I wanted to make virtual friends."* Tessa considered electronic learning to be an entirely individual process, and she believed the communication she had with her classmates to be an unnecessary part of the course. The brief exchange we had on this issue illustrates her viewpoint:

K: If it had not been a course requirement, do you think you would have communicated with others [in your electronic class] at all?

T: Probably not.

Tessa did feel positive about the experience of electronic learning, but only inasmuch as it presented a delivery alternative for a course she needed to take. She wrote, *"It was a very convenient and easy way to complete a required course though I'm not sure I learned very much."* Her insistence that, *"I honestly don't think an on-line rapport can be as worthwhile as actual face to face relations between students"* indicates her disinclination to consider her classmates as a resource for learning.

Unlike Tessa, Monica did value the interactions she had with her fellow students. Because she had been away from school for many years, she experienced some trepidation over how she would *"manage with the course,"* but added, *"As long as I felt we were communicating and confirming the material, I felt I could move on With this method [of sharing on-line], I could read other people's feedback and glean understanding from them."* Getting corroboration from her classmates helped Monica to build confidence and contributed to a positive learning experience for her.

Monica's definition of learning was simple: *"Learning is gaining an understanding of information. When something becomes clear to me and I can apply the information, I feel I have learned it."* She noted how this process can be either individual or collective or both, *"at different times and in different settings."*

Brenetta's experience would also fit well into Monica's notion of the learning process. For Brenetta, learning about computers was a task she undertook herself several years ago in order to manage a disease control program. She explained that at the time she was *"computer illiterate and [became]*

entirely self-educated" in various software programs. Although Brenetta was comfortable with the format for her electronic course, she described how initially it presented some problems for her and her classmates, explaining, *"It took a while for us to figure out how to best use the resource, and I know for myself, I underutilized the listserv."*

However, Brenetta viewed the electronic component of her course as a valuable alternative for overcoming the isolation inherent in traditional distance education formats. She wrote,

I was/am committed to utilizing the on-line capacity to my advantage. I really miss not having the ongoing contact and input that goes with attending class with a group - using e-mail facilitates some of that process.

Brenetta enjoyed having frequent contact with fellow students, citing *"an individual commitment to participating in discussion"* as a key component to the on-line learning experience.

Finally, Holly provided only very brief information relating to her perspective on electronic learning. She wrote that she *"liked the format immediately,"* but later added that *"everyone was very new to computers and the instructions on how to get on the listserv in the first place were confusing for some people,"* which initially created difficulties in her course. In spite of feeling uncertain about her ability to succeed in a university-level course before taking this one, Holly found the experience to be empowering for her, and she looked forward to continuing her studies.

Holly was one of three people who referred to technical/access issues as having an impact on their course experience. Eve, who had no home computer, found it necessary to do her work from a computer at her workplace, but this created problems for her at times: *"I was only here a few days a week, so I could not be in contact all the time and had only limited time at work to communicate with others."* Tom sensed that many people in his course also struggled with getting access to a computer and/or getting connected to others. He wrote,

The electronic thing was very difficult on the class. The first 2 weeks were spent trying to help others get e-mail going at all or trying to peel their boyfriends or husbands off the computer so they could use it.

Eventually, these problems were resolved in his class and students were able to focus their energy on the course material.

While Tom's *"instant advantage"* with electronic communication and the Internet meant that he didn't suffer the same frustrations others did in getting used to the on-line format, he nevertheless had another issue that was difficult for him to deal with, namely sharing his work with his classmates. He explained it this way: *"By presenting my work to the group it opened me up for my weakness (English). I had to battle my feeling of being much lower than average."* By the end of the course, however, Tom recognized that shared learning had *"worked right in my favor. It made me assess and reassess my work on a daily basis. When I handed in my work it was actually worth reading."*

Simon, too, felt convinced about the benefit of sharing assignments with fellow learners. Of those he had the opportunity to see, *“some were very interesting, some were funny All in all, very enlightening.”* Holly found that by being able to see the responses others in her class had to questions or assignments, her own learning was augmented. She described how her *“knowledge and understanding of the course requirements were greatly enhanced by the opportunity to have group discussions through e-mail.”*

Characteristics of Electronic Communication

Electronic discussions, whether via the more public forum of a listserv or bulletin board, or through the one-to-one (sidebar) transmission, proved to be laden with implications for electronic learners. Holly liked the efficiency of an e-mail communication because,

People are more focused when they write something down (e-mail) while discussions in a classroom setting can easily fall off topic, there is a greater incidence of interruption, misinterpretation, etc., that can hinder the progress of group activities I am not shy, but I enjoyed on-line because our group discussions were always on topic, so we didn't waste a lot of time.

Tom's perspective of electronic discussions was similar to this. He insisted that *“people are more to the point with e-mail,”* then clarified in a later correspondence, *“It takes a bit of effort to type and people tend to keep it to a minimum and frank.”*

Conversely, Tessa found the opposite to be true in her course. She felt that the convenience of e-mail was license for students to use the medium *“even when they have nothing significant to say.”* For her, *“communication on-line lacks the intimacy of real conversation but at the same time is so instantaneous that it inevitably becomes inane.”* Tessa was unhappy with the requirement that she post at least once a week to the class’s bulletin board, pointing to the *“forced”* nature of such communication: *“What was I supposed to say? You can’t have a dialogue with 25 people at the same time.”*

This sentiment was echoed by Monica who pointed to the more general nature of whole-group communication, which meant it was *“difficult sometimes to follow the ‘conversation.’”* She also drew attention to the difficulty of experiencing electronic silence when no response would be forthcoming from a classmate after she had posted a message. She recognized, though, that there could be reasons other than disinterest for that situation to occur, noting, *“As I used the computer at work I had limited time to respond and if I wasn’t at work when someone else responded, I may have left them with the same frustration.”*

In spite of these difficulties, Monica appreciated the opportunity for deliberation which was enabled by the electronic course format. She wrote about how it was *“easier to clarify my thoughts before posting them,”* unlike in a f2f context whereby those engaged in a conversation must process their ideas more rapidly if they are to keep pace with the discussion. Carole, too, wrote of this advantage during her on-going exchanges with classmates:

I write much more easily than I talk in group situations but sending an e-mail to the large group was not like talking in a large group. I had lots of time to compose and think about my response before sending it, and could respond or not as I wished to.

Being able to deliberate and compose without interruption helped to overcome the anxiety of having her words “out there” in a more permanent form than spoken words take. Eventually, Carole “became more comfortable” as she exchanged thoughts and ideas with her fellow students.

Tom observed the same phenomenon occurring among some of his classmates, characterizing it this way: *“This on-line thing is an interesting social interaction. People seemed to open up through e-mail where a face to face connection brings on hesitation.”* Tessa provided one possible explanation for why a difference can exist between a person’s level of interaction in a co-present situation and that of the electronic environment. She explained, *“The partial anonymity of e-mail lets you say things you might not otherwise say and not have to deal with others’ immediate reactions.”* Simon’s experience further supports this view, and he suggested that *“some of the less vocal people in actual physical contact situations might actually become better known through their written words than would ordinarily be the case.”* For these people Simon describes, the situation could be empowering and, therefore, would potentially have contributed to a more beneficial electronic social structure.

RELATIONSHIP/SOCIAL STRUCTURE CODES

Rules

The social structure of any community, electronic or otherwise, is necessarily dependent on rules to preserve the well-being of its members. Such rules may be either tacit or explicit, and the extent to which they are enforced determines much with respect to the social climate. Simon responded this way to my question about the existence of rules for interacting among his classmates:

Well, no explicit rules anyway. We were reminded that the postings were public and available to anyone on the Internet who wanted to have a look. On a personal level I sometimes kept my red-necked opinions to myself, sometimes I let them show a bit.

Simon's method of self-censorship or self-control was adopted by other participants as well. Carole referred to "*common courtesy and common sense*," as the standard among her classmates, noting that "*with the e-mail format you could be as open or as closed with information as you liked.*"

Tom described his perspective of the situation that existed in his electronic course: "*You can tell very quickly how far you can go. Many people do a poke to see if you have a funny bone and if you respond.*" In spite of his assertion, though, Tom experienced backlash from some of his fellow learners when he "*vented in a 2000 word post*" in reaction to a topic others had been discussing. In spite of posting an

apology after realizing his mistake the following morning, he nevertheless “got flamed”³ when classmates felt he had gone too far.

Other participants experienced difficulties when class members paid little heed to the rules as well. Meredith wrote of the frustration she felt over her small group’s lack of cohesiveness in handling group assignments. Monica found that the randomness with which her group members would determine a leader for certain activities resulted in unnecessary awkwardness. She wrote, “*It would have been less uncomfortable and more efficient if we had decided each person would take turns on a rotating basis.*”

Monica’s comment underscores another feature of the electronic social structure, namely the expectation that everyone will contribute to group work on an equal basis. As was the case with other issues, participants had varying views on this aspect of on-line learning. For example, while Holly believed that everyone “*put in equal amounts of effort to get the activities done ... We didn’t have any member who didn’t pull their weight,*” Eve found the opposite to be true from her experience. Monica felt that some of her classmates occasionally took advantage of the situation:

We didn’t assign a leader to the groups so I felt at times there were unofficial leaders which wasn’t necessarily a bad thing as it got the work done, but there was opportunity for some not to participate at all.

³ *Flaming* is a term common among users of one-to-many electronic communications, such as bulletin boards or news groups, to describe the process of sending vitriolic messages to anyone who appears to have overstepped generally accepted electronic social conventions.

In some cases, as above, it appears that nothing was done to correct the input imbalance; however, Tom found that anyone in his course not contributing was taken to task for it. He wrote,

Oh, for sure there were people not willing. Those were centered out by the groups and the slack was taken up by the rest. If someone fell by the side, they were contacted by the group and the group was contacted in general about the lack of contact.

In this way, Tom's class members monitored each other to ensure everyone participated as equally as possible.

Trust

A good reason for insisting on equality of participation is that a sense of trust can more easily develop among learners. One of the exchanges I had with Simon speaks to the importance of trust in a shared learning situation:

K: Without any sort of visual cueing, it requires considerably more trust to put one's words out there - it's much more permanent than simply speaking the words. And if some classmates aren't forthcoming in a way that makes you feel you can trust them, it's natural to expend the energy on those who are.

S: ... It is the input from others that helps to better develop our own ideas, and if we don't trust the information they provide we won't accept their input. Part of building that trust is to communicate so people can see what you are all about.

Tom found that some students in his course would *“go out of their way to contact each other to read over essays.”* His experience indicates how beneficial it was for classmates to establish a sense of trust among themselves.

Support

For several participants in this study, getting and giving support had a significant impact on their overall learning. Holly made reference to the *“sense of support and teamwork”* that existed within her small group. She surmised that *“because we were all returning to school after a long time away from the studies, we became a cohesive, supportive group almost immediately.”* Brenetta, too, wrote of how she and her classmates *“provided each other with social support in addition to course-related support.”* She further explained that,

The social support was not essential, but added to the experience of the class It was similar to having a couple of friends in class that you sit with - it adds something to the experience that you don't necessarily get if you always sit alone.

When one of Carole's fellow students was going through a personal crisis, *“most of our group responded to her to show her our empathy and support.”* Eve cited commonality of experiences as an important factor for her, writing, *“I just felt connected and felt that other people were going through the same problems I was.”* Anne, too, felt the *“sense of support for each other when we're having difficulty grasping a concept or feeling overwhelmed”* was essential to overcome the anxiety she experienced with different aspects of her electronic course.

Electronic Audience

One such aspect Anne had to deal with was a feeling of intimidation about communicating with the whole class, particularly when she didn't know any of them. She described how it was *"a little easier to share thoughts and ideas when I sense that only one person is going to read it."* Eve's reaction to communicating with all her classmates at once was similar to Anne's, and she wrote of her preference for sidebars because *"you knew who you were talking to and it was easier to be frank since you knew the instructor was not reading the personal e-mails."* In explaining one of the first assignments, which was to interview and introduce a classmate to the others, Tom mused, *"I wondered about [the prof] posing as one of the students to see inside!"* Clearly, these participants' perceived audience had an impact on their orientation to communicating electronically.

Collaboration

For many participants, their "audience" of classmates provided them with a collaborative milieu in which to share ideas and make suggestions. Unfortunately, Diana, whose faith in the input of her classmates resulted in a failed first assignment, became skeptical of the value of collaboration thereafter, and she resolved to *"pass on my own merits"* for all subsequent assignments. Brenetta described the process that she and her classmates underwent to manage their course work:

We would discuss readings as a class or more commonly as a small group, and this facilitated my understanding of the materials. It was useful to

hear varied perspectives on the same materials - provided depth to the learning.

In spite of this preliminary collaborative discussion, though, she felt that she was still working on her own when it came time to actually do the assignments.

Both Monica and Simon reported a fully collaborative effort among them and other students in their respective courses. Monica pointed to numerous assignments for which her group members would “*post all of our answers and someone would compile the information to one posting for the entire group.*” In Simon’s course, the collaborative format was built into each assignment’s requirements.

Students would

do a draft and then interact with assigned partners by submitting the drafts to them for comments. The final result was a much better assignment and a feeling of collaboration when it was completed.

Collaboration, then, became a valuable process for many students studying electronically.

Nature of Electronic Communication

Part of the collaborative effort that would have contributed overall to students’ learning experience but that would not have appeared in their actual assignments per se was the off-task talk, or “chatting,” among students. Simon’s class had access to a bulletin board where they were free to discuss anything:

“The bb was wide open, people talked about whale watching, climbing mountains, pimps & prostitutes and the occasional jokes - some even a bit risqué. Nice and open, I liked the

concept.” Tom was equally enthusiastic about the “*personal interaction*,” and remarked how “*people got right into the course and were having a blast on-line in the end.*” Eve found that the personal e-mails were helpful for her to feel part of a social community. She summed it up by writing, “*It was also good to just chat.*”

One of the limitations to electronic communication is its absence of the usual visual cues we rely upon to interpret and understand a message. The personal communication described above was an important way for some participants to overcome those limitations, at least in part. Anne described how “*a little bit of personal sharing helps me to visualize the person on the other end of the screen.*”

Monica also felt somewhat at a loss without being able to see her classmates. She described her perspective this way:

I guess I am a visual or auditory person. I feel I know someone's personality better if I have an image to attach them to. Hearing their voice gives me another image. It's hard to get inflection or personality in a typed message. The images I developed were based on the personal messages they sent.

Simon's comment on this issue was simple: “*It would have been nice to put a face on our classmates.*” Tessa shared this sentiment, explaining how it would have benefitted her if she had had “*at least one in-person meeting with my classmates [which] might have established a real rapport.*” The comments of these participants

illustrate the potential difficulty of dealing with the “stripped” nature of electronic communication.

In spite of the obvious limitations of electronic communication, some participants were still able to develop strong relationships with other students. In Tom’s course, where students were asked to share information and introduce each other as a first assignment, this one-to-one communication allowed them to develop a closer and more lasting relationship to a classmate. Tom explained, “*I know that if I wanted to send some e-mail to the person I interviewed right now, she would contact me and we could continue a dialogue by e-mail.*” The similarity between Tom’s experience and Simon’s is striking, for Simon also wrote of his relationship with his partner for the first assignment: “*I felt that I knew my ‘intro’ classmate better than most of the others because of the extra direct correspondence that I had with her where we told each other all about ourselves.*”

Communicating with only one other person at a time also provided an opportunity for some students to offer genuine encouragement to a classmate when it was needed. As Holly explained,

Sometimes it was nice to have a one-to-one to clarify anything that didn’t seem clear, or to compliment someone on their work or their thoughts. It was a nice way to boost someone who was losing interest or having difficulty.

Of course, the same message could have been conveyed in a posting to a listserv, but as Holly's experience implies, e-mailing a classmate individually was at times a more appropriate method for communicating.

Monica and Brenetta both wrote about the difference between posting messages to the whole class and communicating with the small groups that formed for working on assignments. Monica explained that *"the smaller group was easier to get to know as we communicated more often. It seemed the other small groups knew each other in a similar way."* In Brenetta's class, *"the bulk of communication quickly went to the groups, and I do not remember a lot of messages that went over the listserv."* One-to-many communication, then, was not a popular choice for some students who preferred a one-to-one or, at least, a "one-to-few" communication style instead.

CHAPTER 5

Conclusions and Recommendations

*For now we see through a glass, darkly;
but then face to face; now I know in part;
but then shall I know even as also I am
known. I Corinthians 13:12*

SUMMARY AND CONCLUSIONS

I undertook this study because I wanted to learn more about the nature of electronic communication and about how interactions among students would affect their learning in on-line courses. The study was not meant to produce a definitive explanation of this phenomenon, but to contribute to an on-going body of inquiry that attempts to understand human beings as learners and communicators in an electronic environment.

My participants worked collaboratively on-line with electronic classmates during their respective courses in order to learn the course materials and to realize the implications this knowledge would have on their professional and personal lives; my inquiry took this process one step further by asking them to reflect on their experiences and to collaborate with me in constructing a relevant representation of their electronic learning. Because I was attempting to understand the nature of their interactions, and because I was interested in having them consider their individual experiences as a whole after the course's completion, I called my social constructivist methodology *experiential reflection*.

In spite of the obvious shortcomings of electronic communication as research medium, it offered at the same time a richly generative environment wherein my participants could take the time they needed to reflect upon and respond to my questions or comments, a situation that is not always convenient in a f2f interview. There were many times during my data collection when I would send a message to a participant but would not receive a response until a few days or even a week later. It is possible that the convenience of responding at any time may have become a justification to procrastinate for some participants, but if this were the case, I felt it was a reasonable tradeoff for the freedom the medium allowed otherwise.

Electronic mail also provided the means to overcome the geographic distances that played a role in some participants' choosing to enroll in on-line courses in the first place. Many participants were local students whose work or personal responsibilities necessitated their taking this form of distance education, but others were from more remote areas of the province, or from out of province. It would have been impossible for me to conduct f2f interviews with these latter participants, and multiple telephone interviews would have been too costly.

A further advantage to using electronic mail to probe my participants' experiences was that everyone automatically had a complete record of his or her communication with me. Although it was never necessary to go back and check the accuracy of a statement, the opportunity to do so provided the comfort of a

corroborative safety net for me and my participants throughout our conversations.

Finally, for many people, the nature of electronic communication was such that it enabled more reflective deliberation than the immediacy of a f2f encounter would have done. Part of this may have been the result of my participants' having greater control over when they responded to my messages, without the concern of being interrupted by another question before their original thought had been completely developed.

Role of the Researcher

The primary consideration for my method of data collection was that it would allow participants the room to explore their experiences while keeping my voice in the background as much as possible. The questionnaire was designed to get participants thinking about aspects of their on-line interactions with other members of the electronic class; the difficulty was in allowing room for participants to examine these interactions without supplying terms that would have suggested how they should feel about them. Clandinin and Connelly (1994) remind us to be cognizant of the researcher's role: "The way an interviewer acts, questions, and responds in an interview shapes the relationship and, therefore, the ways participants respond and give accounts of their experience" (p. 420).

The dilemma for me was knowing exactly where to place myself in my study. If adopting the constructivist approach to human inquiry entails gaining an understanding of an experience from the viewpoint of those who actually live the experience - called the *emic* point of view (Schwandt, 1994) - this meant that I had to come to the study without wearing the mantle of the researcher-expert, and instead to present myself in the more appropriate raiment of the learner.

Eisner (1998) stresses the importance of language as a medium not only for conveying experience, but also for constituting it. If language was to be the means through which I would understand the nature of my participants' on-line interactions during their courses, it was at the same time the means by which they would come to "know" me and, hence, to trust me enough to feel comfortable about sharing their experiences with me. I adopted a conversational style¹ in my emails to help participants feel more comfortable, and to provide the built-in flexibility that could enable them to highlight aspects of their individual experiences that were more important to them (Clandinin & Connelly, 1994). Because I wished to empower my participants, I used their language, their words and phrases, whenever I could in my own questions and comments to encourage deeper reflection on their part. I also invited them to write freely of their experiences by posing open-ended questions and by asking for elaboration on

¹ I attempted to do this in my follow-ups to the questionnaire responses; however, because some participants chose not to continue to dialogue with me (usually by not responding to subsequent emails), I did not have the same opportunity to present myself to them as *learner* rather than as *researcher*.

anything that seemed to suggest deeper meaning than they had at first presented.

One of the difficulties I faced throughout my data collection was resisting the temptation to label or categorize too quickly. Eisner (1998) points to the “blinkering” that can result from this tendency when he writes:

But categorization can also be a liability when it forecloses, as it often does, the exploration of the qualities that constitute *this* classroom, *that* student, *this* particular school. If our perceptual experience is aborted for the sake of classification, our experience is attenuated; we do not experience all that we can. (p. 17)

I found it important to remind myself repeatedly that what I sought was to *understand* the nature of my participants’ electronic interactions, rather than to *explain* them.

The social constructivist paradigm worked well for my data analysis. The on-going discussions my participants had with their classmates to negotiate and construct meaning in their courses paralleled the process I engaged in to construct an understanding of their experiences with their help.

One salient consideration of my using a constructivist epistemology for gaining understanding of the phenomenon is that interpretations I derived from that methodology are “second-order” in nature. Once a participant spoke of a life-world experience, the participant offered at the same time an interpretation of that experience because it could be spoken of only in the past tense (Schwandt,

1994). If I then reported on that first-order interpretation, the original experience was re-constructed yet again. This does not mean that my analysis of the experience was invalid; rather, it means that I and my participants provided a mature, socially-constructed account of a phenomenon. Our understanding was enhanced by layering each newly-informed reflection with the mortar of considered thought, thus building a lasting structure of meaning.

Findings

As I expected, the data my participants provided were varied and individual, but there were also many similarities among them. A number of key findings merit considered thought. First, the participants' experiences point to the special nature of electronic communication, particularly because the visual cues relied upon so heavily for interpreting messages were absent. This meant that some participants felt more intimidated about posting their thoughts to unseen classmates; others found the relative anonymity of the medium to be liberating.

A further characteristic of on-line communication was its efficiency. Participants liked that they could think and compose, taking as much time as they needed, without fear of interruption from others. This fits in well with the "reflective cognitive stance" van Manen (1990) refers to. Occasionally, however, it presented difficulties when a student had to wait for a reply that was not

immediately forthcoming, but generally the convenience of the electronic medium outweighed this latter concern.

Another finding that resulted from this study deals with the way in which participants' learning was affected by their electronic interactions. For all but one of the participants, learning was very much a social event in which discussions with other students played an important role for understanding their course materials. Many participants used terms such as "collaboration" and "input from others" when describing factors for their learning. Off-task talk was cited several times as an important element in making participants feel more at ease with their classmates, and this in turn generated feelings of trust and recognition that everyone was "in the same boat."

Participants also wrote about the importance of equal participation in course activities and assignments. Those who believed that others were not contributing equally may have held back somewhat due to feelings of unfairness. Others wrote of how classmates would go out of their way to help each other and to "pick up the slack" when it was needed - these students believed they gained more, both academically and personally, because of the extra effort they put into their collaborative work.

Additionally, it was important to participants that they feel some sameness, some sense of *community* with at least a few other learners in order to really engage in a meaningful cooperative learning process. This feeling began

for some participants during an introductory exercise of interviewing a classmate and was strengthened by continued interactions, both course related and otherwise. Those interactions further helped many participants feel more comfortable about learning because they eliminated the sense of isolation that is an inherent part of traditional distance education formats.

Finally, in spite of having both good and bad experiences, all participants indicated they would take another electronic course. Because students value face-to-face interactions so highly, it is unlikely that the traditional classroom setting will be completely replaced by a delivery medium such as the Internet, at least in the foreseeable future. But there is a need for educational institutions to offer alternatives for learners, particularly if the “just in time” learning phenomenon continues to be in demand.

RECOMMENDATIONS

As a result of my research, I propose five recommendations for educators who will conduct on-line courses.

1. *Take into consideration the intimidation some students will feel about computer-mediated communication.* For many people, the electronic environment is unknown and unfathomable. Any anxiety they may feel about a course’s content or about returning to school after several years will only be exacerbated by having to learn in an environment that is new to them.

2. *Provide clear guidelines about etiquette to help reduce electronic silences.*

Wherever possible, students should be encouraged to respond to each other's postings within reasonable time. Even a short "I'll have to get back to you later" message will let the original sender know that her thoughts and ideas are not being ignored.

3. *Remember not everyone has equal and regular access to equipment.* Some students may not have the luxury of a home computer, which means they may need to use one at work or elsewhere. Even home computers may need to be shared with family members, leaving limited time for the electronic student to do work.

4. *Build activities into the curriculum that allow students to work in large groups, small groups, and pairs in order to accommodate the preferences of all students.* While small groups seem to provide the most comfortable collaborative situation, some students like to have input from members of the whole class, and others prefer the intimacy of working with only one other person.

5. *Encourage regular interactions among students, including off-task talk.* Setting up a class listserv where students can discuss course-related issues, and a bulletin board where they may "chat" about anything they wish, will furnish them with the most opportunities for communicating on any level, thus contributing to the development of a strong social structure among classmates.

DIRECTIONS FOR FURTHER INQUIRY

In the course of this study, I often encountered “threads” that would have taken me in new and interesting directions, for just as the Internet is a labyrinthine web of connections with no beginning or end, so is my process of learning. In order to keep myself focused, however, it was necessary to consider some of these threads only in passing and to remind myself that I could come back to them at a later time. Others were more directly related to my research, but their addition would have made my work unwieldy. Nevertheless, they merit mention here.

This study could have benefitted from a larger group of participants. Further research covering a greater number of courses would help to confirm (or refute) that the experiences my participants described are typical. This is not to negate the contributions reported here; it would merely help to situate my participants’ experiences in the broad category of electronic learning.

Another study might also focus on the importance of gender to CMC and learning. A quick glance through any computer sales magazine reveals that males are still clearly the target group. It follows, then, that they may have more experience and more comfort with using computers and computerized systems. A study examining the extent to which this is, or is not, true would add to our understanding of electronic learning.

It would also be interesting to look more closely at the content and form of electronic communication from a linguistic point of view. How much like oral communication is its electronic counterpart? Is it, in fact, a more efficient medium than the face-to-face encounter because it enables more deliberate, considered thought in advance of the communication?

REFLECTIONS

Even after two years of being immersed in the review of literature, the analysis of my data, and the adumbration of the APA Manual, I remain excited about electronic communication and learning. This study has contributed enormously to my growth both as an educator and as a human being living in an electronic world. It is yet another step in my lifelong learning process.

I now look forward to designing and teaching my first electronic course, equipped with the knowledge that a key part of its design must be the facilitation of student-to-student interactions. I wrote in the Introduction that I believed having a sense of community among electronic learners could be important to their academic success; the findings of this study support my belief. Therefore, my goal as an electronic distance educator would be to encourage students to take advantage of the unique features the medium offers for developing community (collaboration, connection to other distance learners, deliberation), while minimizing the potential difficulties inherent in the technology, such as electronic silence, or the “facelessness” of classmates.

Finally, I am pleased to have contributed to the literature on methods for data collection. As more students choose to undertake their studies via electronic means, our need to understand this learning phenomenon will increase. Electronic mail dialoguing provides one means of spanning geographic distances so that further research may be conducted.

REFERENCES

- Barnes, D. (1976). From communication to curriculum. Hammondsworth, UK: Penguin.
- Bogdan, R. & Biklen, S. (1982). Qualitative research for education: An introduction to theory and methods. Boston, MA: Allyn and Bacon, Inc.
- Cerulo, K. (1997). Reframing sociological concepts for a brave new (virtual?) world. Sociological Inquiry, 67(1), 48-58.
- Clandinin, D. & Connelly, F. (1994). Personal experience methods. In Denzin, J. & Lincoln, Y. (Eds.), Handbook of qualitative research (pp. 413-427). Thousand Oaks, CA: SAGE Publications, Inc.
- Denzin, J. & Lincoln, Y. (Eds.) (1994). Handbook of qualitative research. Thousand Oaks, CA: SAGE Publications, Inc.
- Dewey, J. (1929). Experience and nature. New York: W. W. Norton & Company, Inc.
- Eisner, E. (1998). The enlightened eye: Qualitative inquiry and the enhancement of educational practice. Upper Saddle River, NJ: Prentice-Hall, Inc.
- Fontana, A. & Frey, J. (1994). Interviewing: The art of science. In Denzin, J. & Lincoln, Y. (Eds.), Handbook of qualitative research (pp. 361-376). Thousand Oaks, CA: SAGE Publications, Inc.

- Franklin, U. (1992). The real world of technology. Concord, ON: House of Anansi Press Limited.
- Giarelli, J. & Chambliss, J. (1988). Philosophy of education as qualitative inquiry. In Sherman, R. & Webb, R. (Eds.) Qualitative research in education: Focus and methods (pp. 30-43). London: The Falmer Press.
- Gruender, C. (1996). Constructivism and learning: A philosophical appraisal. Educational Technology, 36, 21-29.
- Guba, E. & Lincoln, Y. (1994). Competing paradigms in qualitative research. In Denzin, J. & Lincoln, Y. (Eds.), Handbook of qualitative research (pp. 105-117). Thousand Oaks, CA: SAGE Publications, Inc.
- Hiltz, R. & Turoff, M. (1993). The network nation: Human communication via computer. Cambridge, MA: The MIT Press.
- Holstein, J. & Gubrium, J. (1994). Phenomenology, ethnomethodology, and interpretive practice. In Denzin, J. & Lincoln, Y. (Eds.), Handbook of qualitative research (pp. 262-272). Thousand Oaks, CA: SAGE Publications, Inc.
- Ihde, D. (1990). Technology and human self conception. In Larry Hickman (Ed.), Technology as a human affair (pp. 125-133). New York: McGraw-Hill Publishing Company.
- Jones, S. (Ed.). (1997). Virtual culture: Identity and communication in cybersociety. Thousand Oaks, CA: SAGE Publications Inc.

- Kahn, B. (Ed.).(1997). Web-based instruction. Englewood Cliffs, NJ: Educational Technology Publications, Inc.
- de Kerckhove, D. (1997). Connected intelligence: The arrival of the web society. Toronto, ON: Somerville House Publishing.
- Kolb, D. (1996). Discourse across links. In Ess, C. (Ed.) Philosophical perspectives on computer-mediated communication (pp. 15-26). Albany, NY: State University of New York Press.
- Kress, G. (1989). Communication and culture. New South Wales, Australia: New South Wales University Press.
- Locatis, C. & Weisberg, M. (1997). Distributed learning and the internet. Contemporary Education, 68 (2), 100-103.
- van Manen, M. (1994). Researching lived experience: Human science for an action sensitive pedagogy. Canada: The Althouse Press.
- Martorella, P.H. (1996). The degathering of society: Implications for technology and educators. NASSP - Bulletin, 80(582), 55-62.
- McGee, P. Building an on-line community for learning. The Global Schoolhouse [On-line]. Available: <http://www.gsh.org/wce/mcgee.htm>
- McGinn, R. (1990). What is technology? In Hickman, L. (Ed.) Technology as a human affair (pp. 10-25). New York: McGraw-Hill Publishing Company.
- McLellan, H. (1997). Creating virtual communities via the web. In Khan, B. (Ed.) Web-based instruction (pp. 185-190). Englewood Cliffs, NJ: Educational Technology Publicationa, Inc.

- Miller, J., & Seller, W. (1990). Curriculum perspectives and practice. Toronto, ON: Copp Clark Pitman, Ltd.
- Negroponte, N. (1996). being digital. Toronto, ON: Random House of Canada Limited.
- Noddings, N. (1995). Philosophy of education. Boulder, CO: Westview Press.
- Purcell, K. (1997). Towards a communication dialectic: Embedded technology and the enhancement of place. Sociological Inquiry, 67(1), 101-112.
- Rheingold, H. (1992, June). A slice of life in my virtual community [72 paragraphs]. Available FTP: [gopher://gopher.well.sf.ca.us:70/00/Community/virtual_communities92](ftp://gopher.well.sf.ca.us:70/00/Community/virtual_communities92)
- Richardson, L. (1994). Writing: A method of inquiry. In Denzin, J. & Lincoln, Y. (Eds.), Handbook of qualitative research (pp. 516-529). Thousand Oaks, CA: SAGE Publications, Inc.
- Romiszowski, A. (1997). Web-based distance learning and teaching: Revolutionary invention or reaction to necessity? In Khan, B. (Ed.) Web-based instruction (pp. 25-37). Englewood Cliffs, NJ: Educational Technology Publications, Inc.
- Schwandt, T. (1994). Constructivist, interpretivist approaches to human inquiry. In Denzin, J. & Lincoln, Y. (Eds.), Handbook of qualitative research (pp. 118-137). Thousand Oaks, CA: SAGE Publications, Inc.
- Shank, G., & Cunningham, D. (1996). Mediated phosphor dots: Toward a post-Cartesian model of computer-mediated communication via the semiotic

- superhighway. In Ess, C. (Ed.) Philosophical perspectives on computer-mediated communication (pp. 27-41). Albany, NY: State University of New York Press.
- Sherman, R. & Webb, R. (Eds.). (1988). Qualitative research in education: Focus and methods. London: The Falmer Press.
- Simonson, M. (1997). Distance education: Does anyone really want to learn at a distance? Contemporary Education, 68(2), 104-107.
- Student communities. [On-line]. Abstract from: Computer networking and scholarly communication in the twenty-first-century university. Suny Press. Available:
<http://www.missouri.edu/~wleric/cnsc21/student.html>
- Tapscott, D. (1998). growing up digital: The rise of the net generation. New York, NY: McGraw-Hill.
- Turkle, S. (1997). Life on the screen: Identity in the age of the internet. New York, NY: Touchstone.
- www.ibm.com interviews: Howard Rheingold. Mindshare. [On-line].
Available: http://www.ibm.com/stretch/Mindshare/rheingold_int.html
- Young, R. (1992). Critical theory and classroom talk. Bristol, PA: Multilingual Matters Ltd.

APPENDIX A

Questionnaire

Please answer the following questions as thoroughly as possible. The amount of space provided for answers is not meant to indicate the length of your responses - feel free to use as much space as you wish! [Note: You will need to copy the Consent Form, above, and this Questionnaire into a new email message before you will be able to fill in your responses.]

1. How many on-line courses had you taken before taking [course #]?

ANSWER:

2. How much experience did you have with computers and/or electronic communication before you enrolled in [course #]?

ANSWER:

3. How long did it take before you felt comfortable with the on-line format for [course #]?

ANSWER:

4. How many of the other students in [course #] did you know before you enrolled in it?

ANSWER:

5. What "activities" were there at the beginning of the course to help you become acquainted with the others taking it? [eg. sharing brief biographies with others; discussing hobbies or interests] Who initiated these activities?

ANSWER:

6. Please describe any activities or assignments that were designed to facilitate student interaction throughout the course [eg. group projects].

ANSWER:

7. With how many others in the course did you feel a connection, a sense of rapport? What were the contributing factors?

ANSWER:

8. If you did not feel a connection to anyone in the course, please explain why.

ANSWER:

9. How often did you communicate
a) with the whole group? ANSWER:

b) in a "sidebar" with one other student? ANSWER:

10. Were sidebars more comfortable than whole-group discussions? Please explain your answer.

ANSWER:

11. In what ways was your work affected by your relationship with the other students?

ANSWER:

12. Was it a course requirement that you post any of your writing or other course work for your fellow students to see, and if so, what type of work was it?

ANSWER:

13. How did you feel about sharing some of your course work on-line with others in [course #]?

ANSWER:

14. What aspects of your on-line experience in this course helped you meet its learning objectives?

ANSWER:

15. What factors do you think are most important for developing a sense of rapport or "community" among learners in an on-line course?

ANSWER:

16. Based on your experiences in [course #], would you enrol in another on-line course? Explain.

ANSWER:

17. Would you be willing to be contacted again for clarification or elaboration of the responses you have provided in this questionnaire?

ANSWER:

End of Questionnaire.

Thank you very much for your participation in this study!



University of Victoria

Human Research Ethics Committee

CERTIFICATE OF APPROVAL

Principal Investigators

Karen D. Clarke
Graduate Student

Department/School

**Communication and
Social Foundations**

Supervisor

Dr. M. Robertson

Co-investigator(s):

Title: *Exploring Student Interactions in a Computer-Mediated Communication Environment*

Project No.

98071

Start Date

16 Feb 1998

End Date

30 June 1998

Approval Date

16 February 1998

Certification

This is to certify that the University of Victoria Ethics Review Committee on Research and Other Activities Involving Human Subjects has examined the research proposal and concludes that, in all respects, the proposed research meets appropriate standards of ethics as outlined by the University of Victoria Research Regulations Involving Human Subjects.


J. Howard Brunt,
Acting Associate Vice-President, Research

This Certificate of Approval is valid for the above term provided there is no change in the procedures. Extensions/minor amendments may be granted upon receipt of "Request for Continuing Review or Amendment of an Approved Project" form.

Table of Coding Categories

97

SITUATIONAL CODES CATEGORY			
Code Keywords	Tom	Code Keywords	Simon
✓ · fluency · comfort level · confidence	• on-line format instant advantage	· orientation to learning & elec. learning	• taken many, many traditionally delivered corresp. courses - as a consumer of distance education I would love to see more alternatives out there for internet delivery
✓ · flexibility · approach to learning	• [course didn't have clear structure] which really helped guy like me - when I have to work, I work, etc.	· openness · orientation to learning	• had no problem with sharing course work on-line; would have preferred that all assignments and grades were totally public. You can learn almost as much from your classmates' efforts & grades • the point of the whole exercise is to learn
· flexibility	• hate to sit in classes with stuffy people where I have to be there at a set time	· process orientation	• many pros and cons for public posting of grades, etc., but when talking about contributions to learning/teaching, nothing better than examples of both good and bad
· product orientation ?	• I walked into that course with about as much negative attitude as you could get	product orientation process orientation	• some courses necessary evils in quest for degree - most important thing was surviving to the end, getting high enough grade to pass • other courses can be interesting, fun, enlightening in many ways [outside course content], and the mark, while satisfying, was only incidental to the whole experience and the knowledge gained
✓ · personal meaning	• one thing I hate about English is you have to write how the prof wants you to write, not how you feel like writing	· orientation to learning	• learning is a continual process in which cumulative knowledge enhances previously stored information
✓ · comfort level	• what is so cold about computers. They run hot for me, not cold Just because it is electronic has nothing to do with being impersonal	process	• "knowing" - use one space after a period, don't was new red sweaters with your whites, etc. • "learning" - a <u>process</u> that requires thinking, exploring and discovering seems

SITUATIONAL CODES CATEGORY

Code Keywords	Tom	Code Keywords	Simon
		collaboration • classmates as resource	to be much more enhanced when other people are incorporated to expand our own imaginations and knowledge • it seems that on your own you always overlook something that someone else uses routinely
✓ learning = practical • personal meaning	• most important part of learning is the practical side of all of it. When I learn something I actually do not feel much of an accomplishment ... learning process means nothing unless it has some meaning to my life. If I don't feel my education is practical and thus interesting I tend to ignore it	• orientation to learning	✓ I am mostly better than average student - too lazy to be a top level student
✓ fluency • comfort level • confidence	• the Web is a great tool for me. That is what it is. A tool. I can find my way around the web in seconds where I just sneeze a lot when I am in a library.	• classmates as resource	• I think that learning is always enhanced when others help to expand the different directions that we take when we explore any subject ✓ wouldn't it be nice if someone somewhere was working on this same topic and you could collaborate and send your drafts to each other for incorporating each others' thoughts?
✓ definitions of learning	• I know I have learned something when I remember how to do it later. When I use what I have learned and the theory works out. • There is another way ... that is more of a sensation kind of thing. I feel enlightened It is more of a relief kind of feeling because I have a feeling of frustration when I cannot grasp a concept that I desire to understand ... I will fight tenaciously to get to a level of understanding.		
✓ orientation to learning	• well motivated people with a great berth of experience always seem to do it for me. The hot shot prodigy was never my type to talk with. I like the people who earn their way with hard work.		

SITUATIONAL CODES CATEGORY

Code Keywords	Tessa	Code Keywords	Holly
<ul style="list-style-type: none"> product orientation 	<ul style="list-style-type: none"> I took the course because it was required, not because I wanted to make virtual friends 	<ul style="list-style-type: none"> comfort level 	<ul style="list-style-type: none"> everyone was very new to computers and the instructions on how to get on the listserv in the first place were confusing for some people

SITUATIONAL CODES CATEGORY

Code Keywords	Monica	Code Keywords	Brenetta
<ul style="list-style-type: none"> confidence communicating electronically 	<ul style="list-style-type: none"> I felt it was important that I was on the same wavelength of understanding as my classmates. After not studying for many years I was unsure how I would manage the course. As long as I felt we were communicating and confirming the material, I felt I could move on. 	<ul style="list-style-type: none"> isolation classmates as resource communicating electronically 	<ul style="list-style-type: none"> I live in a remote area and welcomed the opportunity for ongoing contact and discussion with my classmates
<ul style="list-style-type: none"> confidence 	<ul style="list-style-type: none"> It does take a little confidence to show others your thoughts and ideas 	<ul style="list-style-type: none"> classmates as resource 	<ul style="list-style-type: none"> It took a while for us to figure out how to best use the resource, and I know for myself, I underutilized the listserv as we also had group assignments - so I tended to send my thoughts to my group only - which in retrospect really limited my involvement in the class
		<ul style="list-style-type: none"> openness communicating electronically 	<ul style="list-style-type: none"> I felt fine about <u>sharing my work</u> - I was/am committed to utilizing the on-line capacity to my advantage. I really miss not having the ongoing contact and input that goes with attending class with a group - using email facilitated some of that process

SITUATIONAL CODES CATEGORY

Code Keywords	Eve	Code Keywords	Diana
<i>responsible for own learning</i> <ul style="list-style-type: none"> [re some students not answering emails] <p>I understood their position. I know that people have a lot of responsibilities. At times I found it was hard for me to find the time to write. I think it is good to be able to have the choice. We are all grown ups and are responsible for our own learning.</p>		<ul style="list-style-type: none"> There was an understanding of freedom of speech [on the listserv]. I was fine with that. 	

SITUATIONAL CODES CATEGORY

Code Keywords	Anne	Code Keywords	(name)
	<ul style="list-style-type: none"> I would consider myself a beginner as I did not use a lot of functions often enough to remember how to do them without following written instructions. I had not used any electronic communication before this course. 		

PERSPECTIVAL CODES CATEGORY

101

Code Keywords	Tom	Code Keywords	Simon
<p>characteristics of email liberation</p>	<p>this on-line thing is an interesting social interaction. People seemed to <u>open up</u> through e-mail where a face to face connection brings on hesitation</p>	<p>classmates as resource shared learning sharing work</p>	<p>as classmates we asked each other to <u>share</u> some of our assignments. Some were enlightening, some funny, ... All in all, very enlightening.</p>
<p>inadequacy / confidence sharing work</p> <p>shared learning</p>	<p>I have never shared any of my work with other people. I have a complex about people seeing my work</p>	<p>feeling connected overcoming isolation</p>	<p>the extra communication [email] removed the usual sense of <u>isolation</u> and "working in a vacuum" feeling that is a typical integral part of a correspondence course. So, I think it was important to the overall experience, but perhaps not so valuable when just looking at pure learning</p>
<p>classmates as resource</p> <p>R/S?</p>	<p>I was patient about what people said about my work. This differs greatly from my "in person" mood. when I am in person, I "react" and then "act". That is just the way I problem solve ... when someone is critical of me, my first reaction is to go on the offense ... a protection mechanism.</p>	<p>feeling connected value of off-task talk removing isolation</p>	<p>emails about course work were devoted specifically to assignment questions and student drafts. Whereas the bb was about anything that anybody wanted to talk about. In my opinion, the emails contributed the most to the overall learning, while the bb contributed to the overall experience in that it helped more to <u>remove the isolation</u>. I am not sure that just a few emails back and forth strictly related to assignments would have made us feel like we were all working together as a group or a class towards a common goal (learning how to be better writers)</p>
<p>"personal touch"</p>	<p>there was a very personal touch to the course ... It gave me real flexibility and that helped. I read my material, read the web page and went to work.</p>	<p>characteristics of email empowerment</p>	<p>it occurs to me that, in particular, some of the less vocal people in actual physical contact situations might actually become better known through their written words than would ordinarily be the case.</p>
<p>technical issues / access</p>	<p>the electronic thing was very difficult on the class. The first 2 weeks were spent trying to help others get e-mail going at all or trying to peel their boyfriends or husbands off the computer so they could use it.</p>	<p>char of email encourage participation anonymity? empowerment?</p>	<p>average and marginal students are drawn out better in an on-line environment than in a traditional classroom ... more effort needs to be spent on encouraging participation from the quieter students. Perhaps a requirement for everyone to write a weekly couple of paragraphs about their weekend.</p>

PERSPECTIVAL CODES CATEGORY

102

Code Keywords	Tom	Code Keywords	Simon
<p>feeling connected</p>	<p>• Intro bios exercise was very well done by the prof - great way to make people feel connected and relaxed. Though I wondered about [the prof] posing as one of the students to see inside!</p>	<p>classmates as resource (S)</p>	<p>• even if a person sits down at a computer with the manual for a new program, you can learn many new things and techniques, but it seems that on your own you always overlook something that someone else uses routinely</p>
<p>• characteristics of email - equal participation</p>	<p>• e-mail forces all people to participate equally. In a classroom there is always the little quiet lamb that sits in the corner and never says their bit and the loud mouth that just will not stop putting their foot in their mouth</p>	<p>• rules (R/SS)</p>	<p>• no explicit rules for interacting in course • overall, there shouldn't be any rules, it's much more natural that way; after all, how can you get passionate when there is no conflict?</p>
<p>• characteristics of email - deliberateness • classmates as resource</p>	<p>• with e-mail I could sit and think about what they said and then I would take it under advisement or reject it. You learn quick that people are not saying it to point out that you're stupid or out of the loop, just that you need a bit of polish.</p>	<p>• trust feedback revealing self (R/SS)</p>	<p>• It is the input from others that helps to better develop our own ideas, and if we don't trust the information they provide we won't accept their input • part of building that trust is to communicate so people can see what you are all about</p>
<p>• char. of email - efficiency - deliberation</p>	<p>• I think people are more to the point with email • it is an interesting medium. It takes a bit of effort to type and people tend to keep it to a minimum and frank. It is a time thing. • I have gotten into trouble many times in a regular classroom. If anything the Internet/e-mail kept me in check and my arguments lucid</p>	<p>• personal meaning (R/SS)</p>	<p>• [are norms and conventions of communication in our culture the same regardless of the medium?] • yes, there is nothing like personalizing something to make it more relevant. Getting to know someone better makes it much more personal. Isn't that why mediators try to reform criminals by introducing them to their victims?</p>
	<p>• I have sent or posted messages that I wish I could retract as I was not being myself - I like to joke around; my humour is sometimes taken seriously • you can get that reaction in all forms [of communication], though I think people are more to the point with email</p>		

PERSPECTIVAL CODES CATEGORY

<i>Code Keywords</i>	Tom	<i>Code Keywords</i>	Simon
Confidence sharing work	• by presenting work to the group it opened me up for my weakness (English). I had to battle my feeling of being much lower than average		

shared learning (vulnerability)

PERSPECTIVAL CODES CATEGORY

Code Keywords	Tessa	Code Keywords	Holly
electronic barriers	bulletin boards and chat rooms were initiated by the prof but I didn't use them. I found it difficult to "get to know" classmates on-line	classmates as resource .shared learning	• I feel that my work reflected much of what I had learned through dialogue with my fellow students. My knowledge and understanding of the course requirements were greatly enhanced by the opportunity to have group discussions through e-mail.
electronic barriers	• I don't believe real rapport was possible on a computer. Conversations seemed forced without eye contact, body language, etc. to guide	.shared learning	[re meeting course objectives] the ability to see the many different responses we had to a question, and to consider how each of us came to our conclusions.
.classmates as resource .feedback -trust	• my essays rarely changed because of <u>feedback</u> from fellow students	.shared learning.	as the course progressed I began to notice that many of our initial responses to questions became more alike
.flexibility (char. of email)	• I don't think the on-line aspect facilitated meeting the course objectives. It just made the class more <u>flexible</u> ... I don't think I learned anything significant with regard to college composition that I didn't already know.	.char. of email - directness	• I think that people are more <u>focused</u> when they write something down (e-mail) while discussions in a classroom setting can easily fall off topic, there is a greater incidence of interruption, misinterpretation, etc. that can hinder the progress of group activities
.efficiency	• I am not shy, but I enjoyed on-line because our group discussions were always on topic, so we didn't waste a lot of time	.char. of email - "meaningful conversations"	• [re answers becoming more alike among group members - would that have happened in regular classroom?] - probably not. people are more focused when they write something down, while discussions in a classroom setting can easily fall off topic, there is a greater incidence of interruption, misinterpretation, etc.

PERSPECTIVAL CODES CATEGORY

Code Keywords	Code Keywords
<p>Tessa</p> <ul style="list-style-type: none"> • my conversation was forced because the prof required us to post on the bulletin board once a week but didn't give us anything to talk about. That's like giving an in-class presentation without a topic. What was I supposed to say? You can't have a dialogue with 25 people at the same time. <p>•char. of email - "meaningful conversations"</p> <ul style="list-style-type: none"> • My communication with individual classmates by e-mail was forced but it was easier to have something to say to a specific individual. Communication was casual but I certainly didn't continue it after the course was over 	<p>Holly</p>
<p>•char. of email - anonymity - empowerment</p> <ul style="list-style-type: none"> • It's difficult for me to judge whether I'm the same person in text as I am in reality. One good thing is the <u>partial anonymity of e-mail</u> lets you say things you might not otherwise say and not have to deal with others' immediate reactions. I usually say what I think anyway so I don't think my communication style changed too drastically. 	<ul style="list-style-type: none"> • I enjoyed our on-line because our discussions were always on topic, so we didn't waste a lot of time
	<p>•technical issues</p> <ul style="list-style-type: none"> • everyone was very new to computers and the instructions on how to get on the listserv in the first place were confusing for some people

PERSPECTIVAL CODES CATEGORY

Code Keywords	Code Keywords
<p>Monica</p> <p>-char. of email -electronic silences</p> <ul style="list-style-type: none"> it was difficult to tell at times if your messages were getting across because you didn't receive answers right after posting messages sometimes frustrating when I asked a question and no one responded. As I used the computer at work I had limited time to respond and if I wasn't at work when someone else responded, I may have left them with the same frustration 	<p>Brenetta</p> <p>-instructor's role</p> <ul style="list-style-type: none"> instructor played an important role in connected the class with her active participation in the process
<p>*putting a face on classmates</p> <p>-char. of email - "stripped communication"</p> <ul style="list-style-type: none"> it would have been nice to have a picture of group members to get a better sense of who they were I feel I know someone's personality better if I have an image to attach them to. Hearing their voice gives me another image. It's hard to get inflection or personality in a typed message. The images I developed were based on the personal messages they sent. 	<p>-commitment to participate</p> <ul style="list-style-type: none"> I think that an individual commitment to participating in discussion / process is key
<p>-char. of email -multiloguing</p> <ul style="list-style-type: none"> whole group discussions less comfortable because they gave more general feedback so it was difficult sometimes to follow the "conversation" 	<p>-feedback -instructor's role</p> <ul style="list-style-type: none"> [it took us a while to figure out how to best use the resource] frequent use and comments on the readings fostered participation. [Prof] also had a significant role in facilitating this process with comments, ideas, frequent <u>feedback</u>
<p>-feedback</p> <ul style="list-style-type: none"> I appreciated [group members'] <u>feedback</u> and affirmation. It helped me to understand the work. 	<p>-feedback</p> <ul style="list-style-type: none"> <u>feedback</u> was useful and positive. I was writing about an area of nursing that the others had limited or no knowledge about it did cause me to reevaluate a couple of things and that was good
<p>-char. of email -deliberation</p> <ul style="list-style-type: none"> easier to clarify my thoughts before posting them [with e-mail] 	<p>-sharing work -shared learn'g</p> <ul style="list-style-type: none"> I felt fine about <u>sharing my work</u> - I was/am committed to utilizing the on-line capacity to

PERSPECTIVAL CODES CATEGORY

<i>Code Keywords</i>	Monica	<i>Code Keywords</i>	Brenetta
		feeling connected	my advantage. I really miss not having the ongoing contact and input that goes with attending class with a group using email facilitated some of that process
<i>- putting a face on classmates</i>	I am a visual or auditory person. I feel I know someone's personality better if I have an image to attach them to. Hearing their voice gives me another image. It's hard to get inflection or personality in a typed message.		

PERSPECTIVAL CODES CATEGORY

Code Keywords	Code Keywords
<p>Carole</p> <p><i>feedback</i></p> <ul style="list-style-type: none"> once I sent messages out and started receiving responses, I was more comfortable with the format 	<p>Eve</p> <p><i>technical issues</i></p> <ul style="list-style-type: none"> had to work from a computer at work and I was only here a few days a week, so I could not be in contact all the time and had only limited time at work to communicate with others. A few times I came in on my days off to see if the instructor had posted any new info.
<p><i>char. of email -deliberation</i></p> <ul style="list-style-type: none"> Although I had more contact with people in my small group, I felt comfortable discussing things with all members of the course through this format. I write much more easily than I talk in group situations but sending an e-mail to the large group was not like talking in a large group. I had lots of time to compose and think about my response before sending it and could respond or not as I wished to 	

RELATIONSHIP/SOCIAL STRUCTURE CODES CATEGORY

Code Keywords	Tom	Code Keywords	Simon
<ul style="list-style-type: none"> electronic relationships 	<ul style="list-style-type: none"> people seem to open up through e-mail where a face to face connection brings on hesitation 	<ul style="list-style-type: none"> collaboration 	<ul style="list-style-type: none"> the format of the assignments was to do a draft and then interact with assigned partners by submitting the drafts to them for comments. The final result was a much better assignment and a feeling of <u>collaboration</u> when it was completed
<ul style="list-style-type: none"> electronic relationships trust 	<ul style="list-style-type: none"> there were times when classmates would go out of their way to contact each other to read over essays. They even formed relationships with people to the point where they <u>trusted</u> those people over the people in their new group 	<ul style="list-style-type: none"> nature of communication -off-task talk 	<ul style="list-style-type: none"> there was also a bulletin board where we routinely "chatted" about whatever we felt like talking about
<ul style="list-style-type: none"> 'presence' of prof audience meta-awareness?? 	<ul style="list-style-type: none"> Many times people would put their comments and then what they figure [the prof] would say ... sometimes with chilling correctness 	<ul style="list-style-type: none"> commitment to participate 	<ul style="list-style-type: none"> there were a couple of students that didn't bother to say much on the bb, and coincidentally we ran out of assignments before I was scheduled to be a partner
<ul style="list-style-type: none"> equal participation 	<ul style="list-style-type: none"> for sure people were not willing. Those were centered out by the groups and the slack was taken up by the rest. If someone fell by the side, they were contacted by the group and the group was contacted in general about the lack of content 	<ul style="list-style-type: none"> nature of comm. -off-task talk 	<ul style="list-style-type: none"> discussions elsewhere were primarily related to assignments and feedback on assignment drafts. The bb was wide open, people talked about whale watching, climbing mountains, pimps & prostitutes and the occasional jokes - some even a bit risqué. Nice and open, I liked the concept.
<ul style="list-style-type: none"> 'presence' of prof audience 	<ul style="list-style-type: none"> though I wondered about the prof posing... the class seemed a bit older than you would expect ... the people were well experienced in life and what it had to offer. The mature nature of the discussions was very apparent 	<ul style="list-style-type: none"> nature of comm. -personal sharing electronic relationships 	<ul style="list-style-type: none"> [re connecting with classmates] some people bared their souls much more than might happen with a brief or preliminary contact. It's surprising how members of a group will get caught up in the moment and say/do things they might ordinarily feel too restrained to get into. I had a sense that was developing in our class

RELATIONSHIP/SOCIAL STRUCTURE CODES CATEGORY

110

Code Keywords	Code Keywords
<p>Tom</p> <p><i>-electronic relationships</i></p> <p><i>-personal sharing</i> <i>off-task talk</i></p> <p><i>one-to-one vs one-to-many</i></p> <ul style="list-style-type: none"> it helped that [the prof] had "Get to know each other" as the first essay where we had to interview by e-mail another person in the group. This had the most astounding effect on people. I know that if I wanted to send some e-mail to the person I interviewed right now, she would contact me and we could continue a dialogue by e-mail 	<p>Simon</p> <p><i>-input from others</i></p> <p><i>-electronic relationships</i></p> <ul style="list-style-type: none"> perhaps I would put more credence to the input and remarks from someone that I know rather than a total stranger. I think that as we get to know people better we put more value in their opinions, or not. In live classroom settings there are usually some people whose views I might seek out and others that I might ignore. The on-line communication may help to apply these standards to distance education. thinking back, I believe that I indeed put more effort into the critiques of my classmates that I knew better, than the ones that I didn't. And the only way I knew some of them better was in the emails and in the bb activity.
<p><i>nature of communication</i></p> <p><i>-openness</i></p> <ul style="list-style-type: none"> the interactions were sincere and to the point. When people felt jipped they said so. I listened to many people complain about their marks 	<p><i>-rules</i></p> <ul style="list-style-type: none"> no explicit rules. We were reminded that the postings were public and available to anyone on the internet who wanted to have a look. On a personal level, I sometimes kept my rednecked opinions to myself, sometimes I let them show a bit. Overall I think that there shouldn't be any rules, it's much more natural that way. After all, how can you get passionate when there is no conflict?
<p><i>nature of communication</i></p> <p><i>-off-task talk</i></p> <p><i>-rules</i></p> <ul style="list-style-type: none"> [re posting a contentious email on a touchy subject] Funny thing, there were more posted to me personally than on the news group. The ones on the news group went straight for my throat and the ones I got personally were all very positive, down right supportive 	<p><i>nature of communication</i></p> <p><i>-removing isolation</i></p> <ul style="list-style-type: none"> the emails contributed to the overall learning, while the bb contributed to the overall experience in that it helped remove the isolation

RELATIONSHIP/SOCIAL STRUCTURE CODES CATEGORY

Code Keywords	Code Keywords
<p>Tom</p> <p>nature of Commun. <i>off-task talk</i></p> <ul style="list-style-type: none"> those that disagreed decided to humiliate, intimidate, get back at or correct me in a public way. The ones that supported me did not want to stir any more up but wanted to tell me that free speech is all of ours to have. 	<p>Simon</p>
<p>Social rules <i>2/20</i></p> <ul style="list-style-type: none"> once you got to know what the bounds were or if there were any, you could shoot from the hip and not worry. you can tell very quickly how far you can go. Many people do a poke to see if you have a funny bone and if you respond ... etc. It does not take long to figure if people are having fun at it or not. If they have problems or not. not much happened when someone overstepped the bounds. There was no real outlandish stuff from what I could see. I had an ongoing argument with one classmate ... in the end, we agreed to disagree <i>2/4</i> 	<ul style="list-style-type: none"> it would have been nice to <u>put a face on our classmates.</u>
<p><i>nature of communication</i> <i>sidebars</i> <i>personal sharing</i></p> <ul style="list-style-type: none"> as the course progressed and each person felt more at ease, there were more and more personal sidebars. There were many feelings about the course exchanged by the end. People were feeling very passionate about their work and their marks 	<ul style="list-style-type: none"> trust feedback revealing self it is the input from others that helps to better develop our own ideas, and if we don't trust the information they provide, we won't accept their input. Part of building that trust is to communicate so people can see what you are all about.
<ul style="list-style-type: none"> small groups are better in this kind of thing. [The prof] had about 15 and a drop rate of 5 (?) The dynamics of the group were great with this ratio. 	
<p>Social rules <i>2/4</i></p> <ul style="list-style-type: none"> there were <u>social rules</u> just as there are in life. You don't spit in others' face and you don't ignore your e-mails when they are a portion of the course. People were also 	

111

RELATIONSHIP / SOCIAL STRUCTURE CODES CATEGORY

<i>Code Keywords</i>	Tom	<i>Code Keywords</i>	Simon
<p><i>electronic silences</i></p>	<p>feeling insecure and felt they had to stay on top of it all. They stayed in contact and when one person did not answer an e-mail, you got mail from those wondering where that person had gone. The women of the group were better at staying in contact.</p>		
<p><i>nature of communication</i></p>	<p>The personal interaction was great People got right into the course and were having a blast on-line in the end.</p>		

RELATIONSHIP/SOCIAL STRUCTURE CODES CATEGORY

Code Keywords Tessa	Code Keywords Holly
<p>electronic relationships ^{instructor's chat}</p> <ul style="list-style-type: none"> bulletin boards and chat rooms were initiated by the prof but I didn't use them. I found it difficult to "get to know" classmates on-line 	<p>• equal participation =</p> <ul style="list-style-type: none"> we took turns getting the ball rolling [for assignments]
<p>electronic relationships</p> <ul style="list-style-type: none"> I honestly don't think on-line rapport can be as worthwhile as actual face to face relations between students virtual communities can't really be communities 	<p>• support</p> <ul style="list-style-type: none"> there were 5 of us and I felt connected to them all ... there was a sense of support and team-work, because we all participated but at times we each picked up the slack and covered for others who were behind or held up by family or other distractions
<p>• nature of commu. • "putting a face on classmates"</p> <ul style="list-style-type: none"> I feel that communication on-line lacks the intimacy of real conversation but at the same time is so instantaneous that it inevitably becomes inane. If it had been possible to have at least one in-person meeting with my classmates it might have established a real rapport which could be continued on-line 	<p>• nature of communication - sidebars one-to-one</p> <ul style="list-style-type: none"> sometimes it was nice to have a one-to-one to clarify anything that didn't seem clear, or to compliment someone on their work or their thoughts. It was a nice way to boost someone who was losing interest or having difficulty
	<p>• equal participation =</p> <ul style="list-style-type: none"> [re taking turns as leader] it was never formalized, it just worked out that way and we each put in equal amounts of effort to get the activities done, we each just took a turn at initiating the next exercise (not always in the same order, people just did it when it was convenient for them). We didn't have any member who didn't pull their weight
	<p>• support • mutual experiences</p> <ul style="list-style-type: none"> I think because we were all returned to school after a long time away from the studies, we became a cohesive, <u>supportive</u> group almost immediately ... we were all so intimidated at first so the group was a great source of comfort

RELATIONSHIP/SOCIAL STRUCTURE CODES CATEGORY

114

<i>Code Keywords</i>	Tessa	<i>Code Keywords</i>	Holly
		<p><i>equal participation</i></p> <p><i>=</i></p>	<p>it is much more evident in on-line studies when an individual has offered nothing to the group, while in person people may sit back and not contribute at all. It's probably much easier for shy people to interact on-line than in person</p>

RELATIONSHIP/SOCIAL STRUCTURE CODES CATEGORY

Code Keywords	Monica	Code Keywords	Brenetta
collaboration	<ul style="list-style-type: none"> there were several activities that we worked on in smaller groups. We would post all of our answers and someone would compile the information to one posting for the entire group 	support	<ul style="list-style-type: none"> we were in fairly regular contact and provided each other with social support in addition to course related support - e-mail facilitated this in a way that teleconferencing does not provide the opportunity for
electronic relationships nature of comm - whole group vs sidebars = one-to-one	<ul style="list-style-type: none"> the smaller group was easier to get to know a we communicated more often [than the larger group]. It seemed the other smaller groups knew each other in a similar way 	collaboration	<ul style="list-style-type: none"> I really still worked on my own, but we would discuss readings as a class or more commonly as a small group, and this facilitated my understanding of the materials. It was useful to hear varied perspectives on the same materials - provided depth to the learning
= equal participation	<ul style="list-style-type: none"> we didn't assign a leader to the groups so I felt at times there were unofficial leaders which wasn't necessarily a bad thing as it got the work done but there was opportunity for some not to participate at all 	removing isolation	<ul style="list-style-type: none"> it was reassuring to hear about others' struggles and breakthroughs with the materials, and made me feel like I was not working in <u>isolation</u>.
freedom of speech rules?	<ul style="list-style-type: none"> you cannot discredit or undermine anything that is posted. It is important to receive feedback in a non-judgemental way. Participants should feel free to post their opinions and have acceptance 	nature of comm. all-to-all sidebars	<ul style="list-style-type: none"> from what I remember, the bulk of communication quickly went to the groups, and I do not remember a lot of messages that went over the listserv. I would certainly do it differently now that I have done a couple of courses this way.
social rules	<ul style="list-style-type: none"> * some people who used their work computers may not have been at work for a week so sometimes we didn't know to go ahead without them or not 	support collaboration	<ul style="list-style-type: none"> the social <u>support</u> was not essential, but added to the experience of the class - and facilitated our desire to participate together in the learning.... It was similar to having a couple of friends in class that you sit with - it adds something to the experience that you don't always get if you sit alone
nature of comm.	<ul style="list-style-type: none"> we would send messages like "are you 		<ul style="list-style-type: none"> I questioned the group's commitment to the

RELATIONSHIP/SOCIAL STRUCTURE CODES CATEGORY

<i>Code Keywords</i>	Monica	<i>Code Keywords</i>	Brenetta
Social rules	<p>there?" Also there were comments like "I am willing to post the next response, does anyone mind?" It would have been less uncomfortable and more efficient if we had decided each person would take turns on a rotating basis to post</p>	<p>in -electronic relationships</p>	<p>process, and realized that the others likely did not have the time or were too busy worrying and focused on completing their own work to have the energy to comment on mine</p>
social rules	<ul style="list-style-type: none"> I don't remember any explicit rules. We didn't run across anyone who did this. People on the listserv seemed appreciative of others' efforts. 	<p>-mutual experiences</p>	<p>[factors contributing to sense of rapport] the desire to participate, commonality of our experiences (we were all mothers or soon to be, many working in addition to going to school), and, I think, freedom to express our thoughts in an uninterrupted forum that provided challenge, encouragement and <u>feedback</u></p>
-"putting a face on classmates"	<ul style="list-style-type: none"> The images I developed were based on personal messages they sent like information about their family ... Those that used poor spelling/grammar gave me another image 	<p>nature of communication</p>	<ul style="list-style-type: none"> if I was not comfortable saying something to the group, it encouraged me to consider "why" and reconsider my position in a way that fostered my abilities to work on my skills at open, non threatening communication
-electronic relationships	<ul style="list-style-type: none"> I didn't feel a connection to those that didn't participate 	<p>.isolation -mutual experiences</p>	<ul style="list-style-type: none"> it was reassuring to hear about others' struggles and breakthroughs with the materials, and <u>made</u> me feel like I was not working in <u>isolation</u>
		<p>-nature of communication</p>	<ul style="list-style-type: none"> from what I remember, the bulk of communication quickly went to the groups, and I do not remember a lot of messages that went over the listserv. I would certainly do it differently now that I have done a couple of courses this way.

RELATIONSHIP/SOCIAL STRUCTURE CODES CATEGORY

Code Keywords	Code Keywords
<p>Carole</p> <p>social rules ?</p> <ul style="list-style-type: none"> just getting in touch with members of my small group was interesting. We notified each other of our work schedules, holidays coming up, etc. so we knew when to expect responses from each other 	<p>Eve</p> <p>electronic relationships</p> <ul style="list-style-type: none"> some students did not routinely answer my personal emails due to difficulties with their email or work felt comfortable with one other member of small group just because she responded to my emails
<p>-shared learning input from others</p> <ul style="list-style-type: none"> [re relationship w/ other students & course work] insights into my topic and insights into their topics was gained. Other people presented their points of view freely in the hope that it would help me in my assignment 	<p>-electronic relationships - audience</p> <ul style="list-style-type: none"> [re sidebars vs whole group discussions] you felt you knew who you were talking to and it was easier to be frank since you knew the instructor was not reading the personal emails
<p>- mutual experiences - support</p> <ul style="list-style-type: none"> [what would cause you to want to respond to one person over another?] common concerns and interests: busy schedules and upcoming holidays.... One person in my small group shared her problem with a personal crisis involving a family member, most of our group responded to her to show her our empathy and <u>support</u> 	<p>- personal sharing</p> <p>one-to-one v one-to-many</p> <ul style="list-style-type: none"> [re developing sense of community] to be able to be in small groups and have people's personal emails
<p>- social rules respect? - nature of comm. - openness sharing?</p> <ul style="list-style-type: none"> common courtesy and common sense seemed to be the rule. I don't believe anyone breached the rules - with the e-mail format you could be as open or closed with information as you liked. Offers of opinions on other people's topics were pretty general because we did not know details about each others' articles so it was often stated "I may be off base here, but ..." or "this might not be along the lines of your paper, but ..." so we could take it or leave it if the suggestions were not appropriate 	<p>- electronic relationships - 'presence' of prof audience</p> <ul style="list-style-type: none"> [re sidebars] you felt you knew who you were talking to and it was easier to be frank since you knew the instructor was not reading the personal emails

RELATIONSHIP/SOCIAL STRUCTURE CODES CATEGORY

118

Code Keywords	Code Keywords
<p align="center">Carole</p> <ul style="list-style-type: none"> • currently taking another course [but not on-line]. Very frustrating without the on-line component. My interest in the course material has dropped dramatically. I miss the input from other course members. 	<p align="center">Eve</p> <ul style="list-style-type: none"> -equal = participation (rule?) • I did not feel that everyone contributed. A lot of people had problems getting connected to email
<p>electronic relationships</p> <ul style="list-style-type: none"> • [re first message sent out] unsure of how much personal information to include. Started getting back some detailed personal stuff from other people and began to open up more 	<ul style="list-style-type: none"> • mutual experience • [re importance of on-line communication] I just felt connected and felt that other people were going through the same problems I was

RELATIONSHIP/SOCIAL STRUCTURE CODES CATEGORY

119

Code Keywords	Code Keywords
<p>Diana</p> <ul style="list-style-type: none"> - collaboration - input from classmates • my initial workshop student feedback I incorporated in my assignment, due to my lack of confidence in my English, and I failed the assignment. I then viewed my fellow students not as English experts, but as equals. I knew then I had to pass on my own merits not by getting corrections through workshops 	<p>Anne</p> <ul style="list-style-type: none"> - feedback <i>one-to-one</i> - electronic relationships - intimidation <i>solitary & anonymous</i> • As everyone is on different shifts I learned that we had to work through the whole list and present our thoughts for <u>feedback</u> from the others. We then combined our group thoughts for presentation to the listserv. I like this as we could feel free to toss our ideas around in a small group (maybe it felt less intimidating??) before presenting them for the instructor and the rest of the class to read
<ul style="list-style-type: none"> - support • we <u>supported</u> each other towards the end of the course by sharing internet addresses 	<ul style="list-style-type: none"> - personal sharing <i>off task talk</i> - support <i>putting a face</i> - feedback • a little bit of personal sharing helps me to visualize the person on the other end of the screen. Good communication skills - <u>clarification</u> of my ideas and <u>reflective feedback</u> as well as a sense of <u>support</u> for each other when we're having difficulty grasping a concept or feeling overwhelmed
<ul style="list-style-type: none"> - removed isolation • I enjoyed the interaction via the electronic mail and internet. This forum provided distance education with a sense of classroom experience 	<ul style="list-style-type: none"> - electronic relationships - intimidation <i>audience</i> • I don't like big groups to start with - I feel intimidated in a crowd of people whom I don't know so talking one-on-one feels less threatening - a little easier to share thoughts and ideas when I sense that <u>only one person is going to read it</u> - gives more of a sense of privacy although this is probably a false sense.
<ul style="list-style-type: none"> - feedback • the <u>feedback</u> from the instructor was helpful. The classmate feedback was food for thought 	
<ul style="list-style-type: none"> - nature of commun. • there was an understanding of freedom of speech. I was fine with that 	

RELATIONSHIP/SOCIAL STRUCTURE CODES CATEGORY

<i>Code Keywords</i>	Meredith	<i>Code Keywords</i>	name
-electronic relationships	<ul style="list-style-type: none"> I ended up in a group where I knew one person prior to the course. We are friends outside of the course as well and did discuss nursing issues over the phone more often than on line. She was the only person I felt any connection to. There seemed to be a separation of students into smaller groups within the group we were placed into by the school 		
-social rules -collaboration	<ul style="list-style-type: none"> I felt at times that the group was not very cohesive and that we seemed to pair off into smaller groups; this made it difficult when it came time to post things to the whole class that were supposed to have come from our smaller group. At times some of the group had not finished readings or others would read ahead and go ahead and post answers to the larger group without consulting the rest of the group 		
-support	<ul style="list-style-type: none"> the other nurses are very <u>supportive</u> and empathetic when responding to listing / reading 		

APPENDIX D

Coding Categories

SITUATIONAL CODES

fluency with computers
 comfort level
 flexibility
 utilitarian approach to educ.
 product orientation (re educ)
 process orientation
 openness
 feelings of inadequacy
 personal meaning
 definition of learning

 confidence
 isolation
 classmates as resource
 "responsible for own learning"
 outside responsibilities

PERSPECTIVAL CODES

technical issues
 shared learning

 CHARACTERISTICS OF EMAIL
 ♦ permanence
 ♦ deliberateness
 ♦ electronic silences
 ♦ liberating effect
 ♦ directness
 ♦ "stripped" communication
 ("put a face on classmates")
 ♦ efficiency
 ♦ "uninterrupted forum"
 ♦ empowerment
 ♦ "meaningful conversations"
 ♦ anonymity
 ♦ equality

RELATIONSHIP/SOCIAL
STRUCTURE CODES

RULES
 ♦ "social rules"
 ♦ equal participation
 ♦ answering e-mails
 ♦ freedom of speech
 ♦ "chatting"

 TRUST
 ♦ personal sharing

 SUPPORT

 AUDIENCE
 ♦ presence of prof

 COLLABORATION
 ♦ input from others
 ♦ mutual experiences
 ♦ instructor's role

 NATURE OF COMMUNICATION
 ♦ off-task talk
 ♦ "put a face on classmates"
 (stripped communication)
 ♦ one-to-one vs. one-to-many
 communicatoin

APPENDIX E

Sample Data

At 12:18 AM 3/14/98 -0800, you wrote:

>Hi Karen, here is some clarification

>

>

>>>ANSWER:

>> I liked the format immediately, but there was some difficulty for some

>>students to subscribe to listserv at first.

>

>Do you think this impeded your ability to get to know them, and their
>ability to get to know you? No, I think that everyone was very new to
computers and the instructions on how to get on the listserv in the first
place were confusing for some people. The confusion only lasted a week or so.

>

>

>

>>We took turns getting the ball rolling.

>

>Who decided whose turn it would be, or was it ever formalized?

>No, it was never formalized, it just worked out that way and we each put in
equal amounts of effort to get the activities done, we each just took a turn
at initiating the next exercise(not always in the same order, people just
did it when it was convenient for them. We didnt have any member who didnt
pull their weight.

>

>

>>>ANSWER:There were five of us

>

>Do you mean in the whole class, or in a discussion group made up of members
>from the larger class?

>Our discussion group had five members. The class had about 40 or so in total.

>

and I felt connected with them all...there was

>>a sense of support and team-work, because we all participated but at times

>>we each picked up the slack and covered for others who were behind or held

>>up by family or other distractions.

>

>How long did it take before this sort of mutual support began to be evident?

>I think because we were all returning to school after a long time away from
the studies, we became a cohesive, supportive group almost immediately..we

common backgro

wee all so intimidated at first so the group was a great source of comfort.

>

>

>> As the course progressed I

>>began to notice that many of our initial responses to questions became more

>>alike as we went along. That was neat to see it all come together

>

>This is very interesting! There must have been a tremendous sense of trust

>and mutual respect among you and your classmates for this to have occurred.

>Do you think the same sort of phenomenon would have occurred in a regular

>classroom context?

Probably not. I think that people are more focused when they write something down(e-mail) while discussions in a classroom setting can easily fall off topic, there is a greater incidence of interruption, misinterpretation etc that can hinder the progress of group activities. It is much more evident in on-line studies when an individual has offered nothing to the group, while in person people may sit back and not contribute at all. Its probably much easier for shy people to interact on-line than in person. On-line if you question something that someone has written, you can do so without hurting or offending, because there is no tone or look or sigh etc. I am not shy, but I enjoyed on-line because our group discussions were always on topic, so we didnt waste alot of time.

>

>> I have two young children(2 and 5), I have been

>>out of school for ten years, never having had a great mark in college, and I

>>got 85% for a final mark in this course!

>

>What an excellent result! Have you maintained contact with your classmates

>since the course's completion? It occurs to me that you have created among

>you an electronic network that could be very valuable both for your

>professional life and your personal one.

>Yes I have kept in touch. Its great!

>

>>On-line gave me the

>>ability to work at the times that I had available-10pm to midnight!

>

>Ahhh, yes ... this I understand VERY well. :-) I choose the late night

>hours for my work also - no phones ringing or other distractions.

>

>Was 320 part of a program that you are taking and will you be taking others?

>It was part of the BSN postRN program. I will be taking other courses, but perhaps ones with less of a nursing focus. Its time for a real change!

>

>Good luck in your studies Karen. What are you hoping to do when you finish your Masters? This was fun. I hope someone looks seriously at your study and gets on with more on-line courses. Take care, ~~Someone~~

>

>on-line course?

First I want to reiterate that while the bulletin board did the job, I feel that an email list would have been better. Having said that, the extra communication removed the usual sense of isolation and "working in a vacuum" feeling that is a typical integral part of a correspondence course. So, I think that it was very important to the overall experience, but perhaps not so valuable when just looking at pure learning.

>

>Was the nature of the bb discussions typically different from discussions elsewhere or were they about the same?

Discussions elsewhere were primarily related to assignments and feedback on assignment drafts. The bulletin board was wide open, people talked about whale watching, climbing mountains, pimps & prostitutes and the occasional jokes--some even a bit risque. Nice and open, I liked the concept.

>

>>I felt like a fellow classmate with almost everyone.

>

>What contributed to this?

Some people bared their souls much more than might happen with a brief or preliminary contact. It's surprising how members of a group will get caught up in the moment and say/do things they might ordinarily feel too restrained to get into. I had a sense that some of that was developing within our class.

>

>

>>>ANSWER:

>>I felt that I knew my "intro" classmate better than most of the others

>>because of the extra direct correspondence that I had with her where we

>>told each other all about ourselves.

>

>Would you say, then, that if you had known more about your classmates not

>just as students but as people you would have felt a stronger connection to

>some of them? If so, why do you think that would be important?

>

Perhaps I would give more credence to the input and remarks from someone that I know rather than a total stranger. I think that as we get to know people better we put more value in their opinions, or not. In live classroom settings there are usually some people whose views I might seek out and others that I might ignore. The online communication may help to apply these standards to distance education.

>

>

>>I had no problem with that, actually I would have preferred that all

>>assignments and grades were totally public. You can learn almost as much
>>from your classmates efforts and the corresponding grading marks and
>>remarks as from your own submissions. After all the point of the whole
>>exercise is to learn.

>

>For many students, much of their learning (right from the very beginning)
>has been fairly private in that only the teachers see and evaluate their
>work. This is one reason that I believe many people resist the on-line
>format even though it otherwise provides a more convenient mode for
>learning. I agree with you that learning from peers can be extremely
>valuable, but it is still foreign and, therefore, risky for many. I have to
>keep reminding myself of that!

I agree, and I suppose there are many pros and cons on whether or not students should have their successes and failures trotted out for all to see. But when we are talking about contributions to learning/teaching, there is nothing better than examples of both good and bad. I found it very valuable to review the graded work of my classmates, especially for those whose drafts I had commented on during the writing process. On the other hand, if I would have received low marks on assignments I might have a different opinion on sharing my work. But that is part of life isn't it, progressing or degenerating depending on your visible output?

>

>I was also wondering if there were any "rules" for interacting during this
>course, either tacit or explicit. Was this discussed at any point? What
>happened when (if) someone wrote something others might have felt was
>inappropriate?

Well no explicit rules anyway. We were reminded that the postings were public and available to anyone on the internet who wanted to have a look. On a personal level I sometimes kept my red-necked opinions to myself, sometimes I let them show a bit. One classmate went on a bit of a rant one evening, nothing serious, but the next day he apologized for being in a bad mood. I don't think anyone was too bothered by it, some even wrote in expressing empathy. Overall I think that there shouldn't be any rules, its much more natural that way. After all, how can you get passionate when there is no conflict?

Again Karen, please feel free to ask more questions. Also, if you don't mind sharing your work, I would be very interested in reading your thesis when completed. Don't feel obligated, only if you want to.

Regards



Return-Path: <[REDACTED]>
From: <[REDACTED]>
Date: Thu, 12 Mar 1998 14:03:56 0000
To: vita@islandnet.com
X-UIDL: df6f868ec0b99110c8bf62286f53046f

%%
%%

Thur Mar 12, 1998 12:14 pm From: vita@IslandNet.com
(

Subject: Re:
To: <[REDACTED]>
From: vita@IslandNet.com (Karen Clarke)
Date: Thu, 12 Mar 1998 11:15:36 -0800 (PST)

Hi [REDACTED]

> I'd be interested in your feedback on some of the information I've included
> below:

> It was difficult to tell at times if your messages were getting across
because you didn't receive answers right after posting
> messages sometimes.

> How did you feel about that situation?
It was frustrating when I asked a question and no one responded. As I used the computer at work I had limited time to respond and if I wasn't at work when someone else responded, I may have left them with the same frustration. Some people who used their work computers may not have been at work for a week so sometimes we didn't know to go ahead without them or not.

> We would post all of our answers and someone would compile the information to
> one posting for the entire group.

> Was it your sense that everyone in the group contributed equally to this
> process?

For the most part. We had one who rarely participated but she used her work computer and wasn't at work on a regular basis.
> It would have been nice to have a picture of the group members to get a better sense of who they were.

> This is interesting! Can you elaborate a bit on how "seeing" the other

>group members would have helped you?

I guess I am a visual or auditory person. I feel I know someone's personality better if I have an image to attach them to. Hearing their voice gives me another image. It's hard to get inflection or personality in a typed message. The images I developed were based on the personal messages they sent like information about their family or the weather or something like that. Those that used poor grammar and spelling gave me another image. I started to develop these faceless images in my mind. Maybe this doesn't matter to other people. I was also fascinated by other's experiences across the country. It isn't often one gets to converse with such a diverse group.

Now I have this image of you - faceless of course! Maybe this is my newness at the internet. I get the same feeling when I only talk with people on the phone and then meet them. Often what my first impression was, was not at all what they were like.

>ANSWER: We didn't assign a leader to the groups so I felt at times there were unofficial leaders which wasn't necessarily a bad thing as it got the work done but there was opportunity for some not to participate at all.

>Was there every any discussion about getting these non-participants to contribute more? Do you believe your work was affected by their unwillingness to participate?

We would send messages like "are you there?" Also there were comments like "I am willing to post the next response, does any one mind?" It would have been less uncomfortable and more efficient if we had decided each person would take turns on a rotating basis to post, etc.

>ANSWER:I appreciated their feedback and affirmation. It helped me to understand the work.

>In a regular classroom, quite often a student's work is seen and evaluated only by the instructor. If this had been the case for Nursing 320, do you think your learning would have been lessened without the feedback from your classmates?

I felt it important that I was on the same wavelength of understanding as my classmates. After not studying for many years I was unsure of how I would manage with the course, especially since the material was quite foreign. As long as I felt we were communicating and confirming the material, I felt I could move on. I'm sure the instructor could give the same feedback but it is my experience that if you don't ask questions, sometimes you don't get answers. With this method, I could read other people's feedback and glean understanding from them. It does take a little confidence to show others your thoughts and ideas. I received good feedback which helped me to continue to participate. I liked that the instructor would ask the others to comment on our comments.

>ANSWER: You can not discredit or undermine anything that is posted. It is

VITA

Surname: Clarke Given Names: Karen Dawn

Place of Birth: Montréal, Québec

Educational Institutions Attended:

University of Waterloo 1982 - 1986

University of Toronto 1988 - 1989

Degrees Awarded:

B.A. (Honours) University of Waterloo 1986

B. Ed. University of Toronto 1989

PARTIAL COPYRIGHT LICENSE


I hereby grant the right to lend my thesis to users of the University of Victoria Library, and to make single copies only for such users or in response to a request from the Library of any other university, or similar institution, on its behalf or for one of its users. I further agree that permission for extensive copying of this thesis for scholarly purposes may be granted by me or a member of the University designated by me. It is understood that copying or publication of this thesis for financial gain shall not be allowed without my written permission.

Title of Thesis:

"Through a Glass, Darkly": Exploring Student Community in Electronic Learning Environments

Author




Karen D. Clarke
September 11, 1998