TEACHING AND LEARNING IN THE COMPUTER-MEDIATED CONFERENCING CONTEXT

by

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A thesis submitted in conformity with the requirements for the degree of Doctor of Education
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ABSTRACT

Under the conditions of computer-mediated communication (CMC), the entire process occurs through the exchange of electronic messages. This thesis documents the experience of learning under these conditions toward determining factors which can afford or limit such experiences.

Using the complete electronic record of a graduate course in qualitative research along with interview data, the researcher employs grounded theory, including some quantitative measures of text output, to examine elements of that experience especially the management of stressors, message flow, message production, cognitive strategies and the giving and getting of feedback.

Among the factors seen as contributing positively to the experience were: the facilitative expertise of the instructor who was able to manage the affordances and limitations of the CMC medium in course design and delivery; and, the intellectual and social readiness of the students.

The emergence of a cohesive, supportive learning community in the case under consideration confirms the findings of other researchers who affirm both that community will emerge as an artifact of continued participation in on-line groups, and that this social dimension is important to the effectiveness of asynchronous learning, and should be considered in course design.

The thesis concludes with implications for practice and directions for future research including an exploration of the imitation of modelling as a powerful adult learning strategy.
Dedication

Eleanor Irene Adeline Kiviranta Robertson
(1913 - 1999)

Gail Patricia Crocker Robertson
(1939 - 1996)

It was Mother who insisted that I could become whatever I wished to become and accomplish whatever I wished to accomplish, as long as ‘whatever’ was worthy. It was Gail who, one evening in the fall of 1985, said to me: “You look bored. Why don’t you do a doctorate?” Both women encouraged this adventure at its outset; neither lived to see it accomplished.

This work is dedicated to their memories.
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To my son David for reminding me constantly by his actions that believing in yourself is where it’s at

To my daughter, Kathy McIntyre, for arithmetic and secretarial smarts when I really needed them

To my daughter-in-law, Dr. Sandra Kofalvi and to Jim for enormous personal support and for producing their own magnum opus: Victoria

To my wife, Dr. Carol Musselman
for a push
for a prod
for an affirmation
for sweating it out with me at Kinko’s as night became morning
but really, just
for being there

To all the friends, named and unnamed, who contributed support in whatever way

To all the weavers in my study for revealing to me the richness and complexity of their lives

And, not least,
To John Milton, who understood the writer’s angst with exquisite clarity. For me, the following piece of Milton started out as a little self-deprecating humour, located as it was at the head of my To Do file; in the end, it was a prayer:

Sing Heavenly Muse . . . I thence
Invoke thy aid to my adventurous song,
That with no middle flight intends to soar
Above the Aonian mount, while it pursues
Things unattempted yet in prose or rime.

—Paradise Lost, John Milton, 1667

To you all, with much, much affection,

DAR:-)>

iv
# Table of Contents

Abstract .......................................................................................................................... ii
Dedication ........................................................................................................................ iii
Acknowledgements ........................................................................................................ iv
Table of Contents ......................................................................................................... v
List of Tables ................................................................................................................ viii
List of Figures ................................................................................................................. ix

## Chapter 1: Introduction .......................................................................................... 1

I. Research Orientation ............................................................................................... 1
   A. Background to the Inquiry: Adult Learning and the Computer-Mediated
      Conferencing Phenomenon .................................................................................. 1
   B. Personal Relationship to the Phenomenon ........................................................ 3

II. The Inquiry .............................................................................................................. 4
   A. The Research Site in Brief: The Course -- Qualitative Research:
      Principles and Practicum .................................................................................... 4
   B. The Opportunity and The Research Question .................................................... 6

III. Organization of the Thesis ................................................................................... 8

## Chapter 2: Review of the Literature ..................................................................... 9

I. Significant Features of the Course ......................................................................... 9
II. CMC as Educational Medium ............................................................................... 10
   A. Essential Characteristics .................................................................................... 10
   B. Educational Affordances ................................................................................... 11
   C. Educational Limitations ................................................................................... 20

III. CMC as a Medium for Experiential Learning ..................................................... 22
   A. Aspects of the Role of Experience in Adult Learning:
      Implications for Facilitation .............................................................................. 23
   B. Adult learning as Transformation: Extensions of Reflection and Feedback .... 26

IV. The Centrality and Significance of Messages: Psychology Marries Technology .. 33
   A. Mastery and Belonging: A Fundamental Psychological Tension in Adults ........ 33
   B. Poetry and Politics: An Extension of Mastery and Belonging ......................... 34

V. Facilitation ............................................................................................................. 35
   A. Essential Personal characteristics of the facilitative instructor -- the facilitator 36
   B. Social and Organizational Facilitation: Skills and Practices ......................... 36
   C. Task Facilitation: Skills and Practices ............................................................ 37
   D. On-Line Collaborative Learning Interventions ............................................... 38
   E. Managing Class Dialectic: the Facilitator as Moderator .................................. 39
   F. Two Views of Facilitating Graduate Learning: Anselm Strauss & Lynn E.
      Davie ............................................................................................................... 40
   G. Narrative and Episodic Facilitation: Two Key Styles of Instructor Involvement 43

V. Student Considerations ........................................................................................ 47
   A. Number of Students: Critical Mass, Critical Class Size .................................. 48
   B. Social or Existential Readiness ....................................................................... 49
   C. Intellectual Readiness ....................................................................................... 49
   D. Availability of Time ......................................................................................... 49
VI. Conclusion: The Debate Goes On ................................................................. 50

Chapter 3: Methodology ..................................................................................... 52
  I. Scope and Ethical Considerations of the Data Gathering .......................... 52
  II. The Data-Gathering ..................................................................................... 53
      A. Types of Raw Data .................................................................................. 53
      B. The Data-Gathering Period: Sequence of Event ..................................... 54
      C. Identification of Four Genres of Course Writing .................................... 55
  III. The Quantitative Study .............................................................................. 56
  IV. The Qualitative Study ............................................................................... 57
      A. Message Data Sources ........................................................................... 57
      B. The Research Paradigms: Heuristic Research, Grounded Theory and Hermeneutics .............................................................. 58

Chapter 4: The Data Part 1 – Living The CMC Learning Experience............... 61
  I. Prologue ........................................................................................................ 61
      A. The Drama: Course Participants in their Setting — Time and Place ........ 61
      B. The Actors ............................................................................................. 62
      C. Character Data ....................................................................................... 63
      D. Conferences, Messages and Volubility .................................................. 63
  II. Participation Dynamics .............................................................................. 65
      A. The Participation Imperative: The Givens of Course Participation ...... 66
      B. Psychological Implications of the Participation Imperative: Stressors .... 68
  III. Managing Communication: Processing and Creating Messages ............ 78
      A. Managing the Message Flow .................................................................. 78
      B. Message Production .............................................................................. 87
  IV. Learning Through Message Making: Dialogue to Dialectic ................. 91
      A. Learning and Dialectic .......................................................................... 91
      B. Communication Behaviours and Cognitive Strategies ......................... 93
      C. Feedback: Giving and Getting, Good and Bad ....................................... 97

Chapter 5: The Data Part II — Creating and Maintaining the Learning Community....111
  I. Recreating a Face-to-Face Community ....................................................... 111
      A. Replacing prosody ................................................................................. 113
      B. Friendliness, Friendships, Concern and Intimacy ................................. 117
      C. Naming ................................................................................................ 120
      D. Large Groups and Small Groups ........................................................... 125
  II. Social Glue: Caring -- Laughter and Tears .............................................. 126
      A. Etta and the Native Youth Suicide Thread ............................................ 127
      B. Purposeful Nonsense: Gladys, Raoul, ‘Arv, Étienne and Annie ............. 131
  III. Epilogue ................................................................................................... 132
      A. Indra’s Net and Bells ............................................................................. 132

Chapter 6: Findings and Factors: Evaluating the Experience ......................... 136
  I. Student Evaluations ..................................................................................... 136
      A. Some Course-End Learnings .................................................................. 136
  II. Facilitator-Related Factors ....................................................................... 139
A. Exemplification of an Archetypal Facilitator ................................................................. 139
B. Successful Management of Affordances and Limitations in course design ...................... 139
C. Modelling Excellence as a Qualitative Researcher ............................................................. 140
D. Modelling Excellence as an On-Line Adult Educator ......................................................... 140
E. The Entry of all Students into Full Group Membership .................................................... 141

III. Student-Related Factors ..................................................................................................... 141
A. Class Size Critical ................................................................................................................... 141
B. Group Membership Constant over Time of the Course ....................................................... 142
C. Social and Existential Readiness .......................................................................................... 142
D. Intellectual Readiness .......................................................................................................... 142
E. Time Management ................................................................................................................ 143
F. Overcoming Stressors ........................................................................................................... 143

IV. Community-Related Factors .............................................................................................. 143
A. Specialized Student Support in Place ................................................................................... 143
B. An Experiential Approach to the Content .......................................................................... 143
C. The Narrative of the Course was Intensely Dramatic ............................................................ 143

V. Conclusion ............................................................................................................................ 144

Chapter 7: Conclusion ................................................................................................................. 146
I. Contribution and Importance of this Study ...................................................................... 146
A. The emergence and Importance of Community ............................................................... 147
II. Implications for Practice ...................................................................................................... 148
III. Directions for Future Research: Intimations and Issues .................................................... 149
A. Facilitator as Scaffold Builder ............................................................................................. 149
B. Explorations of the Imitation of Modelling Adult Learning Strategy ............................... 150
C. Stylistic Analysis of Discourse Features ............................................................................ 151
D. CMC as an educational medium in relation to the cognitive-scientific study of writing to thinking ............................................................................................................................ 151
E. Computer-Mediated Discourse in Instruction: A Unique Sub-Genre? ............................ 152
F. Group Dynamics in a Face-to-Face Setting vs. CMC Setting ........................................... 152

IV. Hindsight: Reflection on the Thesis Journey ......................................................................... 153
V. Experimental Considerations ................................................................................................. 153
VI. Conclusion ............................................................................................................................ 154
VII Creative synthesis ................................................................................................................ 156

References ................................................................................................................................... 157
Appendix A: On-Line Course Participation in Conferences ..................................................... 168
Appendix B: Quantitative Study Elements — Features of Text ................................................ 169
Appendix C: Processes and Phases of Heuristic Research ....................................................... 186
Appendix D: Dramatis Personae ............................................................................................... 189
Appendix E: Turntaking-Related Tables ................................................................................... 194
Appendix F: Emoticons or "Smilies" ........................................................................................ 196
Appendix G: Matrix of Naming-Related Events ...................................................................... 198
Appendix H: Annotated Transcript — Gladys, Raoul, 'Arv, Étienne and Annie .................... 199
Appendix I: Dialectic in Action — Controversy over Dealing with a Native Elder ............... 205
List of Tables

Table 2-1 Paulsen's Collected Online Facilitation Techniques .................................................. 38
Table 2-2 Narrative and Episodic Facilitation Profiles ............................................................... 46
Table 2-3 Narrative and Episodic Learner Profiles ................................................................... 47
Table 4-1 Course-Related Textual Output in Typographical Characters with Conversion to Standard Word Equivalents by Types of Participants ................................................................. 64
Table 4-2 Distribution of Conference and Message by Conference Type .................................. 64
Table 5-1 Five Aspects of the Naming Phenomenon: Frequency of Occurrence ................... 123
Table 5-2 Erin's Namings ............................................................................................................ 124
Table 5-3 Message Stream of the Native-Youth Suicide Thread ............................................. 131
Table 5-4 Identification of Message Elements the "Indra's Net" Thread .............................. 133
Table AT-1 Qualitative Research: Principles and Practicum -- On-Line Course Participation in Conferences between January and April 1993 by Student Groups and Instructors .............................................................. 168
Table AB-1 Basic Textual Characteristics of Dialogical Messages in the Representative Group .......................................................... 169
Table AE-1 Total Clumps and Total Messages by Participant in the Conferences PARADIGM and ACCESS ........................................................................................................ 194
Table AE-2 Turntaking Represented as Ten Rounds of Clumps in the Conference PARADIGM Keying on the 10 Clumps Posted by Erin Placed as the Initial Clump in a String of Clumps ......................................................................................... 195
Table AE-3 Turntaking Represented as Seven Rounds of Clumps in the Conference ACCESS Keying on the Seven Clumps Posted by Erin Placed as the Initial Clump in a String of Clumps ........................................................................................................ 195
List of Figures

Figure 4-1. Mean number messages per student and by gender ........................................65
Figure 4-2. Interrelationship of dynamic elements within the CMC learning context ..........67
Figure 5-1. Sociogram of reciprocated naming relationships ........................................ 123
Figure AB-1. Total Dialogical Messages in the individual corpora of the representative group, quartered sequentially by volume ................................................................. 172
Figure AB-2. Total Dialogical Messages in the individual corpora of the representative student group, and quartered sequentially by volume ................................................................. 172
Figure AB-3. Mean words per message in the individual dialogical corpora of the representative group and quartered sequentially by volume ................................................................. 173
Figure AB-4. Mean words per student message in the individual dialogical corpora of the representative group and quartered sequentially by volume ................................................................. 173
Figure AB-5. Mean words per sentence in the individual dialogical corpora of the representative group and quartered sequentially by volume ................................................................. 174
Figure AB-6. Percentage of passive sentences in the individual dialogical corpora of the representative group and quartered sequentially by volume ................................................................. 176
Figure AB-7. Descriptive index -- use of adjectives and adverbs -- in the individual corpora of the representative group and quartered sequentially by volume ................................................................. 176
Figure AB-8. Percentage of subjective words in the individual dialogical corpora of the representative group and quartered sequentially by volume ................................................................. 177
Figure AB-9. Flesch-Kincaid Readability Index in the individual dialogical corpora of the representative group and quartered sequentially by volume ................................................................. 177
Figure AB-10. Yule-Williams measure of vocabulary diversity in dialogical messages of the representative group by total individual corpus and quartered sequentially by volume ................................................................. 180
Figure AB-11. Repeat rate in dialogical messages of the representative group by total individual corpus and quartered sequentially by volume ................................................................. 180
Figure AB-12. Appropriation and utilization of domain-specific vocabulary in dialogical messages of the representative group by total individual corpus ................................................................. 181
Figure AB-13. Characters per word in dialogical messages of the representative group by total individual corpus and quartered sequentially by volume ................................................................. 181
Figure AB-14. Conjunctions as percentage of tokens in dialogical messages of the representative group by total individual corpus and quartered sequentially by volume ................................................................. 183
Figure AB-15. Prepositions as percentage of tokens in dialogical messages of the representative group by total individual corpus and quartered sequentially by volume ................................................................. 183
Figure AB-16. All connectors -- prepositions and conjunctions -- as percentage of tokens in dialogical messages of the representative group by total individual corpus and quartered sequentially by volume ................................................................. 184
Figure AB-17. Utilization of conjunctions in dialogical messages of the representative group by total individual corpus ................................................................. 184
Figure AB-18. Trends in the interaction of prepositions and conjunctions for all five individuals in the representative group ................................................................. 185
Chapter 1
INTRODUCTION

I. Research Orientation

A. Background to the Inquiry: Adult Learning and the Computer-Mediated Conferencing (CMC) Phenomenon

In his 1984 novel, *Neuromancer*, William Gibson created a surreal, futuristic, electronic and, for many, grotesque sci-fi environment which he dubbed *cyberspace*. That word has become the identifier for the historical paradigm which, following the industrial age, developed noticeably in the last quarter of this century with the emergence of digital electronics, satellites and computers. Since computers talk to each other in this world, people do not have to move; information moves. For instance, adult students must no longer trudge weekly to a campus nor embrace the splendid isolation of paper-based distance-education courses if they wish to pursue graduate education. Mediated by the personal computer, interactive, adult learning can now take place in the privacy or solitude of home or office through computer-mediated communications (CMC).

The purpose of this thesis is to understand and exploit the adult education possibilities of this inter-computer communication. More specifically, how do adults experience learning under these conditions? What factors in the facilitation of courses delivered under these computer-mediated circumstances afford or limit their effectiveness as adult learning experiences? In order to achieve this purpose, I undertook the examination and evaluation of an entire course delivered under the conditions of on-line learning.

The pandemic of personal computers as communication devices has shifted notions of "university" and "campus" along with the attendant access to, among other things, graduate education. In 1993, the year in which the course under discussion in this case took place, Professor Lynn E. Davie of the Ontario Institute for Studies in Education/University of Toronto (OISE/UT), a pioneer in course delivery through the CMC medium, opined that the phenomenon, and by extension, its presence as a learning environment, was growing faster than the ability of those who were using it to deliver courses were able to construct it (personal communication). It still is (Feenberg, 1999). By 1997, in their paper entitled *Best and Worst Dressed Web Courses: Strutting Into the 21st Century in Comfort and Style*, Boshier and his
colleagues can examine 127 courses world-wide not only for their “special features, natty graphics, evidence of imaginative web architecture and, most importantly, soundness and integrity.” A leap of enormous magnitude had occurred between 1993 and 1997: the emergence of the World-Wide Web (WWW or www) as an integrating communications network capable of delivering both graphics and sound. Audio-visual had gone digital electronic!

In 1988, Davie described CMC as:

the use of a network of microcomputers linked to a central host computer by a variety of means including local networks, telephone lines, or special data networks such as DATAPAC in Canada. Using special conferencing programs on the host computer, individuals can leave messages for other students or the instructor to read, read messages left by others, send private notes, or write and edit cooperative papers (p. 57).

In 1993, the label “CMC” still covered that range of electronic / telephonic message-swapping alternatives. E-mail -- electronic mail -- was, and still is, the simple exchange of electronic messages between two parties, mediated by a host computer. "Listservs" or list servers distribute a single text message to a list of recipients. Computer conferencing allows many participants to contribute text asynchronously, and in accumulating volume, on given themes, through a central computer.

With a delightful rhetorical flourish, Boshier and his colleagues (1997, p. 329) tell us that “Web courses are constructed as the answer to fiscal crises evoked by neo-liberal restructuring. They are also touted as an anarchist exemplar of ‘de-schooling’ as envisaged by Ivan Illich.” Feenberg (1999) would agree -- with considerably less delight.

From my personal recollection, the original motivations for introducing CMC-based distance education were quite uncomplicated: simple opportunism. In the 1980s, CMC course delivery in post-secondary institutions was novel and largely experimental. It was done because it could be done and because CMC afforded some gratifying features to both givers and takers. The inherent characteristics of CMC -- its time and distance insensitivity -- were appealing to adults, not only those who were cut off from traditional campus-based offerings, but also those adults seeking a genuine alternative to the class-cum-lecture format. The characteristics of time and distance insensitivity coupled with the novelty of participating “in the comfort of your own home or office” is what largely escalated interest in the CMC-delivered format.
While the computer technology used to deliver the course which is the basis for the case considered in this dissertation is largely outdated -- incapable of any higher-level representation i.e., graphics or sound, beyond text -- the findings, I believe, remain relevant to graduate course delivery under current www-based conditions. Indeed, R. G. Ragsdale (personal communication, September 26, 1999), a pioneer in the application of CMC to graduate course delivery, states: “Since last using PARTI [the technology used to mediate the course described in this thesis], I have used Webboard, Knowledge Forum, TopClass and (starting in January) BlackBoard, but my use of them differs very little from what I did with PARTI.” Thus, I use the notion of CMC-delivery in its broadest contemporary sense. It represents the same practical problem of designing and delivering on-line text-based courses in order to maximize their educational benefits to adults. It is to this purpose that my dissertation is directed.

B. Personal Relationship to the Phenomenon

As a technology-in-education professional, my association with computers in learning had its beginning in 1981 when it was my pleasure to serve for TVOntario (TVO), my employer, on Ontario’s Provincial Advisory Committee on Computers in Education. Beginning in 1982, I was associated with an experimental secondary-school course delivery in northern Ontario (Bott & Robertson, 1983) mounted jointly by the Ontario Ministry of Education and TVO. Students in selected sites within the Lake Superior Board of Education were provided with satellite access to data banks located in the Ottawa region. These data banks were regularly used as information sources in classroom assignments. In 1987, once again for TVO, I managed a satellite-driven CMC field trial with sites across Canada, and provided technical supervision for a second terrestrially-based project centred in Ontario. In the fall of 1988 I was a student in a CMC-delivered course offered by OISE/UT.

From 1989 to 1992, while on loan from TVO to the then-Faculty of Education, University of Toronto, I participated in the development of the TEL Centre -- Technology for Enhancing Learning -- which was the precursor to today’s OISE/UT Education Commons. Among other duties, I consulted with faculty and staff toward developing CMC as a field supervision and general discussion vehicle. During this period I also developed and delivered workshops in the application of technology to education generally and, on one occasion, created and delivered an on-line facilitators’ workshop for the Educational Computing Organization of Ontario.
My interest in CMC has persisted ever since, even into the study of aspects of that phenomenon as a dissertation project. While undertaking that work, more fully described in Chapter 3, Methodology, I had the pleasure to act as “Coach”—technical advisor—to those students and, indeed, faculty at OISE/UT who required technical assistance in familiarizing themselves with the PARTICipate (usually shortened to PARTI) conferencing system then in use at OISE/UT. From the beginning of 1993 into 1996 I had the opportunity to monitor perhaps a dozen courses in varying degrees of intensity. While that kind of exposure does not necessarily make an individual a “connoisseur”, it does broaden the appreciation and sharpen the insight. Aspects of that experience are documented in Ross, Crane & Robertson (1995).

II. The Inquiry

A. The Research Site in Brief. The Course — Qualitative Research: Principles and Practicum

The course on which this research is based, Qualitative Research: Principles and Practicum, was offered by the education faculty of a major Canadian university, through distance education, CMC, between January and April, 1993, for 14 weeks. Fifteen graduate students began and all 15 successfully completed the adventure. The instructor/facilitator was a female professor, Erin, with a long record as a successful academic and qualitative researcher. This was the first time that Erin had delivered a course using CMC technology. She was, however, supported technologically and materially by other faculty who had extensive experience with the medium.

The course was delivered through the PARTI computer conferencing system, a technology developed out of the University of Michigan. This software was originally designed to operate on a VAX system, but for this course it was riding on UNIX hardware.

Erin’s course description makes explicit both student and instructor responsibilities for on-line participation. Each week Erin expects that students:

... would make two types of contributions to the discussion. First, you would make a statement with respect to the topic. This might be in answer to a question I pose, or in response to the readings. Secondly, you would interact with other members of the group, either responding to their queries or reflecting an opinion with respect to their own contributions. ... Generally, I expect you to log on to the [course-related] conference[s] at least three times a week. At least one of these log-ons would be of a substantial nature.

Reciprocally, Erin agrees:

... to facilitate the course by providing information through hard-copy readings and on-line information, leading off and taking part in group discussions and
exercises, helping students organize to work together in groups, responding individually to questions [publicly, on-line in the conference context] about the course content, assignments, etc., . . . and providing detailed comments on assignments. I will log on at least twice a week, usually but probably not always, on Mondays and Fridays. Each week I will provide a summary of what has gone on the conference[s] during the week.

In addition to their on-line obligation, students had a significant off-line qualitative research project to undertake along with other casual assignments. The major project, due about a month after the on-line portion of the course ended, required students: to select a phenomenon; conduct up to four interviews or collect other kinds of data; prepare notes or transcripts; develop and administer codes; analyze the data, and write up the results in the form of a journal article of no more than 25 double spaced typewritten pages. This assignment accounted for 70% of the grade. This assignment also provided the material not only for an on-line work-in-progress account of the students' progress worth 10% of the student grade, but the opportunity for other students to provide feedback on the work. This was also a rich student source of experientially-derived problems for class discussion as Erin developed the topics throughout the course. The conference titles in Appendix A reveal the content of the course as it developed. The final 20% of the grade came from an annotated bibliography assignment, once again directly relevant to the major assignment. Additional course-related information is set out in Chapter 3: Methodology.

The totally text-based nature of the communication interchange sets educational activity under the case of CMC apart from most other learning environments. It appears to be a unique teaching/learning situation which provides an exemplary opportunity to observe the dynamic of class participants at their labour, where almost all other normal communications interactions -- for instance face-to-face interactions -- are removed. In this situation, whatever objective presence an individual student projects will be an extension of the self through strings of bald text in a message format. Under CMC conditions, then, not only must students write to succeed by demonstrating their learning through essay writing, but they must write much more in order to participate in the learning adventure at all. The significance of messages and messaging will be addressed again in Chapter 2.

Students may or may not have met face-to-face with course deliverers, or indeed, with each other. In the case under consideration, the very first meeting of the class was not on-line: students for whom the institution was regionally accessible met face-to-face with Erin and some
support persons including myself; some students beyond easy travelling distance to the institution joined that meeting through audio conferencing.

**B. The Opportunity and The Research Question**

It was my pleasure to be the technical support to Erin and her students. This opportunity came in a timely way: I needed a site to study the CMC course-delivery phenomenon and, because she had never delivered a course using this medium, she needed technical assistance. Indeed, while I had nothing to do with the substantive elements of the delivery, I too had taken a similar course, face-to-face, and thus was familiar with the content. The entire experience of being associated peripherally with the running of the course, both as a technical assistant and an invited voyeur, stimulated and informed the framing of research issues for me.

In the argot of media, this course “worked:” fifteen students began the adventure and all fifteen completed it; all the students met Erin’s and the institution’s expectations for achievement; the students, by their own admission (see Chapter 5), learned or, otherwise, were positively changed by the experience and praised Erin’s efforts. But, from a research perspective, why did this course “work”? This latter formulation of the question, is really a “meta-question” which necessarily entails other related questions in order to contribute to a heuristic researcher’s notion of ‘explication.’ My interest was specifically:

1. to identify and document the significant experiential, learning-activity related features that emerge from an examination of the on-line transcript of the course along with interviews of 12 of the students and Erin;
2. to assess the affordances and limitations of the CMC delivery mechanism, how they conditioned the experience of the students and how they operated as factors in the facilitation of this course;
3. To determine and evaluate how the facilitator’s behaviours operated as determiners or conditioning factors in the course;
4. to seek theoretical explications for the success -- or potential failure -- of this course which are available in adult education and CMC-related literature.

In short, given the nature of the experience, what factors in the medium itself and the facilitation of this course afforded or limited its effectiveness?

Because CMC was a new phenomenon, its study was intrinsically interesting as we would have the entire transcript of a prolonged learning event -- something that the research
community had never chosen to exploit before. I sought to understand the dynamic -- the pushes and pulls, motives and agendas. I wanted to develop a set of categories around issues I believed to be realistic in this learning environment which Stephenson (1996) so eloquently characterizes in her master’s thesis as *A Place Where There Are Only Words*.

The shaping power of the act of writing on cognition is suggested by the journal editor of the National Council of Teachers of English "Genuine learning in any subject matter must take place by the forming and shaping of thought in written language" (1984, p. 26). While it was tantalizing to believe that CMC forces its participants to shape or transform knowledge in a manner more efficient, effective, or economical than the standard on-campus, in-class-with-two-essays delivery route, I make no attempt to deal in any depth with the relationship of writing on cognition; nor do I undertake a genuine comparison of the CMC course-delivery experience with other course-delivery vehicles including pencil-and-paper or other electronically-mediated forms of adult distance education. However, I believe that some casual comparisons cannot be avoided.

In a similar vein, while computer-mediated technology is the material substrate of the learning adventure, I do not consider further the kinds of facilitating issues which Feenberg identifies as communication requirements (1989, p. 31) -- issues of mechanical facility with the medium necessary to communicate within the needs of the course including setting up course and student files, establishing student accounts and assigning names and passwords. I exclude them as a consideration under deliberate facilitation since they are marginal, albeit necessary, to the more central business of facilitating student learning. From the student’s perspective, however, learning the requisite on-line skills may not be a trivial issue and, for neophytes to CMC, climbing that learning curve can be a major stressor. Thus I address technology as a student stressor to participation. Happily, the skills needed to participate by both student and teacher are generally mastered quickly thus becoming invisible to all concerned.

Since a positivistic approach would have reduced questions to a yes/no format, I felt that I would be restricted in how much of the phenomenon I could consider after data gathering. To grasp the totality of the phenomenon, the meta-research paradigm of choice was heuristic research, specifically employing grounded theory as a mechanism for processing the on-line and interview records. Some content analysis was undertaken on a very restricted basis. Chapter 3, Methodology, documents the process. Indeed, the neat, quantitative, restrictive, vocabulary study
which was the promise of an earlier phase of the thesis has given way to the current broader, qualitative research project.

Because this work is inductive, I have data and conclusions that, while they are interesting, are too much to talk about. Thus, I have chosen only to report in greater detail on finding and factors related to (a) issues of facilitation, (b) student participation and (c) issues relating to the class as a community of learners. Some other issues of interest are either brought to a conclusion in chapters 4 and 5 which document the learning experience of the students and Erin, or are treated in Chapter 7, Conclusion, as items for further exploration.

In fine, I gathered and organized a new set of data around issues related to learning under the conditions of the CMC medium including: motivation, managing the message flow, developing community and facilitation. Each of the foregoing I took to be a contribution to a successful student learning experience. Understanding learning, then, would be imbedded in the examination of these categories.

**III. Organization of the Thesis**

Chapter 2: Review of the Literature will examine especially literature relating to the affordances and limitations of the CMC medium for educational purposes, an exploration of the literature related to experiential learning and its relationship to the medium, and an exploration of instructor behaviours known to afford or limit the effectiveness of an on-line experience. Chapter Three: Methodology sets out the rationale relating to the enquiry along with a catalogue of the actual process. Chapter 4, The Data Part I -- Living the CMC Learning Experience -- sets out participation statistics, and qualitative findings Chapter 5, The Data Part II -- Creating and Maintaining the Learning Community -- reports on the remarkable group cohesion that developed. Chapter 6, Findings and Factors: Evaluating the Experience, identifies and evaluates facilitator-related, student-related and community related factors contributing to the experience. Chapter 7, concludes the work with an examination of the generalizability, verifiability and reliability of the work along with the implications for practice.
Chapter 2

REVIEW OF THE LITERATURE

The general research question directs us to determine those factors in the facilitation and medium of this course which afforded or limited its effectiveness as an adult education experience. Mason inveighs against those studies which concentrate only on details of course delivery and never consider the technology-based learning strategy of the application as a whole, and those which discuss at length the advantages of the technology (affordances) but do not apply these to the particular application in any analytical or critical way (Mason, 1995, p. 194).

In order to avoid these pitfalls, in Part I of this chapter we begin with a brief survey of the features of this course which will be significant for further analysis. The main thrust of this chapter is the review of salient literature that speaks first to: the characteristics of the CMC medium into which this course was set (Part II, A); second, the educational affordances (benefits) and limitations (disadvantages) inherent in the medium chosen for the course including how these are likely to impact on the learning of adults (Part II, B & C); and third, an exploration of the medium as an environment for experiential learning (Part III). Part IV marries psychological theory with technological realities in a focus on messages, the prime entities for communication and learning. Part V examines instructor behaviours known to afford or limit the effectiveness of an on-line experience; Part VI discusses student-related factors, while Part VII, a summary of CMC’s current acceptance as a post-secondary, course-delivery medium, concludes the chapter.

I. Significant Features of the Course

“Good evaluation,” suggests Mason (1995, p. 195), “is marked by the extent to which the essence of the application has been identified and synthesized for the reader.” In this part we do just that. In brief, on-line learning or learning in a computer-mediated communication (CMC) environment in the situation under study is characterized by the following surface features, all of which are intertwined. The process is marked by:

* an asynchronous exchange or dialogue
* of theme centred, often task-related messages
* among adult graduate students and their instructor
* who are place independent
yet access and create this common material
* through a computer terminal and computer display.
* Messages are written in a discourse style such that the text often seems to be written speech.
* The dialogue takes place in a many-to-many, interactive communication environment.
* Course facilitation relies on the leadership and expertise of the instructor,
* yet draws on the experience of each individual
* within a small learning group setting.
* In addition to the on-line activity, students engage in an off-line learning project which informs both their on-line activity and their final off-line written paper.

II. CMC as Educational Medium

A. Essential Characteristics

In this section we examine the educationally-related characteristics inherent in the CMC medium chosen for this course. Seven basic characteristics allow us to generate and examine a host of educational affordances and limitations. Harasim and Johnson (1986, See also Harasim 1989; Kaye, 1989) identify three essential characteristics which they claim make the medium unique as an educational domain as compared with face-to-face or other distance-education situations: (a) asynchronicity; (b) place independence (distributed forum or congregation); and (c) many-to-many interactive communication (one-to-one also implied). In addition, (d) the text-only, narrow-bandwidth nature of the early CMC especially must be considered a unique characteristic contributing as it does both to the medium's affordances and limitations.

Of purely educational importance beyond simple social interaction is the fact that the medium is also engineered in such a way that (e) the corpus of course communication is stored centrally on a host computer. Finally, by its very nature, (f) engaging in communication in general or in learning specifically appears to generate positive motivation and excitement -- a contribution of positive affect to the learning process.

Of mechanical or physical importance is the fact that the presentation of all communication flows through a computer display, which allows 25 lines of information, each line at a maximum, 80 characters wide, or as Davie (1989) fashions it, (g) "the small window."

While the PARTI system in use in this case allowed for private communication, the kind of access to large-scale computerized databases noted in Davie and Palmer, (1984) and Harasim (1986) were not directly available.
**B. Educational Affordances**

In this section we undertake a discussion of the educational affordances (benefits) which the medium would create for this course, and which, together with its limitations, determine its potential as a medium for adult education.

1. **Affordances arising primarily out of the social nature of the medium.**

   i. In a case study comparing the quality of participation in both a face-to-face collaborative peer review and analysis and a CMC-structured situation, Ruberg, Taylor, and Moore (1996) report that the CMC medium facilitated increased participation when compared with a face-to-face situation.

   ii. Because of its many-to-many interactive communication potential, CMC is a social medium by nature. Where a measure of democracy in the learning setting is valued, the opportunity for students to participate in a more democratic, less instructor-structured learning situation is an affordance since the system encourages a relatively free and open exchange of opinion, limited only by the tolerances of the instructor. Picciano (1998) and Ruberg, Taylor, and Moore (1996) reported that an increase in democratic activity occurred as a result of students working in the CMC system which, in Picciano’s case was both welcomed and praised. (See also Davie & Palmer, 1984). Davie and Wells (1991) believe that students become empowered as individuals by contributing to the group effort in a CMC context.

   Adults learn more productively when they feel they are voluntary learners. When adults feel that they are non-voluntary learners they behave in the same way as children do in non-voluntary learning situations, demonstrating the same kinds of motivation and attendance problems along with disruptive behaviour (Brundage & MacKeracher, 1980). The apparent freedom to regulate one’s own participation behaviour within acceptable limits can be thus afforded by learning under these conditions. The key to exploiting or not exploiting this affordance is the nature of the facilitation, as we shall see.

   iii. Because all transactions remain on the system the CMC environment becomes a ready-made electronic crucible for ideas generated through group dialogue, encouraging dialectical thinking through debate, and the construction of knowledge through collaboration. (Cohen, 1995; Scardamalia & Bereiter, 1991; Scardamalia, Bereiter, McLean, Swallow, and Woodruff, 1989)
It is the problem-centred dialogical interaction among learners that distinguishes collaborative settings from other learning environments. Collaborative learning theories view the learner as an active participant in the learning process, involved in constructing knowledge through a process of discussion and interaction with learning peers and experts. (See Kearsley, 1999a, on Bruner’s constructivist theory.) "An optimum context for learning provides learners with frequent opportunities to create thoughts, to share thoughts with others, and to hear others' reactions" (Bouton & Garth, 1983, p.76). Knowledge, according to this view, is something that emerges through active dialogue, by formulating ideas into words and building ideas and concepts through the reactions and responses of others to these formulations (Harrasim, 1989). Knowledge building occurs as students explore issues, examine one another's arguments, agree, disagree, extrapolate, question, illustrate, expand and synthesize. Collaboration contributes to higher order learning through cognitive restructuring or conflict resolution, in which new ways of understanding the material emerge as a result of contact with new or different perspectives. The idea of scaffolding, sometimes attributed to Vygotsky but actually framed by Wood, Bruner and Ross (1976) encompasses many of the above notions which will be examined in greater detail as we proceed.

The medium permits serendipity -- chance occurrences and spontaneous reorientation of dialogical direction. Dialogue is conditioned by good taste and relevance. Unlike teacher-directed, “Socratic” classroom-style dialogue there is no genuine restriction as to who participates when, or how often.

“The fundamental characteristic of network learning is the premise of collaborative approaches to learning. Networks are group communication environments that augment social connectivity” (Harasim, et al., 1995, pp. 274-5). “Students actively present ideas and respond to one another’s formulations, a process which contributes to facilitating higher developmental levels of understanding” (Harasim, 1989, p. 55).

All of the student participants in the course were practicing teachers somewhere in the elementary, secondary, post-secondary or industrial training context for whom taking this course could be considered a professional development experience: “When teachers and students engage in cooperative learning activities mediated by computer networking, the power and speed of human learning is extended by their collective knowledge and rich set of experiences” (Riel,
In Cohen's dissertation (1995), he compared the learning of physics concepts in a face-to-face learning situation and under the collaborative database conditions of the Computer-Supported Intentional Learning Environment (CSILE) -- an environment which provides learning conditions somewhat different, but not totally unlike the PARTI system under consideration in our study. (See also Scardamalia, et al., 1989.)

In a classroom where CSILE is being used in conjunction with computer simulations, students can engage in several activities different from those described in the face-to-face condition: (1) Students contribute individual as well as collaborative ideas in the form of written theories, new information, comments, plans for experiments, predictions about outcomes, and conclusions; these ideas become not only visible to all members of a group, but permanent and retrievable objects; (2) students pursue individual as well as collaborative experiments; and (3) the communal database allows students shared access to their own and others' experiments and ideas, including plans, predications and conclusions. (Cohen, 1995, p.3)

Cohen predicted that the CSILE environment would promote (a) students' focusing attention on the objects, concepts, and features of their own and others' ideas; (b) students' monitoring and regulation of their own and others' ideas; (c) students making more wide-spread efforts to contribute than in a traditional environment; (d) students more readily engaging in discourse to solve their problems of understanding than they might in a traditional teacher-centred classroom. He examined (a) meta-processes -- the monitoring of one's self and others, (b) equitable collaboration -- the access and contribution to discourse from all group members, and (c) problem centred discourse -- discourse centred on problems of understanding.

Cohen found that in the students' building of common knowledge structures, (a) there was significantly more monitoring and regulation in the CSILE condition than in the face-to-face condition; (b) there was significantly more equitable collaboration as evidenced by the performance of low contributors; and (c) "Students who had little or no voice in the face-to-face condition and therefore demonstrated little or no problem-centred discourse showed no such deficit relative to others in the CSILE condition" (Cohen, 1995, p. i, pp. 113-114). What is also significant is that Cohen would state unequivocally that: "The CSILE program is the only program where the affordances of technology are central in fostering cultures of understanding" (p. 120).
iv. The emergence of a more mature role for students in the teaching-learning dynamic. Picciano (1998) affirmed that student and instructor roles were changed in the asynchronous course which he facilitated. Picciano, along with Ruberg, Taylor, and Moore (1996) affirmed that not only did students have more of a voice in the discussions than in the lecture-hall context, but that students accepted empowerment and responsibility. For Davie and Wells, (1991) this change in student role from passive receptor of information to active participation in a learning community is viewed as student empowerment which means that students are both expected and enabled to take a visible and meaningful role. This role encourages students: (a) to have the courage to state an intellectual position; (b) to support one’s stand with well-constructed arguments; to be flexible enough to consider challenges to one’s position; and (d) to modify this position as a result of dialogue with others. In short, empowerment means engaging fully in the dialectic of the situation.

v. CMC encourages a new role for the instructor -- the facilitator. The medium creates the possibility of widening the scope of instructor alternatives. Brundage and MacKeracher identify three basic modes of teaching: directing (training), facilitating and collaborating (1980, pp. 57-61). These three modes may be seen to be arranged along a continuum from directing through collaborating where learners take increasing control of their own learning. Conversely, the teacher increasingly cedes control, until the teacher/learner distinction disappears.

In computer-mediated communication instruction, the teacher or instructor plays an important set of roles. Not only does he or she structure the experience, but the instructor also provides an important role model with his or her own contributions to the conversation. The instructor encourages participation, demonstrates appropriate responses, summarizes the discussion from time to time, and redirects the attention of the group when it goes off track. (Davie, 1988, p. 62).

Picciano’s undergraduate students admired the facilitative role of the professor who was able to “centre the discussion and move it forward” (Picciano, 1998, e'). Boettcher (1998), Picciano (1998), Heath (1998, grudgingly), Davie (1991) and Kaye (1989) agree that in

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1 The Publication Manual of the American Psychological Association gives no guidance for the pagination of in-text citations in the case of electronic materials which, by the nature of the medium, do not generally come formatted with page indicators. While The Manual suggests a preference for paper-based references which obviates the problem (see pp. 218-222), www-based materials may or may not have a paper-based counterpart. For the sake of clarity an 'e' in the place of the page number e.g., (Picciano, 1998, e) will indicate that the source of the quotation is electronic. Where material may have two sources, the pagination will first reflect certainly the source used in the research process and, perhaps, if available, the alternate resource, as in the case of (Boettcher, 1998, e, p. 49).
conducting asynchronous learning endeavours, instructors should be prepared to share some of their traditional power to direct operations with the students. This does not mean abandoning control or responsibility, but it does mean adjusting the teaching style to the CMC situation.

Kaye (1989) adds that traditional teaching methods are being abandoned or modified in favour of a resource-based approach which no longer emphasizes the teacher as the main source of knowledge. Teacher *talk* gives way to student *talk* which Davie (1991) notes has been associated with increases in student learning since 1966.

The use of CMC as a major element of a course almost inevitably implies that the locus of control shifts from the teacher to the group and the group processes. The teacher who sees his/her role principally as a facilitator of learning and as a 'networker', putting learners in touch with the resources (human and otherwise) that they need is liable to be more successful as an on-line tutor than the one who tries to be the sole arbiter of learning and dispenser of knowledge. (Kaye; 1989, p. 16; see also Nipper, 1989, pp. 72-73).

Certainly traditional methods appear to be changing for various reasons, but in many respects, CMC forces the change. First, the instructor really cannot control who communicates with whom about whatever aspect of the course. For that reason the Socratic-style question-and-answer dialogue cannot be controlled the same way that it can in a face-to-face situation. Second, I can confirm from my own experience the two findings of Ruberg, Taylor, and Moore (1996) who found that the volume of student-authored material far outweighs that of the instructor (as it does in the present case as which we are about to witness), hence dominating the discourse, and the emergence of discussion leaders among the students whose facilitating behaviours would rival an experienced instructor.

"When adult learners and teachers interact" note Brundage and MacKeracher, "their behaviors affect and modify each other" (1980, p. 114):

These interactions are constructive when both can be responsive to each other, accountable for their own behaviour, open to feedback from each other, and trusting of each other. . . . Adult learning is facilitated when the teacher can give up some of his control over teaching processes and planning activities and can share these with learners. . . . Adult learning is facilitated when the teacher is willing and able to learn from, with, and about learners and is willing to share these learning with those learners." (p. 114)
2. Affordances arising primarily out of asynchronicity: flexibility with respect to the personal use or constraint of time.

Adult learning is directly impacted by issues of time. "Adults do not learn productively when under severe time constraints. . . . Adults tend to learn best when they can set their own pace and when time pressures are kept to the minimum" (Brundage & MacKeracher, 1980, p.23). On the other hand, "Their [adults] reduced speed is compensated for by improved efficiency and competence in learning strategies" (p. 108). "The older they are, the more counter-productive time pressure becomes" (p.23). Given this condition, the teacher should “provide for sufficient discretionary time to allow the teacher to make individual responses to each learner. Adult learners require time and opportunities to modify their self-concept in response to learning” (p. 98).

i. Because participants are not required to respond immediately, as they might in a face-to-face dialogical situation, there is time to reflect, hence the opportunity for thoughtful composition in responses (Perkins & Newman, 1996; Mason, 1995; Harasim, 1989; Kaye, 1989; Davie 1988). Given the distributed nature of the congregation, and the asynchronous nature of the medium, time pressures such as the pressure to perform sometimes experienced in face-to-face learning situation are not experienced so poignantly.

ii. C. L. Musselman (personal communication, 1999) notes that in educational or psychotherapeutic contexts, asynchronicity, whether through actual CMC or e-mail, affords time to let negative feedback sink in.

iii. On the other hand, feedback can be virtually instantaneous between teacher and students or among students, if that is what is wanted.

iv. An empirical observation related to asynchronicity states that turn-taking tends to be more equally distributed in CMC discussions (Kaye, 1989, p.11) which implies that more students are likely to participate more often when factors which shut them out of discussion are not present, e.g., time in “official” group study, or the presence of voluble others (Davie 1988). Picciano (1998) reported high anticipation among students of participation in the discussion: “The bell never rings and class is never over.”

3. Affordances arising primarily out of place independence (distributed congregation).

The notion of congregating for learning has generally implied a physical and social setting framed by time. Electronic distance education mechanisms such as the electronic
blackboard or audio-conferencing have increasingly stretched the notion well-past the original sense of face-to-face, physical contiguity. Brundage and MacKeracher (1980) tell us that adults can and do learn in a variety of such physical and social settings, and that there exists an interrelationship between them. Adult learners can work alone, along with one other person, or in a group, all of this in classrooms, workshops, seminars or cafeterias. The literature suggests that adults learn as much working alone or with one other person as they do in a group (Brundage & MacKeracher, 1980, p.19). Adult learners use groups in two ways: as a forum for helping them resolve their own individually-defined problems (individual learning) and as a mechanism for resolving group-defined problems where each member contributes to the total solution (group learning). We have, in our case, the opportunity to test that assumption with a learning condition characterized by virtual congregation.

i. Coupled with the medium's text-only characteristic, there is a reduction of discriminatory communication patterns. In the absence of physical and social cues such as gender, race, socio-economic status etc., we have a less-than-complete notion of the author of a message in CMC. On the other hand, the text-based nature of on-line education can enhance our interaction with one another. It is the ability to be an interesting writer which confers status in an otherwise status-free group of people (Kaye 1989). Harasim (1986, 1990) notes that written discourse moderates many of the issues of status and that when using written discourse, as opposed to oral discourse, students are more reflective in their commenting on others. From Harasim’s findings, Cohen (1995) concludes that: “the written mode of discourse will play a powerful role in affording Equitable Collaboration [sic]” (p. 19).

ii. Learning in this mode appeals to the housebound, the handicapped and others disadvantaged by geography from attending traditional learning venues (Coombs, 1989).

iii. The potential exists of bringing a range of human resources to bear which might not be possible in some traditional settings (Kaye, 1989). Harasim (1989) points to the guest electronic lecturer, while Owen (1989) develops the notion of the writer-in-electronic-residence – a genuine author who appears as a guest expert on writing and interacts with the children through the medium.

iv. The “sense of privacy” (Ruberg, Taylor, & Moore, 1996, p.72, pp. 86-87) created by the medium, “makes interviewees somewhat more willing to disclose information than they would in face-to-face interviews or on paper-and-pencil questionnaires.” For the same reason,
Sproull and Kiesler believe that the self-disclosure induced under the conditions of CMC has more honesty than other methods. Hartman et al. (1991) found that less able, poorer performing students or those with writing anxiety were more comfortable in the CMC environment because of the diminished social context (see also 4. above).

Selfe (1990) reported that women tended to participate more and interact more under CMC conditions than in the traditional classroom setting because they were less inhibited in stating their opinions.

4. Affordance arising out of the inherently motivational nature of the medium.

i. Active, ongoing, intense participation in learning activities has been one of the major outcomes of the use of CMC technology. This can be compared with the often episodic nature of directed activity surrounding the once-a-week seminar or other learning activities which require self-starting. Students tend to stick with CMC-related activity on a continuous basis (Harasim, 1989). “Literally hundreds of highly intelligent comments were contributed to our computer conferences each month by both students and teachers. The quality of these online discussions surpasses anything I have been able to stimulate in my face-to-face classroom” (Feenberg, 1999, e; see also Davie, 1987).

5. Affordance arising out of the low bandwidth, text-only nature of the medium.

In its most general sense, the notion of bandwidth implies the capacity for carrying information between a sender and a receiver, per unit of time. The concept of bandwidth has entered the general vocabulary of communications from electronics where it refers to a range of Hertzian waves and the capacity of that band to carry information in electronic signal form. Thus, on a continuum from narrow to broad, we may array a number of communications media: telephone conversation, radio, television without sound, slow-scan television with sound, full television presentation with stereo sound. What is important to recognize is that in electronic terms, hundreds of telephone conversations (narrow bandwidth) can take place within the spectrum space dedicated to only one television channel (broad bandwidth). In a metaphorical sense bandwidth refers to the complexity of any medium to carry varying sources of information such as sound, images, motion, indeed body language. On-line, text-only CMC is narrower in bandwidth than the electronic blackboard which is narrower than television, which is narrower than face-to-face communication. That part of the signal that does not contribute to the communication is termed noise.
As an educational medium, CMC relies on adequate writing skills, and encourages the development of expert writing skills (Davie, 1989; Picciano, 1998). Writing in 1999, Feenberg believes that participating in a text-only medium may be the very essence of electronically mediated education:

On the other hand, we have a well established method for communicating in a narrow bandwidth. It's called writing. And we have a rich experience of using writing to overcome the limitations of bandwidth. Writing is thus not a poor substitute for physical presence and speech, but another fundamental medium of expression with its own properties and powers. It is not impersonal, as is sometimes supposed. We know how to present ourselves as persons through writing; this is what correspondence is all about. Nor is it harder to write about ideas than to talk about them; most people can formulate difficult ideas more easily in written form than in speech in front of an audience.

These considerations on writing hold the key to online education. The online environment is essentially a space for written interaction. This is its limitation and also its potential. Electronic networks should be appropriated by educational institutions with this in mind, and not turned into poor copies of the face-to-face classroom which they can never adequately reproduce.

6. Affordance arising out of central storage of the corpus of course communication.

i. Since all the communication from all of the interested parties remains available on the central host computer system, this communication is searchable, hence retrievable. Note-taking or tape-recording in lectures takes place because the information coming from the source is ephemeral. Notes could be removed by the author or facilitator, but the occurrence was rare in the course under consideration.

In iterations of the CMC systems which followed PARTI, interconnectivity with other data sources enhanced its potential, but for our purposes, that possibility did not exist.

ii. The record of each student can be isolated and student performance exposed and tracked. As a result, Davie (1987) reports one student commenting that under the conditions of CMC, "it has been almost compulsory to do the reading" (p. 22; 1988).

iii. B. J. Burnaby (personal communication, 1999) comments that imitation is a powerful adult learning strategy. "The teacher of adults should be able to model behaviour which is relevant to the role of the learner" (Brundage & MacKeracher, 1980. p. 26). Three key elements of that role, among others, which are modeled for the students by the facilitator are writing style, use of appropriate vocabulary generally and domain-specific, and the delivery of feedback. Indeed, the only modelling available for some students is that which comes through text.
In its synthesis of reading, writing and thinking connections (1991), the Division of Instruction of the Maryland State Department of Education stated: “Studies confirm that writers imitate the reading they are introduced to: readers of stilted, unnatural basals write stilted unnatural prose. Surrounding student writers with well-written models of many genres and styles will enlarge the resources at their disposal when they write” (p. 66). In their comparison of face-to-face and CMC situations, Ruberg, Taylor, and Moore (1996) reported that students in both conditions learned from and modeled methods of thinking and responding which they saw represented by their instructor. L. E. Davie (personal communication, 1993) points out that the modelling of respected students is also powerful. While modelling serves not only to motivate and direct, it reduces search behaviour in how to grapple with the elements of the course in a trusting way.

iv. Davie and Wells (1991) point out that transcript-based assignments can be designed which promote reflection and student self-awareness. Under CMC conditions, the writing of position papers with respect to issues raised by students or the instructor, commentary by other students on those papers or the critique of commentary from a theoretical perspective all depend on interaction with the electronically archived transcript of course transactions.

C. Educational Limitations

1. Limitation arising jointly out of the many-to-many distributed nature of the medium and out of place independence (distributed congregation).

i. Computer conferencing does not easily facilitate group problem-solving or decision-making except among expert users. Although computer conferencing augments our ability to interact with one another, the medium is limited in providing tools to organize and manage group activities (Davie, 1989; Harasim, 1989).

2. Limitation arising primarily out of the asynchronous nature of the medium.

i. The immediacy valued in the face-to-face educational or therapeutic situation is lost (C. L. Musselman, personal communication, 1999).

3. Limitations arising out of the low bandwidth, text-only nature of the medium.

i. Decontextualization due to narrowness of communication bandwidth. In 1989 Feenberg was not as positive about communication in the written-only medium as he is in 1999 (above):

Creating a purely electronic or ‘virtual’ meeting space results in a loss of context. Contextualization is the weak link in computer conferences, far more so than in
familiar communications systems. The absence of tacit cues and coded objects strands participants in a contextual void that may leave them literally speechless. The uncertainty of a poorly contextualized communication leads to defensive withdrawal. . . CMC writing may be compared to vocalized communication in a face-to-face encounter: both media carry the semantic content of the exchange. But the sound of voices alone is insufficient for effective communication, and, as we have seen, gestures and facial expressions are needed to provide additional cues. The bandwidth of writing is even narrower than that of voice. CMC thus suffers comparable limitations when it is confined strictly to the exchange of written texts.

Visual cues, body language and phatic functions (those verbal functions which signal our availability to communicate) which would be found in the face-to-face learning situation and perhaps communicate intimacy are lost (Kaye 1989 p.17; Feenberg, 1989, p.23) “A smile on a student’s face is interpreted by the teacher as a sign of understanding; a student nervously looking at his wristwatch is interpreted as boredom or lack of patience” (Picciano, 1998, e).

But not to be overlooked, however, Perkins and Newman point out that: “even novice users were determined enough to work around the lack of contextual information and restore a status system” (1996, p. 167).

ii. Duplicating or replacing visual clues in an on-line discussion is difficult, requiring some inventiveness. Text can be devoid of that cues that signal irony or affect, such as body language.

iii. Ruberg, Taylor, and Moore (1996) found that being forced to type slowed some students down.

4. Limitations arising out of the small size of the computer display: the small-window problem (Davie, 1989).

i. At the time of the course under consideration in this thesis, the person-machine interface was cumbersome, requiring some students to rise up a long, shallow learning curve. Ruberg, Taylor, and Moore (1996) attribute information overload to the limited nature of the interface which, they assert is caused by a difficulty to control wanted and unwanted information.

ii. Reading long texts is difficult conceptually and physically: following the argument of a paper is difficult over many screens, and eyestrain can exacerbate the problem.

iii. The small display makes keeping track of where one is in the scheme of things difficult. Because the on-screen text may only be a fraction (generally, 24 book-length lines) of longer documents, making sense of, or integrating the meaning of texts longer than, perhaps
three screens becomes problematic in memory, perhaps due to the focus that the system confers on those 24, often-shifting lines.

iv. Together with the condition of distributed congregation and asynchronicity, the small window contributes to a disturbing condition for some students which was referred to in Ruberg, Taylor, and Moore' study (1996) as the "'jumbled' nature of the discussion" — non-linearity or apparent disjointedness or incongruence in the flow of or the juxtaposition of messages. (p. 86; see also Davie, 1989.) Because the medium queues messages in electronic conferences sequentially by time of receipt, as opposed to sequentially by discussion topic or theme, often the sequence messages in a conference seems incoherent since topics can be fragmented by the chance inclusion of material devoted to other aspects of a given theme.

III. CMC as a Medium for Experiential Learning.

In this part we examine four key aspects of the role of experience in adult learning which condition learning generally and specifically in the CMC medium: the learner's private reality, experience as both an enhancer and constraint to learning, and the importance of feedback.

B. J. Burnaby (personal communication, 1999) believes that the strength of CMC as an educational medium is in its power to support experiential learning -- precisely the kind of continuing professional education characterized by Houle (1980) which relies on ongoing reflection on performance by a group of professional practitioners. Lave and Wenger (1991, p. 93) believe that the effectiveness of the circulation of information among peers suggests that engaging in the practice of circulating and evaluating information, rather than simply regarding the value of the information itself as an object "may well be a condition for the effectiveness of learning."

Chaplin tells us that experience is the knowledge or skill derived from practice or learning (1985, p. 166). Two key processes interweave to shape and give meaning to that experience: reflection and feedback. We define reflection as the intentional activities that stimulate the intellect and the affect to explore learning experiences and lead to the development of new meanings (Andrusyszyn & Davie, 1995; see also Boud, Keogh, & Walker, 1985; Burge 1994). Feedback is the mechanism by which we gain knowledge of the results of our behaviour (Tuckman, 1976) or, as Chaplin characterizes it, any kind of return information from a source useful in regulating behaviour (p. 176). The former is generally understood as being a personally-generated process, or, as Andrusyszyn and Davie describe it: "one which is active, deliberate,
conscious, internal, dialectical, and goal directed” (1995, e). Feedback is generally understood as impacting on the learner from external sources in response to personal actions.

This internal-external distinction between reflection and feedback is unfortunately blurred in usage. Together, however, they comprehend both ends of a cognitive spectrum from purely self-centred, inquisitive reflection to the deliberate pondering of feedback in experimental research; while each notion appears as unique, the two cannot be entirely disengaged. The process of writing provides an example of this: the very act of writing is experientially-driven when considered from the perspective of having to reflect on one’s choice of words with some care for not only connotative and denotative value but the effects they are likely to have on readers and the feedback they are likely to generate from readers.

A. Aspects of the Role of Experience in Adult Learning: Implications for Facilitation

Four key aspects of human experience impact on the adult learner regardless of the learning situation: (a) the adult learner’s private reality, (b) the individual learner’s ability to apply personal experience in the new learning situation, (c) experience as a deterrent to change and (d) and the learner’s relationship to feedback. For any one individual, each aspect may or may not lead to personal educational affordances or limitations and each aspect has implications for facilitating learning under the CMC learning context.

1. Public adult learners and their private reality.

“Adult learners enter learning programs with immediate and personal needs, problems, feelings, hopes, and expectations” (Brundage & MacKeracher, 1980, p. 102). This private reality, which is rarely considered by instructors since in some callous sense those who present themselves as learners are not supposed to be, ultimately, obstructed by such considerations. The affordances of asynchronicity and place independence may appeal to those who feel that they can face a graduate learning challenge under these conditions where perhaps a face-to-face seminar situation is simply out of the question. Similarly, the apparently complex nature of the mechanism can be daunting for the technical novice, or educational conservative. What is always true is that this private reality is a major consideration in the ability of the student to cope with the learning regimen. Brundage and MacKeracher believe that the private reality -- especially if elements of it are obstructive -- should become somewhat public:
The feelings and needs are present-tense and are directly related to the learner’s current life experience, tasks, relationships, and problems, and indirectly related to his past experience. These present-tense feelings and needs must be respected and recognized. Those which create obstacles to learning must be reduced or removed at the beginning of the learning program. More specific obstacles can include problems in registering, funding, attending, succeeding, and completing the program. Other obstacles may be related to conflicts between family and work responsibilities and learning responsibilities. All these problems are appropriate for discussion in teacher-learner relationships (p. 102).

A fine list of such personal obstacles was compiled by Burge in her thesis (1993) and subsequent article (1994) on perceptions of learning under CMC. She identifies 12 categories of stressors which bedevilled her study’s participants: (a) having to use cognitive and affective management skills simultaneously; (b) manage loads of information in the face of time pressure, information overload or the perception of irrelevance of the topic; (c) time / task management -- deciding why, when and how to contribute; (d) not getting timely or useful peer messages; (e) feeling ‘out of sync’ with class discussions; (f) having to decide quickly whether to stay in cognitive synchronicity with the focus of class; (g) fearing loss of valuable ideas; (h) cognitive confusions; (i) technical problems (j) disfunctionally divergent peers (k) poor message threading (l) focus on one’s own project to the exclusion of everything else [as perceived by a disgruntled other]. She does not report whether any of the above stressors were fatal.


It is the individual learner’s ability to apply personal experience in the new learning situation which determines the quality of the information transfer: “When past experience can be applied directly to current experience, learning is facilitated. When past experience can be applied only indirectly, the adult learner may have some difficulty perceiving connections and making transfers” (Brundage & MacKeracher, 1980, p. 99). Interventions, then, which seek to relate personal experience to the current learning task maximize the impact of that experience. For this connection to occur, adult learners need the opportunity for self-reflection in a threat-free, non-judgmental environment, where the relationships between the instructor and the students and the students with their peers are based in trust. Devices which can assist in
connecting past experience to the present learning task include representation through metaphors, analogies, graphs, figures, drawings and games (p. 99).

3. **The paradox of the role of experience in the learning situation.**

   Past experience presents the adult learner with a paradox in the learning situation. On the one hand, the stability of past experience and the learner’s self concept lead to confidence and a willingness to enter into the process of change. On the other hand, the process of change has the potential for changing the meanings, values, skills, and strategies of past experience and the self-concept, thereby temporarily destabilizing both. This lack of stability may lead to loss of confidence and to possible withdrawal from the process of change. (Brundage & MacKeracher, 1980, p. 101)

   A powerful example for me of this problem arose out of my own experience as technical coach. In terms of having appropriate notes, one student (not in our reference group) appeared to be caught between operational paradigms and created a personal impasse to thoughtful reflection on content. This person became obsessive in the maintenance of an “in-good” paper record at home. All messages from all conferences were downloaded to the home computer, then printed off, punched and stored in a three-ring binder. No amount of convincing would confirm to this person that the entire record was available on the central, host computer, and that the record was searchable from various important perspectives. In this case, the personal need to maintain good paper-based notes in the traditional sense was confounded by a technology which required some generically different cognitive strategy for personalizing important information. This person ultimately withdrew from the course.

4. **Feedback is essential for adult development.**

   Tuckman asserts that: “The sine qua non of change is feedback” (1976, p. 341). Brundage and MacKeracher remind us that:

   Feedback is essential if the adult learner is to modify his behaviour in an ongoing way. Feedback can only be given when the learner has acted in ways which can be observed by others. He must perform the skill or strategy to be learned or reproduce the knowledge or values in representational form (talking, writing, drawing, and so on (1980, pp. 105-106).

   In what amounts to a dialectic process, Tuckman (1976) demonstrated that willing engagement in a process of personal, professional change for teachers was centred on the giving, getting, and internalizing of feedback. Tuckman articulated 12 rules for feedback of which we reproduce five as being the most salient in our text-based situation where clarity of meaning is essential (pp. 341-342):
1. Feedback must provide clear, incontrovertible evidence of exactly how one appears to behave.

2. The feedback source must be reputable and believable, and his of her intentions must be accepted.

3. Feedback must be in terms that the teacher [any recipient] can understand and relate to.

4. The feedback recipient must have a clear ideal model of what his or her behaviour or characteristic should be.

5. The reception of feedback must not involve more than low risk.

To the above Brundage and MacKeracher (1980, p. 106) would add:

1. Feedback which is immediate has greater potential for affecting learning. The longer the interval between the act and the feedback, the less likely it is that the feedback will have a positive effect on learning.

2. Feedback which is descriptive and implies a possible correction is more helpful than feedback which is judgmental and demands correction.

3. Learning is facilitated when feedback about skills and strategies is task-oriented, when feedback about knowledge is information oriented, and when feedback about personal meanings and values is feeling-oriented.

4. Learning is facilitated when feedback is provided in an ongoing way throughout the entire program so as to allow for continuous assessment of progress and for continuous modification of behaviour.

B. Adult Learning as Transformation: Extensions of Reflection and Feedback

The goal of adult learning is a relatively permanent change or enrichment of knowledge, values, skills, strategies and behaviours. This change is the result of experience and activities involved in the learning process. While the learning of children may also be characterized in much the same way, Brundage and MacKeracher note a crucial distinction between the two: child learning is viewed as forming, that is, the acquiring, accumulating, discovering and integrating of the above-noted knowledge, values etc., while adult learning is characterized as the transforming of knowledge through modifying, relearning, updating and replacing. Mezirow (1975, 1978, 1981, 1990, 1991) characterizes this process as in adults as perspective transformation while Basseches (1984, 1986) explores it through the more traditional notion of dialectic in adulthood.

While these twinned processes are characterized somewhat differently in each case, reflection and feedback as features of this adult transforming process are necessary conditions to, arguably, every theoretical position relating to adult learning. Andrusyszyn and Davie conclude
that: "Activities which facilitate reflection may drive the transformation of what may be perceived as unrefined information into integrated knowledge" (1995, e). Stated otherwise: meaningful, ongoing personal reflection along with participation in a feedback loop are central elements for all theories of adult learning.

I. Adult learning from the socio-cultural perspective: Vygotsky and his legacy.

While studies of cognition which emanate out of the Piagetian tradition tend to concentrate on the nature component of the nature-nurture controversy (see Chaplin, 1985, p. 296), the eastern-European, socialist tradition tends to concentrate on the development of the individual in the socio-cultural context. The psychologist most often associated with this tradition is Lev Vygotsky (1978, 1986, 1987). In this section we shall examine the legacy of Vygotsky along with a Norwegian example of the application of his notion of the Zone of Proximal Development (ZPD) which is at the heart of his educational psychology. In addition we shall examine the notion of situated cognition which is a latter-day extension of his fundamental principle of genetic development in the context of apprenticeship.

i. Lev Vygotsky. While Vygotsky is not generally perceived as an adult educator, his theoretical notions have a currency that reaches beyond children and their learning (Van der Veer & Valsiner, 1994; Gee, 1992; Grabe, 1992; Tharp & Gallimore, 1988).

At the heart of his educational psychology is Vygotsky's general genetic law of cultural development -- deceptively simple as articulated by Kearsley (1999c): that the full cognitive development potential of an individual requires social interaction to be actualized. For Vygotsky, the individual child's mental functioning develops through experience with cultural tools in guided participation with more skilled partners -- adults or more expert peers. An essential feature of learning is that it awakens a variety of internal developmental processes that are able to operate only when the child is interacting with people in his environment and in cooperation with his peers (Vygotsky, 1978, p. 89).

Physiological growth and maturation are a child's natural line of development. A child's cultural line of development occurs on two planes: first on the interpsychological, i.e., interpersonal plane, and later on the intrapsychological (personal, inside-the-person) plane. The natural and the cultural are intertwined as are the personal and social planes. The acquisition of new cultural instruments/tools (including language) is preceded by a period of natural development toward a state of readiness at which the next stage may begin. (See also Van Der
Veer & Valsiner, 1991, 1994.) "Children learn first through their interactions with adults, then internalize the learning. The outcome is 'higher psychological / mental functions' (Bailey, 1999, p. 18). (See also Bloome & Green, 1992; Gee, 1992.)

The ZPD reflects Vygotsky's notion that cognitive development is limited to a certain range at any given age. The potential for such cognitive development is limited to a certain time span. Vygotsky defined the ZPD as the distance between the actual developmental level, as determined by independent problem solving, and potential development, as determined through problem solving under adult guidance or in collaboration with more capable peers. Maximal development during the ZPD depends, then, upon intense social interaction. Indeed, the range of skill that can be developed with adult guidance or peer collaboration exceeds what can be attained alone (Kearsley, 1999c; Bailey, 1999; Guerra & Schütz, 1999; Bloom & Green, 1992; Gee 1992; Gudmundsdottir, 1998). " 'The mind, therefore, is both elastic, in that cognitive growth may take different directions depending upon the socio-cultural environment in which it occurs, and unbounded in terms of its extent for potential for growth' " (Smagorinski, 1995, p. 196, as quoted in Gudmudsottir, 1998, e).

Presenting material that is just beyond what the child can manage independently reflects effective teaching in the ZPD. Such engagement creates opportunities for students to learn new and more sophisticated strategies for using language and other tools. "Teaching consists in assisting performance through the ZPD" (Tharp & Gallimore, 1988, p. 31). "Teaching can be said to occur when assistance is offered at points in the ZPD at which performance requires assistance." This was quoted by Mortensen (1993, p. 237) as "a promising definition."

Brundage and MacKeracher (1980, p.15) point out that it is also a condition for adult learning that there exist sufficient prior patterns and programmed structures to handle new experiences productively. "If the adult learner does not already possess these patterns and programmed strategies for handling new material, then the learning activities must provide opportunities for him to acquire them, without treating him as childish and immature."

Scaffolding implies that individuals build on and extend each other's statements and contributions. The person who intervenes in this scaffolding process could be an adult (parent, teacher, caretaker, language instructor) or another peer who has already mastered that particular function (Gudmundsdottir, 1998; Guerra & Schütz, 1999). Bailey (1999) reminds us that while the term is often attributed to Vygotsky, it was not developed by him; in fact, the notion first appeared in Wood, Bruner, and Ross (1976). Scaffolding occurs, for instance, when an adult monitors a child's level of skill in order to elicit a higher level of competence, and in doing so, structures and models appropriate solutions to problems by helping the child transfer relevant concepts from a familiar situation to a novel one (p. 18).

Transferring responsibility represents a notion implicit in Vygotsky, which has taken form out of the legacy of his thought. "Rogoff (1984) who coined the term, explained that as informal instruction proceeds and the child gains greater understanding of the task, the initial high levels of scaffolding are adjusted. As a result, the child is permitted and encouraged to assume greater responsibility for carrying out the task" (Bailey, 1999).

Apprenticeship indicates the learning of a cultural practice through collaborative actions with a more knowledgeable or capable other. The co-participant needs to make clear to the apprentice the significance of the actions taken.

For instance, a perennial problem in teacher education in Norway concerns the supervision of student-teachers while in the field (Hoel, Gudmundsdottir, Haug, & Vold, 1997). The current practice is that student teachers are spread out in schools all around the region nearest to the university. Often it takes the university supervisor a whole day to visit them if they are in a school far from the university. Therefore, student teachers are basically left on their own out in the schools with their cooperating teachers. (Hoel, et al., 1997, e)

This problem of advising these students was addressed by an e-mail-driven debriefing / spiraling reflection process modeled on Vygotsky's theory. In this example, the teacher training situation establishes a frame for the ZPD.

Student teachers followed a five-step model (termed ALACT by Hoel, et al.; see also Veen, Lockhorst & Korthagen, 1995) designed deliberately to provide a scaffolding opportunity between student-teachers and their university tutors: (a) description of the action: student teachers describe in vivid detail a concrete episode in the classroom; (b) looking back at the event; (c) identifying fundamental pedagogical principles in that episode; (d) generating
alternative strategies; (e) step five brings us back to step one of the new cycle, description of the action.

By way of explanation, Hoel, et al. note:

All classroom activities take place within a specific cultural context that embodies them with meaning. Reflection is also a kind of higher mental process, what is often called an “intellectual tool”, enabling teachers and student teachers to climb to higher grounds in terms of their developing professionalism and practice. It takes place in a context, in a particular classroom and over a specific episode or a series of episodes. (e)

Once the student teachers reach an understanding that enables them to achieve an interpretation of classroom events that is consistent with that of the host teacher and the university tutor, they will have achieved inter-subjectivity. “Achieving inter-subjectivity is not a matter of adding up knowledge, it is a qualitatively different understanding of the situation than that which was previously held” (Hoel, et al., 1997, e).

To Vygotsky, a clear understanding of the interrelations between thought and language is necessary for the understanding of intellectual development. Language is not merely an expression of the knowledge the child has acquired: there is a fundamental correspondence between thought and speech in terms of one providing resources to the other. Language, including written language, becomes essential in forming thought and determining personality features (Guerra & Schütz 1999). Vygotsky concluded that thought undergoes many changes as it turns into speech: thought is not merely expressed in words; but rather realizes itself in them (Vygotsky, 1986, p. 251 ). In a formulation strikingly reminiscent of Kant’s interpretation of concept and precept, Vygotsky opined that a word devoid of thought is a dead thing, and a thought unembodied in words remains a shadow (Vygotsky, 1986, p. 256). In brief all language, mediates social life and intellectual processes, hence learning is a both a social and a mental process: “Thought and speech turn out to be the key to the nature of human consciousness” [italics Vygotsky’s] (Vygotsky, 1986, p. 256).

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2 The entire quotation, translated by Kosulin in Vygotsky, 1986, p. 256, reads as follows:

The relation between thought and word is a living process; thought is born through words. A word devoid of thought is a dead thing:

... and like bees in the deserted hive
The dead words have a rotten smell
N. Gumilev

But thought that fails to realize itself in words also remains a “Stygian shadow” [Author: O. Mandelstam]. The rendering in the text is found in Kearsley, 1999c, e.
Vygotsky’s biographers, Van der Veer & Valsiner (1994), make the point that contemporary western notions about Vygotsky contain “blind spots” (p. 6). Van der Veer & Valsiner have chosen to correct the record in three places by pointing out that (a) Vygotsky was “intellectually interdependent” (p. 6) with both European and American colleagues, thus some of the notions attributed to him arise out of their own research traditions; (b) Vygotsky was interested in the individually developing person, thus while he differed with Piaget in the evaluation of egocentric speech, he did not differ with respect to the developing personal -- cognitive (and affective) structures; and (c) Vygotsky did not characterize the role of the social other as always helpful.

ii. Situated learning and legitimate peripheral participation: Lave, Lave & Wenger. Proceeding directly from Vygotsky’s notion of apprenticeship, but in a contemporary context, is the general theory of knowledge acquisition labeled situated learning. Kearsley (1999b) notes that situated learning as a theory has been applied in the context of technology-based learning activities for schools that focus on problem-solving skills. Within the scope of situated learning theory, Jean Lave and Etienne Wenger (Lave, 1991; Lave & Wenger, 1991) posit their specific theory of legitimate peripheral participation (LPP).

Lave argues that learning, as it normally occurs is a function of the activity, context and culture -- “lived in world” (Lave, 1991, p.64) -- in which it occurs, that is, in which it is situated. This contrasts, she believes, with most classroom learning activities which involve knowledge which is abstract and out of context (Lave, 1992).

Social interaction or coparticipation (Hanks, 1991, p. 13) is a critical component of situated learning in that learners become involved in a "sustained community of practice" (Lave, 1991b) which embodies certain beliefs and behaviors to be acquired. As beginners or newcomers move from the periphery of this community to its center, they become increasingly active and engaged within the culture and hence assume the role of expert or oldtimer. The ongoing development of an identity within the community is central to the career of newcomers (Lave, 1991; Lave & Wenger, 1991).

This finding is not unlike Houle’s where he detected that professions operate inside a collective identity, among the characteristics of which are those which develop solid bonds
among the practitioners: creation and nurturance of a subculture with distinctive attributes, lore, folkways, mores, traditions, and ongoing clarification of the relationship of the professional service to its users. (1980, Ch. 3). While all of the fourteen professions which Houle investigated had formal, intentional, deliberate pre-service training systems, situated learning is usually unintentional rather than deliberate.

Lave and Wenger (1991) provide an analysis of legitimate peripheral practice in five different settings: Yucatec midwives, West African Vai and Gola tailors, navy quartermasters, meat cutters, and alcoholics. In all cases, there was a gradual acquisition of knowledge and skills as novices learned from experts in the context of everyday activities. Key to the learning was that knowledge was presented in authentic contexts -- settings and applications that normally would involve that knowledge and which are social and collaborative (Kearsley, 1999b).

Learning is a process that takes place in a participation framework, not in an individual mind. This means, among other things, that it is mediated by the differences of perspective among the coparticipants. . . . Learning is, as it were, distributed among coparticipants, not a one-person act. While the apprentice may be the one transformed most dramatically by increased participation in a productive process, it is the wider process that is the crucial locus and precondition for this transformation. (Hanks, 1991, p. 15)

Other researchers have further developed the theory of situated learning. For instance, Brown, Collins and Duguid maintain that cognitive apprenticeships support learning in a domain by enabling students to acquire, develop and use cognitive tools in authentic domain activity. Learning, both outside and inside school, advances through collaborative social interaction and the social construction of knowledge (1989; see also Kearsley, 1999b).

Given the primacy of reading and writing to learning within the CMC framework, the following summary of socio-cultural approaches to literacy captures not only the differences between this approach and traditional approaches but the very essence of what the socio-cultural approach implies:

Socio-cultural approaches to literacy question several related common-sense assumptions inherited from the discipline of cognitive psychology. Three of these assumptions are as follows: 1) thinking and speaking are functions of individual minds; 2) literacy is an individual mental skill involving the ability to read and write; and 3) intelligence, knowledge, and aptitude are states of individual minds.

A socio-cultural approach to literacies replaces the three common-sense assumptions above with the following socialized and historicized versions . . . : 1) thinking and speaking are functions of social groups and their specific Discourses; 2) literacy is a social skill involving the ability to take a functional part in one or
more of a given social group’s Discourses, attained through guided participation and built on trust; and 3) a good part of knowledge (what people have a right to claim to know) resides not in their minds, but in the social practices of the groups to which they belong (Grabe, 1992, pp. vii-viii).

For the record, a contemporary reconciliation — if indeed reconciliation is really necessary, given that the differences in the relative contributions of nature and nurture appear to be dictated more by research emphases than genuine theoretical disjunction — of these two approaches suggests that: “Cognition is *typically* situated in a social and physical context and is rarely, if ever, decontextualized” (Butterworth, 1992, p. 1).

**IV. The Centrality and Significance of Messages: Psychology Marries Technology**

Having identified the significant features of the course and having reviewed the educationally-related characteristics of CMC, and having touched on key notions of experiential learning, we now turn to the artifacts which are created out of this amalgam, the messages themselves which are the communication carriers of the teaching / learning endeavour. The messages which form the message stream are the manifestation of a dynamic interplay existing among individual personalities. Messages, then, are the tokens for personal engagement in learning, course management, community management and the presentation of one’s self personally to other participants. Messages create the on-line persona of the message-maker.

While these messages will be characterized from a host of different perspectives as we proceed, to begin our study, it is critical to understand them as an outcome of one very critical facet of human behaviour — the psychological bi-dimensionality of mastery and belonging. In addition, we shall examine messages as examples of an extension of this basic bi-dimensionality expressed in terms of the poetic and political roles they serve.

**A. Mastery and Belonging: A Fundamental Tension in Adults.**

“Human behaviour tends to be organized around two trends: the trend to master and the trend to belong” (Brundage & MacKeracher, p. 13). Much of the literature related to adult learning also reflects this dichotomy. The trend to master relates to feelings of autonomy; notions of independent behaviour within society, and a sense of personal control over the conditions of one’s life. The trend to belong relates to feelings of affection, shared meanings and values and interdependent involvement. Development of both independent and dependent behaviours are necessary — as is the ability as an adult to be almost totally dependent under the appropriate
circumstances -- in the mature adult. Both trends reflect important needs: learning programs which omit one in favour of the other will prove less satisfaction to the learner (p. 115).

**B. Poetry and Politics: An Extension of Mastery and Belonging.**

Holman and Harmon (1986, p. 384) writing about the term ‘poetics’ tell us that, The term is often used today as equivalent to “aesthetic principles” governing the nature of any literary form. Thus critics sometimes speak of a “poetics of fiction.” In a large sense, justified by its supposed etymology, a poetics is the science of any activity that produces a product, whether a set of sonnets or a set of dentures -- or, indeed, an individual’s set of CMC messages. ‘Politics’ embraces notions of public human organizing and decision-making binding the wills of individuals and groups.

The relationship between politics and poetics is the central theme of Michael Herzfeld’s 1985 ethnography entitled *The poetics of manhood.* In this study about Greek maleness on the island of Crete, Herzfeld argues that a Cretan man’s successful performance of whatever he does announces his personal excellence. To be seen to be constantly excellent is the imperative: to be different or unique confers significance on what is accomplished; to live life with flair is to be successful as a Cretan man. Effective performance uses form to draw attention to a set of messages. If the performance lacks flair, the message lacks significance. And, in Herzfeld’s context as elsewhere, genuinely poetic acts serve to meet many of life’s agendas at one time.

Of course, the set of messages to which Herzfeld refers are cultural abstractions or metaphors for effective maleness. And while the set of messages which form the stuff of this work speak about “qualitative” or “naturalistic” research, and are exchanged through the mediation of a computer network, their motivation, articulation, distribution and impact are equally both “political” and “poetic.” Messages have recipients -- audiences -- which makes each message a political act motivated by and speaking to the power relationships that obtain in the course as a socio-political situation. Sociolinguist Robin Lakoff (1990, p. 7) argues that, “Language is politics, politics assigns power, power governs how people talk and how they are understood.”

While message creation supports all of the macro-organizational political objectives of participants in the course, I submit that message creation is also, in itself, poetic -- the considered use of language to convey often multi-layered, multi-purposeful meanings. In that sense, then, message creation decisions are not only agenda-serving decisions but language-choice decisions -
- stylistic considerations including not only who gets responded to, out of the mass of messages in the message stream, but when and how, including stylistic options and the vocabulary chosen. Thus, having something to say, however elegant or socially transformative, requires that message senders have not only a practical mastery of the sometimes-daunting technological delivery mechanism but a sufficient grasp of written language appropriate to working at a graduate level in the CMC situation. It is this interactive flow of feedback through messages that is at the very heart of the dialectic learning process.

V. Facilitation

In the actual experience of online education, technology is not a predefined thing at all, but an environment, an empty space faculty must inhabit and enliven. They [teachers, instructors, facilitators] have a craft relation to the technologies rather than a development strategy. They try to get the feel of it and figure out how to animate it. (Feenberg, 1999, e)

In this section we examine literature that relates to five aspects of the facilitation process: (a) essential personal characteristics of the facilitator; (b) the skills and practices for social and organizational facilitation; skills and practices for facilitating the learning task (d) on-line interventions for collaborative learning; (e) moderating. In section F we are introduced to two approaches for facilitating the learning of qualitative research, one by the now-legendary Professor Anselm Strauss who taught in a face-to-face, seminar setting and the other by Professor Lynn E. Davie who pioneered the delivery of a course in qualitative research through CMC. To end this section we reflect on two archetypal facilitative styles, the narrative and the episodic, which are pivotal in answering the research question concerning successful facilitation within the CMC medium.

By educational facilitation in the CMC context I understand the entire process by which an instructor engages to mount and deliver a course to a group of students, including decisions with respect to: (a) the goal and objectives of the endeavour, (b) philosophy of teaching and learning; (c) selection of content; (d) design of interventions; (e) on-line management (moderation); and (f) work in the role of counselor to individuals or groups of students.

Davie (1989) argues that the literature on small human groups can inform on-line facilitation, especially group discussion and problem solving. Facilitators, Davie suggests, must exploit the distinction between task functions -- those that relate to the job the group is trying to perform -- and group building and maintenance functions, both of which must be balanced and
maintained. Similarly, a distinction must be made between the individual as an individual and
that individual in the social setting (Getzels & Guba, 1957; Jourard, 1968), or, as Cohen (1995)
phrases it: “Cultures of understanding have a social as well as individual dimensions” (Cohen,
1995. p.6). “Collaboration is essential to both individual and social outcomes” (p.10). Following
the description of the personal characteristics of the facilitative instructor, I will use that
distinction further as an organizing device when identifying the skill sets necessary for
facilitators.

**A. Essential Personal characteristics of the facilitative instructor – the facilitator.**

1. Has some prior facility with the technology -- at least at the level of word processing
   on computers and facility with electronic mail (Hiltz, 1986).
2. Is prepared to exercise leadership at all points in the process-- setting the agenda,
   keeping the group working toward its goal. Lack of adequate leadership is a limitation of
   educational possibility (Davie & Palmer, 1984).
3. Is personally interested in the educational potential of networking and CMC (Hiltz,
4. Has a commitment to the values of group work and cooperative learning (Kaye, 1989).
5. Has sufficient time, not only for actual on-line time, but, more importantly, the time
   [and willingness, I reiterate,] to consider students’ contributions and to react to them
   appropriately (Kaye, 1989; Bailey, 1999).
6. Has the ability to self-disclose appropriately, as required, to advance discussion and
   join the group not only as a teacher but as a peer (Jourard, 1968; Bailey, 1999).
7. Models participation behaviours (Mason, 1989; Bailey, 1999; Perkins & Newman,
8. Recognizes the need for an orientation to teaching which balances care for content with
   dedication to students; feels a responsibility to both.

**B. Social and Organizational Facilitation: Skills and Practices**

1. Establishes a personal, one-to-one relationship with each individual within the group
   as a warm, friendly gesture, and as a basis for pointed feedback or other counseling. (See the
   discussion in Bailey, 1999, pp. 198-212.)
2. Calls upon other communications media as required (telephone, face-to-face) to
   achieve course-related objectives. Davie (1989), for instance, begins his courses with a face-to-
face workshop designed to introduce participants to each other, introduce course materials, provide training as required and answer questions.

3. Creates a communal attitude of trust and non-judgmentalism. One mechanism for achieving this condition is the establishment of a purely social, virtual space / conference where the facilitator may or may not be a participant such as Harasim’s Coffeeshop (1989). It is my experience that students quickly overcoming initial disclosure anxiety [my term] by participating in a non-threatening, non-content-oriented, getting-to-know you context. (See also Kaye, 1989, pp. 14-15). Perkins and Newman (1960) relate “recreational e-text” to the development of a collective identity.

4. Condone and, perhaps, affirms a less-than-academically-formal messaging climate, where educational discourse is often simply chatty (Perkins & Newman, 1996). Davie has “even been known to deliberately misspell a word or two” (1989, p. 82).

A fundamental aspect of learning is the social and communicative interactions between student and teacher, and student and student. This is true in face-to-face as well as asynchronous learning activities. The ability to ask a question, to share an opinion with a fellow student, or to disagree with the point of view in a reading assignment is critical to student learning. (Picciano, 1998, e)

C. Task Facilitation: Skills and Practices

Intervention design considerations must exploit not only the limitations and affordances of the medium but also be shaped in congruence with the probability of positive outcome behaviour predicted by salient adult learning theory. Mason (1995, p. 196) cautions us that, “A course which is simply replicated from one medium to another without being re-conceived to build on the particular advantages of each technology is comparable to a study rating users’ reactions to a whole range of fruit for the extent that they taste like an apple.” The following list identifies three practices seen as essential to successful facilitation of the learning task.

1. Conveys clearly course priorities, explicit expectations for tasks and dates related to assignments (Davie, 1988; Davie & Palmer, 1984).

2. Sets the intellectual climate of the course by setting out clear expectations of academic behaviour (Davie, 1989).

3. Has good lecturing skills which can be conveyed in written form (Davie, 1989).
D. On-Line Collaborative Learning Interventions

Davie and Inskip (1992) argue that the outcome of CMC education does not depend so much on the system being used but as it does on the creative, educational designs.

Arguably the most comprehensive discussion of on-line collaborative learning approaches available for the technology under consideration in our case is to be found in Paulsen (1995 and 1998). The overview of Paulsen’s synthesis of interventions found in Table 2-1 following represents not only Paulsen’s search through literature existing at the time (McCreary & Van Duren, 1987; Rekkedal & Paulsen, 1989; Kaye, 1992; Harasim, 1992, 1991 among others) but result of an empirical, on-line data collection. In addition to describing and discussing the interventions outlined in Table 2.1, Paulsen discusses other adult education devices not generally used in CMC due largely to the limitations of the medium.³

Paulsen’s list exemplifies the variety of interventions available to a facilitator for stimulating engagement with the course content and other students within the CMC setting.

Table 2-1
Paulsen’s Collected On-line Facilitation Techniques

<table>
<thead>
<tr>
<th>Individual Techniques: On-line Resource Paradigm</th>
<th>One-to-one Techniques: E-mail Paradigm</th>
<th>One-to-many Techniques: Bulletin Board Paradigm</th>
<th>Many-to-many Techniques: Conferencing Paradigm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Online Databases</td>
<td>Learning contracts</td>
<td>Lectures</td>
<td>Debates</td>
</tr>
<tr>
<td>Online Journals</td>
<td>Apprenticeships</td>
<td>Symposions</td>
<td>Simulations or Games</td>
</tr>
<tr>
<td>Online Applications</td>
<td>Internships</td>
<td>Skits</td>
<td>Role Plays</td>
</tr>
<tr>
<td>Software Libraries</td>
<td>Correspondence Studies</td>
<td></td>
<td>Case Studies</td>
</tr>
<tr>
<td>Online Interest Groups</td>
<td></td>
<td></td>
<td>Discussion Groups</td>
</tr>
<tr>
<td>Interviews</td>
<td></td>
<td></td>
<td>Transcript Based Assignments</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>Brainstorming</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Delphi Techniques</td>
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<td></td>
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<td>Nominal Group</td>
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<td></td>
<td></td>
<td></td>
<td>Techniques</td>
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<td></td>
<td></td>
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<td>Forums</td>
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<td></td>
<td></td>
<td></td>
<td>Project Groups</td>
</tr>
</tbody>
</table>

³ See also Anderson’s (1996) discussion of the virtual conference modeled on the notion of the presentation theme - the presentation of a paper along with discussion. For a list of interventions more closely related to the architecture of the World-Wide Web see Boshier, 1997, p. 332. For a discussion of considerations in the formation of working groups in joint writing projects, see Davie 1989, pp. 83-84. See Davie and Inskip (1992) for their discussion of the use of an extended fantasy role play, a prestructured database and the use of expert visitors as a means of supporting active learning in the CMC situation.
E. Managing Class Dialectic: the Facilitator as Moderator.

Managing well the facilitator's role as a social director, interlocutor, host -- indeed, the executive chairperson --, is perhaps the single necessary condition in delivering a CMC course. This social function may be even more than being the resident content expert, since without a significant sense of social cohesion and interpersonal trust, the affordances arising out of the social nature of the medium are thwarted. The functions stemming from that role blend social and task consideration: making warm invitations; sending private messages of encouragement; preparing a motivating, exhilarating agenda; summarizing; clarifying; seeking consensus (Hiltz & Turoff, 1978). In her interview survey of 21 Masters of Education Students and the two teachers involved with their courses, Burge (1993, 1994) found that structured class management and the provision of fast, relevant, individualized feedback along with personalized affective support were required behaviors.

Feenberg (1989, p. 35) sets out three categories of moderating functions: contextualizing functions, monitoring functions and meta-functions. Contextualizing functions include: (a) opening the discussion by carefully designing opening comments which should announce the theme of discussion and identify any shared experiences or symbols which can clarify content and purpose; (b) clarifying "performative" (process-related) expectations; (c) setting conference norms including rules of behaviour; and (d) setting the agenda. To this list I would add writing the instructional "lecture" -- saying what has to be said about the content and related issues from the instructor's point of view.

Monitoring functions include: (a) recognition of individual contributions, to which we add responding with feedback, both positive and negative; and (b) prompting individuals for comments or contributions, either publicly or privately. Meta-functions include: remedying problems in context, norms or agenda clarity; (b) weaving: summarizing the state of the discussion and finding unifying threads in participants comments." Feenberg believes that weaving "encourages . . . participants and implicitly prompts them to pursue their ideas" (1989, p. 35). I add that this appears to be another form of scaffolding or affirmative feedback. See also Rowntree's (1995) organization of tutor roles which differs not a lot from Feenberg's, but carries with it Rowntree's excitement with the social extension of knowledge through the successive building of thought, message on messages (p. 209).
From Davie’s (1989) perspective, the facilitator supports, molds and directs the
discussion. Davie adds to the above list six moderation considerations: (a) provides avenues for
the expression of dissenting views (Davie & Palmer, 1984); (b) stimulates inter-student
discussion of each other’s work (1987); (c) co-manages emotional reactions (1989); (d)
recognizes the important contribution to the group’s functioning of the following social roles,
and in their absence among the students, models those roles otherwise absent: encourager,
harmonizer, compromiser, gate keeper, standard setter, observer or follower (Davie, 1989, p. 77);
(e) recognizes the contribution to the group of the following task roles, and in their absence
among students, models those roles otherwise absent: initiator, information seeker, opinion
seeker, information giver, opinion giver, elaborator, coordinator, orienter, evaluator-critic,
energiser, procedural technician or recorder (Davie, 1989, pp. 76-77).

F. Two Views of Facilitating Graduate Learning: Anselm Strauss and Lynn E. Davie

Two researchers are presented here who have seriously considered the delivery of
ggraduate courses, Anselm Strauss and Lynn E. Davie. They represent an informative comparison,
flourishing as scholars a generation apart. While both have been associated with the delivery of
qualitative methods courses, among others, at the graduate level, Davie has diversified his
teaching methods after a hands-on research and development implementation of CMC. Where
they are strikingly similar is the value both place on experience: in Strauss’ situation, this was at
the heart of a progressive course-delivery decision; in Davie’s case it is the fundamental asset
each learner brings to the dialectic of the graduate seminar.

1. Anselm Strauss and the Teaching of Qualitative Research Methods Courses: The
Emerging Experiential, Face-to-Face Paradigm.

Along with his colleague Barney Glaser, Anselm Strauss was the founder of the grounded
theory approach to qualitative research (Glaser & Strauss, 1967). In 1988 (pp. 91-99), just after
officially retiring from the University of California Medical Centre, Strauss was interviewed by
the editors of the scholarly journal Qualitative Studies in Education for his perspective on how to
teach qualitative methods research courses. The interview appeared in the journal’s inaugural
edition.

The actual course that he and Glaser had taught and refined for over 20 years --
Qualitative Data Analysis -- followed two quarters of fieldwork courses where the emphasis was
on the doing: the practical gathering of data. This was revolutionary, Strauss suggested, because
traditional sociology departments began with theory and survey courses. Here the problem was, according to Strauss, that students would not learn about doing research before two or three years had passed. “We thought we would turn that tradition upside down and start with research” (p. 91).

In classes limited to about 12 students, the classroom process was to analyze partially the data that each student had collected in the field. All students had an opportunity to present some of their data to the class once or twice during the quarter, usually as work in progress.

Strauss characterized this approach as “an apprenticeship method of instruction” (Strauss, 1988, p. 99). In his role as an instructor, Strauss was guided by two facilitation principles: maintaining classroom authority and the modelling of desirable habits for his students. Strauss believed that the teacher needs to guide the cooperative process but not be intrusive: “You have got to work it out so that those who are most vocal do not take over and those who are more reluctant to talk are pulled into the discussion” (p. 93). Similarly, Strauss saw the instructor as a model who exemplified cooperation, individual attention to students, and the constant rehearsal of reflection as a device to consolidate learning.

Often I ask the class, ‘All right, what are the steps we have gone through?’ Then the class reflects and goes back through the steps. At the end of the hour I say, ‘You have to go back and think about what we did. That’s the only way you learn to be reflective about what you do.’ (Strauss, 1988, p. 96)

For Strauss, the class was “a workshop; it is a working group of people. Therefore, I have to teach it in such a way that students very quickly begin to work together” (1988, p. 92). Thus a source of feedback was not only Strauss himself, but also the other students:

I try to set a mood and make it clear that the whole class is going to work with the student on the issues the student identifies. Of course students come in with very different expectations and wishes. It pays to listen to what those things are so at the end we can come back and ask, ‘Did it work? Did we help you?’ (Strauss, 1988, pp. 93)

While the course that Strauss described differs from the course that Erin delivered in that Strauss concentrated on data analysis only, a number of key relevant notions surface in Strauss’ characterization of the training qualitative researchers: first, the actual experience of data-gathering, and, concomitantly, having data to analyze which has been personally gathered, precedes the analysis process — theory might not precede praxis; second, analysis ought not to be a solitary endeavour — significant others can and do inform our individuality in significant ways;
third, the role of the instructor is both to control, yet paradoxically, to stimulate action; fourth, the instructor should model the role of a qualitative researcher; and fifth, the activity should play some meaningful part in the ongoing formation or professionalization of the student. Thus, while Glaser and Strauss modeled rigor in the execution of the research task, they also modeled cooperation, not competition, with the colleagues. Certainly Glaser and Strauss understood exquisitely the facilitation of experiential learning through its structural processes of personal reflection and accommodation to feedback.

2. Lynn E. Davie: CMC as a medium for advanced graduate study.

Our educational objectives for both CMC and face-to-face courses must support our goals for the Master’s degree. I design and conduct CMC courses that are capable of being judged by the same criteria used to judge any other course, either on or off campus. I intend that the CMC courses be acceptable as a regular part of a student’s curriculum and that each course contribute to developing the skill, attitudes, and knowledge that we desire in our Master of Education or Master of Arts students. The CMC courses simply cannot be a second best experience. (Davie, 1989, p. 75)

In those papers dedicated to the examination of CMC as a vehicle for graduate education (Davie 1984; 1988; 1989; 1996; Davie & Palmer 1984; Davie & Wells, 1991; Davie & Inskip, 1992; Andrusyszyn & Davie, 1995) Davie explores CMC in terms of the objectives of graduate education along with the instructional needs. Davie’s educational metaphor is the graduate seminar, with emphasis on the informed group discussion, where the instructor or tutor behaves as facilitator (Davie 1989; Davie, 1987; see also Kaye, 1989). In this respect, Davie reminds us that an advanced course cannot depend on a single text, nor does it fulfill its objective if the methodology is limited to presentations by the instructor (Davie, 1987).

Encouraging the skills necessary to be an academic requires the graduate instructor to go beyond lecturing into the coaching function. Indeed, too much dependence on the instructor or lack of peer contact limits development of higher order cognitive skills. This situation can be overcome by exercises which require student initiative, discussion, reflection and iterative attempts to improve one’s work.

CMC, because of its affordances is a “flexible” medium for advanced graduate study (Davie & Palmer, 1984, p.57). “The system supports those activities that I value most: attention to other’s ideas, thoughtful contributions, and a developing understanding of the topic” (1987, p. 23). Indeed, it can be argued that when learning under these circumstances, the CMC medium
itself plays a unique role in focussing activity on course-related goals: a graduate course requires a seminar in which the instructor and students read advanced materials, discuss their strengths and weaknesses, explore new ideas, and, in general, dialogue with one another. The computer conference provides a way to incorporate these features of advanced courses into a distance education course (Davie & Palmer, 1984, p.62).

Following the theoretical lead of Jones (1968), Davie and Wells (1991) emphasize the possibility of student empowerment through the use of the CMC medium. Personal power is achieved when the student has a sense of mastery over content and a sense of community with the instructor and other students. The former can be achieved through the analysis of large quantities of information, manipulating and communicating with text only and operating a computer to achieve goals. The latter is achieved when there is the feeling of belonging to and valuing the support of others in a mutual enterprise. The power to search and retrieve information from large-scale computerized databases including remote libraries Davie also sees as an affordance in advanced graduate education (Davie & Palmer, 1984). All of the above can be achieved through the intelligent use of CMC.

G. Narrative and Episodic Facilitation: Two Key Styles of Instructor Involvement

In Bailey’s 1999 dissertation, she studied maternal control issues centering on hearing mother, deaf child and hearing mother, deaf adolescent interactions, from a Vygotskian perspective. The moms were categorized as either narrative or episodic (Bailey’s labels) in terms of their play style with their offspring. Narrative moms engaged their young school-aged children in play and created a shared context upon which all further interaction developed. Episodic moms involved themselves infrequently and indirectly, thus they were not operating in a shared context. Episodic moms were on the outside, and saw themselves as an observers, trackers, proposers and questioners. Bailey concluded that narrative moms work in their children’s ZPD and provided the guidance which elicits development through scaffolding and transference of control (pp. 204-208). Episodic moms generate independent play at the child’s developmental level and do not exploit the ZPD. Bailey argues that episodic moms define play as a task for themselves and their children and teaching through play was the primary focus for them, while teaching was secondary for narrative moms.

In addition, “Narrative children learned they possessed influence when their moms accepted their ideas and incorporated them into the unfolding story” (Bailey, 1999, p. 209).
Narrative children often responded to their moms by following their lead in the development of the story [the research task]. These children appeared to do so because they were enjoying the stories their moms were creating. Their interest was reflected in their willingness to enact the scenes and their displays of positive affect (e.g., smiling, laughing) while doing so. As well, narrative children spontaneously contributed their own ideas to the scene, doing so without fundamentally changing its content. Thus, these children actively participated in play within the joint context their moms created. (Bailey, 1999 p. 207)

In an analysis of a course using the COSY system of CMC delivered at the Open University, Mason (1989, p. 141) reported that tutors who continued to input messages -- cajoling, informative, chatty or substantial -- produced the largest number of student messages. Tutors who put in opening messages in each topic and then expected students to “carry the ball” (p. 141) were disappointed.

Davie and Wells (1991) point out that interaction between instructor and students becomes more personal and personalized when the instructor is in the facilitator role, as opposed to the information-giver role in distance education courses. This closing of social distance can significantly affect completion rates of students at a distance. “Instructors who are aware of their students as unique individuals are in a stronger position to support their empowerment as creative, autonomous learners” (p. 17).

In addition to Burge’s (1993, 1994) dissertation project where she identifies “required behaviours” (p. 30) for facilitators -- structured class management and the provision of fast, relevant, individualized feedback -- four additional theses speak generally to the question of effective facilitator skills: Winkelmans (1988), who, among other things, mapped the effects of instructor contributions on subsequent conference notes; Sleightholm-Cairns (1994), who examined creating a safe, intimate community for learning; Chandler-Critchlow (1994) who has demonstrated that cognitive performance is related in a variety of ways to the intervention role of the facilitator; and Norris 1998 who examined the use of electronically-based apprenticeships to facilitate the transfer of knowledge from experts to students. Also informing the issue is the work of Tagg and Dickenson (1995) who identified facilitation characteristics which encouraged participation where it might not otherwise occur.4

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4 I am indebted to Davie (1996), who identifies much work just mentioned including Burge, Sleightholm Cairns, Chandler-Critchlow, Winkelman and Norris.
Capitalizing on Bailey’s insight (1999, pp. 198-212), we are able to generate a priori two contrasting facilitation profiles -- the narrative and the episodic. Both profiles contain a facilitation style along with the attendant and not-always-causally-related learning behaviors: narrative facilitation style, (NFS) and narrative context learning behaviours (NCLB), as well as the episodic facilitation style (EFS) and episodic context learning behaviours (ECLB).
### Table 2-2

**Narrative and Episodic Facilitation Profiles**

<table>
<thead>
<tr>
<th>Narrative Facilitation Style (NFS)</th>
<th>Episodic Facilitation Style (EFS)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Defines the central task as doing qualitative research.</td>
<td>1. Defines the central task as teaching qualitative research.</td>
</tr>
<tr>
<td>2. Interact directly and in an ongoing manner in course-related messaging.</td>
<td>2. Interaction in messaging is indirect and episodic.</td>
</tr>
<tr>
<td>3. Models all aspects of on-line participation behaviour including the use of domain-specific vocabulary. Interventions grow out of context.</td>
<td>3. Intervenes only as required from role as a teacher. Leaves lectures on line.</td>
</tr>
<tr>
<td>4. Creates a shared context upon which all further interaction develops.</td>
<td>4. Facilitator and learner contexts are largely independent.</td>
</tr>
<tr>
<td>5. Coordinates students' attention between salient theory and practical detail in the execution of qualitative research, including the use of ongoing directed feedback (parallel talk), even asynchronously, to achieve this goal.</td>
<td>5. Attentional focus on meanings or events is uncoordinated between student and facilitator hence facilitator guidance loses impact.</td>
</tr>
<tr>
<td>6. As a control device, socializes neophyte researchers by teaching critical information informally, such as sequencing and organization of research events, appropriate research skills and ethical considerations. Students gradually take responsibility for own qualitative research task which is the climax of the process.</td>
<td>6. As a control device tells or informs students how tasks should be performed and rarely allows gradual transference of responsibility. Student must accept full responsibility for all success or failure. Relationship is formal.</td>
</tr>
<tr>
<td>7. utilizes scaffolding at various degrees of intensity from step-by-step instruction to transference of total responsibility.</td>
<td>7. Uses formal, traditional question-and-answer techniques, corrects or tells the right answers.</td>
</tr>
<tr>
<td>8. Model the complexity of the qualitative research process.</td>
<td>8. Believes that student should arrive at the truth of the complexity of the qualitative research task as a conclusion to a formal learning experience</td>
</tr>
</tbody>
</table>
Table 2-3
Narrative and Episodic Learner Profiles

<table>
<thead>
<tr>
<th>Narrative Context Learning Behaviours (NCLB)</th>
<th>Episodic Context Learning Behaviours (ECLB)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Considers the facilitator a significant audience in the message interchange process.</td>
<td>1. Ambivalent about the role of the facilitator as an audience.</td>
</tr>
<tr>
<td>2. Recognizes and values the facilitator as a qualitative researcher role model.</td>
<td>2. Remains ignorant of or ambivalent to any modelling of qualitative researcher behaviour.</td>
</tr>
<tr>
<td>3. Takes facilitative direction well. Tends to be compliant.</td>
<td>3. Exhibits some independent, non-compliant behaviour. More evidence of isolation and tussles over control.</td>
</tr>
<tr>
<td>4. Learner more an active participant in knowledge construction.</td>
<td>4. Learner more a passive recipient of facilitator’s knowledge.</td>
</tr>
<tr>
<td>5. Learner has a more complex grasp of the totality of qualitative research as a research paradigm.</td>
<td>5. Learner has a less complex grasp of qualitative research as a research paradigm.</td>
</tr>
<tr>
<td>6. Messaging is elaborated and connected.</td>
<td>6. Messaging is unelaborated and disconnected.</td>
</tr>
</tbody>
</table>

In Tables 2-2 and 2-3 above, these behaviours are cast in the context of facilitating / learning to be a qualitative researcher. Each pair of propositions defines two ends of a continuum. Consequently each profile is only theoretical and both facilitators and students could participate more or less in each profile.

A tentative hypothesis follows from this. Stated as a null hypothesis: there is no difference in the outcome of the course with respect to its success in terms of facilitation style. Stated more positively, the degree of success of the course will be in direct proportion to the degree that the facilitative factors are narrative as opposed to episodic.

V. Student Considerations

Some consideration must be made of the students in the facilitation equation. The literature and personal observation reveal four considerations: (a) number of students; (b) social or existential readiness; (c) intellectual readiness; (d) disposition of course-related time.
A. Number of Students: Critical Mass, Critical Class Size

To achieve what they term critical mass -- a term borrowed from physics to suggest the quantitative mass of elements necessary to achieve a nuclear explosion through fission -- Davie and Palmer (1984), citing Hiltz and Turoff (1978), suggest that eight to twelve students in at least three different geographic locations are necessary in the learning group for it to function successfully. Under these circumstances, students sign on often enough and enough new messages enter the system to diversify perspective on topics.

The notion of critical size in group dynamics theory reflects the opportunity both for individual and group expression: the smaller the group the easier for individuals to enjoy unfettered expression; the larger the group, the more difficult for individual expression to emerge within the collective will. For instance, at the Canadian Armed Forces Staff College, trainers organize the year’s work around syndicates of six officers believing that six is the number of individuals in a face-to-face group where the tension between individual will and group pressure exists most poignantly (P. J. Taggart, personal communication, 1986).

Examining the question of the optimum number of participants in on-line courses, Boettcher (1998, 1999) found classes ranging from 10 to 60 students. In her 1998 assessment she notes that experiential data suggest that the maximum number of students for on-line courses is in the range of 12 to 20 students, depending on the level of instruction, with www courses focussing on training or professional certification supporting 25 to 65 students. Her 1999 assessment modifies those numbers somewhat to suggest that smaller on-line classes range across 12 to 15 students, to an average of about 20. Larger classes range from 35 to 40, occasionally as high as 60.

For instance,

In the Open University in the United Kingdom, a new online master's degree course in distance learning will have a maximum of 15 students. At Regent University in Virginia, the maximum number they have in their online Ph.D. courses in communications is 12. Linda Harasim from Simon Fraser University recommends that 20 is about the right number for upper-division communications classes. (Boettcher, 1998, e)

Boettcher is clear in her direction to instructors just entering the business of facilitating on-line courses: "Start small! Probably 10-14 students are a good number to start with for a
fully on-line Web course" (1998, e & p. 49). I believe that advice was probably as appropriate in 1993 for Erin as it is today.

**B. Social or Existential Readiness**

This kind of readiness implies the personal and social maturity or outgoingness to behave appropriately under the conditions of the course, where there may indeed be assaults on the ego. Positive motivation to engage in the activity is an affordance; Hiltz (1988, as cited in Davie, 1988) found that on-line courses rated better with students who were motivated, well-prepared, and who took advantage of the increased chance to interact with their professors or peers.

Student attitudes which facilitate or afford learning include an inclination to interdependence along with other colleagues and an inclination to be considerate of the instructor’s contribution to the collective process. This latter consideration implies a comfort with the instructor/student power situation. Student attitudes which limit the possibility of student learning in a collegial setting include unusual dependence on peers or the instructor, independent or even counter-dependent behaviours. A less-than-considerate attitude toward the instructor also limits possibility.

**C. Intellectual Readiness**

At least two considerations operate here: (a) the ability to move ahead with the internalizing of the content under the direction of the facilitator; (b) the ability to write (Davie, 1988). With respect to Vygotsky, we can suggest that readiness under any set of conditions means being in the ZPD.

**D. Availability of Time**

The amount of time that each individual student will need to spend varies with the working style of the individual. Suffice it to say, an insufficiency of time limits participation and hence learning. Limiting participation can mean withdrawal from the course.
VI. Conclusion: The Debate Goes On

The traditional classroom learning situation is generally assumed to be the best to support learning, with other learning modes perhaps perceived as less effective. There is no evidence to support this assumption. In fact, quite the opposite is true: Online environments facilitate learning outcomes that are equal or superior to those generated in the face-to-face situation. (Harasim, Hiltz, Teles, & Turoff, 1995, p. 27 as cited in Heath, 1998.)

In fact, in a 1996 study comparing a virtual class with a face-to-face class, Schutte found that:

The virtual class scored an average of 20% higher than the traditional class on both examinations. Further, post-test results indicate the virtual class had significantly higher perceived peer contact, and time spent on class work, but a perception of more flexibility, understanding of the material and greater affect toward math, at semester end, than did the traditional class. (e)

Given this kind of cheer-leading by Harasim et al., it may appear that CMC has met with an overwhelming approval among those who are stepping boldly into a new academic millennium. But there is an old guard among faculty for whom the CMC alternative remains, simply, second best: "It might be argued that the written word, whether on screen or paper, is not as compelling as the person or the voice" (Heath, 1998). In extolling direct, traditional face-to-face teaching, Heath believes that:

The practice of teaching involves, of course, more than judgment or know how: It is also exemplary of attitudes, dispositions, emotions, and commitments, none of which are easily conveyed through written propositions . . . It is not at all clear that the metaphorical community of cyberspace provides the proper setting. For within such a metaphorical community, there is little opportunity for the student to observe the qualities of judgment, commitment, and intellectual awareness; any such quality or ability is taught by example: It is implanted unobtrusively in the manner in which information is conveyed, in a tone of voice, in the gesture which accompanies instruction, in asides and oblique utterances, and by example . . .

One can only wonder if the very decline of learning, along with the decline of the idea of a college, has set the stage for those who wish to claim that on-line education is "equal or superior to" traditional education . . . (Harasim et al, 1995, p. 27). Although I believe that the rudiments of a particular subject can be attained through an on-line course, and although some on-line courses may be preferable to some classroom courses, my initial skepticism has not been eliminated—it has only been modified. Perhaps on-line education has a place, but it is a subordinate one; on-line education is best viewed, at least under current technology, as a surrogate: The best education occurs between teacher and student. (Heath 1998)
Perhaps the position of December (1995) expresses the unsaid: CMC as an educational medium will not go away, but will develop in the sensitive hands of the practitioners -- on line course facilitators.

CMC scholars will continue to meld theoretical approaches from other disciplines to examine the experiences, expressions, and contexts of CMC possible on the Internet today. There will be a continued emphasis on context (Lea, 1992) as a frame for understanding CMC. On-line literacy will grow in importance as an important component of education at many levels. (December, 1995)

On the other hand, Mason's caution, placing learning in the CMC medium into a context with other electronic distance media, is still worthy of consideration:

CD-ROM should not be used as another way of producing a book; videoconferencing should use the visual quality of the medium rather than simply providing normal lectures at a distance; and asynchronous networking technologies should build on the reflective possibilities of time delays, not try to simulate real-time interaction. (1995, p. 194)
Chapter 3
METHODOLOGY

In this chapter I focus on key research methodology issues relating to the accomplishment of the research. Part I examines the scope and ethical considerations appropriate to the data gathering. Part II sets out the essentials of the data-gathering process itself, including the organization of the data into types. While part III outlines the quantitative aspects of the study, part IV describes the qualitative. In part IV I have also included material identifying the two qualitative research paradigms which underlie the study, heuristic research and grounded theory.

I. Scope and Ethical Considerations of the Data Gathering

Through a history of the thesis project, this section documents the methodology of the research endeavour.

In December of 1992, my dissertation proposal was accepted, I filed all ethical review materials relating to this study and I received approval to proceed. It had been my original intent to study the activity in two on-line courses. In fact, only the material for the course on qualitative research was used, purely for reasons of sheer volume. Permission had been gained, however, from both instructors to present my proposal to the class members who were present at the introductory face-to-face session in January, 1993. The members of both classes who were present for the session were given a short presentation on the research along with a participant’s letter covering the same ground. The letter also included a consent to participate form. Letters were mailed to participants who were not at the first session so that all the students who would actually begin the courses were contacted.

Participants were asked to signify whether or not they wished to be in the study. If the choice was positive, they were further asked to indicate the level of their participation by choosing one among three levels of intensity: (a) low, where the researcher had access simply to the on-line contributions to the course; (b) medium, where, additionally, the participant agreed to be interviewed face-to-face by the researcher; (c) high, where the participant agreed to provide copies of written work which might be used as a comparison with on-line writing.

In the qualitative research course, all fifteen members who took the course chose to participate. The 12 participants who were within a reasonable range for travel by the researcher all agreed to be interviewed, as did Erin, the instructor. In addition, five course members
provided additional prose pieces. The latter, along with final essays for all the students which had been made available to me, were, in the end, not considered. At a later time during the course I canvassed all participants again to seek access to the four small-group conferences which were, for all intents and purposes private, save for Erin. Once again I received total support from Erin and the class.

In the other course, eight participants of nine agreed to participate. One of the eight was interviewed, as was the instructor. While all of the material which was on-line was downloaded, none was used, nor was the interview material.

II. The Data-Gathering

This part documents the kind of data gathered and the sequence of events leading to that gathering. This section also documents the three types of research data collected: (a) tape-recorded interviews, (b) tape-recorded thinking-aloud monologues and (c) the electronic course record itself. This part ends with a categorization and rationale for selection of text for detailed study.

A. Types of Raw Data

Three kinds of raw data were gathered and prepared for later use: (a) tape-recorded interviews of Erin and the 12 participants who agreed to be interviewed; (b) thinking-aloud monologues where participants “thought aloud” in the presence of the largely-silent researcher and his tape-recorder as they worked through their PARTI in-boxes; (c) manuscripts of all large-group and small-group on-line conferences totalling 40. This latter category I consider to be the primary source of qualitative and quantitative information, backed up by the former, especially the interviews.

After the course had been completed, I asked Erin to rank order the fifteen participants based on any criterion she chose relevant to the course. She kindly obliged and, in confidence, provided a list based on her perception of the adequacy of each student as a qualitative researcher. The list was intended both to aid in a selection of a small group of students for content analysis purposes, and to pursue a notion of imitation based on textual style. The list served the first purpose well; the imitation of instructor modelling hypothesis was not pursued, but will be addressed again in Chapter Six.
B. The Data-Gathering Period: Sequence of Event

1. Interviews and thinking-aloud monologues.

The course began in earnest on January 9 with the face-to-face meeting. I interviewed the 12 participants and Erin between February 18 and April 9, and at the same time, recorded the thinking-aloud monologues. Interviews and monologues tended to be one hour to one-and-a-half hours long. The course concluded -- on-line -- on April 14. The major student project was due on May 10. Transcription of the taped materials began as soon as possible after the interviews were recorded.

For purposes of early experimental content analysis and qualitative analysis, Mona's contribution had been chosen as a place to start; I made this decision quite arbitrarily based on the fact that Mona's material was available the earliest. As it happened, I asked Erin for her ranking after having started on Mona's material; out of fifteen students Mona was near the median. In order to expand the experimental content analysis, it was decided to extend that work to the text of Erin and three more students, largely to pursue, as was noted, a notion that Erin's modelling of text was perhaps being imitated by others in the class. The on-line text of Carl, Harv, Mona and Paul was ultimately considered since these four individuals were almost evenly situated throughout Erin's ranking. The messages of all 15 students were considered in the qualitative analysis. The interview material, while rich, was excessive. It was decided that a representative choice would be made, thus the material of Carl, Mona, and Paul was again considered. Since Harv had not participated in the interview process, Ezra was added to the qualitative small group, as a representative near the ranking of Harv.

2. Configurations of the course record.

i. The electronic record by conference. The 1765 substantial, unduplicated messages in 40 conferences which constituted the public record of the course (including the private small group conferences) were downloaded in ASCII format from the institution's Unix computer via the public switch network to my personal computer to both floppy and hard disk. Downloading was done in conference sequence, conference by conference, with messages in sequential order. See Appendix A for the master matrix of conferences, participants, and message numbers. This method assured that 100% of the record was captured.

ii. The electronic record by individual participant in conference sequence. Inasmuch as conferences themselves overlapped in time, quite often messages were slightly out of sequence.
Where time sequence was an issue regardless of the conference to which a message was posted, a DOS sorting algorithm would organize the sequence from message header material, and the final sort was done manually with a word processor.

iii. The paper record. A paper copy of the messages in conference sequence exactly the same as i. above was also created, but figured very little in the day-to-day manipulation of data.

C. Identification of Four Species of Course Writing

Within the entire corpus of the course, I identified four species of written text, reflecting varying degrees of formality and audience:

i. Finished academic prose. This represented material for the record, or “in good”; as finished product, this kind of prose received the most formal stylistic treatment and was most often found in student papers. The audience for this material was always the professor; when this level of formality occurred on-line, the audience was the whole class, but the instructor was still the most informed reader. To a degree, Erin herself modeled this kind of writing in her course-related paper, and some of the students persisted with it early in the course.

ii. Exposition. While this is much like the finished prose above, it is discriminated from it by having some elements of familiarity not usually associated with “in good.” Major presentations later in the term were more familiar than earlier in the term. Once again the audience for this kind of material was the class at large, with the instructor less a targetted audience since the feedback of the colleagues was deemed to be an important response to material presented in this species.

iii. Dialogical prose. Under this category is included critique, negotiation, the delivering and responding to feedback -- generally, contributions to the class’ dialectic process: the transformation of intellectual positions through the consideration of new or even contrary points of view. Often this kind of prose was directed at one person or a small group of people with the intention of changing or defending a position. The giving and responding to feedback is discussed in Chapter 4: The Data.

iv. Banter. Banter is written informal talk, not for the academic record. This kind of prose was often emotionally expressive. While this kind of material most often found itself in the conference called COFFEE which was structured expressly for socializing purposes, it was found in varying degrees throughout, often as a “soft” opening to something of more course-related import. Once again, the audience was most often one person or a small group.
Given the sheer volume of discourse -- about 368,000 words --, only dialogical text was chosen for analysis in the quantitative study, thereby limiting the amount of text under consideration to that through which the cut-and-thrust of the discussion would take place -- an estimated 233,000 words. While formal text remained excluded from the qualitative study, both exposition and banter are more liberally included, especially where social considerations are under analysis.

**III. The Quantitative Study**

In this part is documented the process of the quantitative study, including the four categories of text characteristics which were evaluated: (a) basic word counts, (b) writing style measures, (c) vocabulary-related measures, and (d) cognition-related measures.

The earliest manipulation of data was oriented toward a content analysis of on-line text and what could be inferred about participants’ learning from the dialogical corpus of their messages. This work was suspended at an intermediate point in my research, after I compiled the descriptive results of the small group study involving Erin and the four students.

From the total corpus (all four genres) of each of the small-group individuals (Carl, Harv, Mona and Paul) the dialogical corpus was extracted manually on a per message basis -- the unit here being a whole message, regardless of the presence, say, of banter within that message. These messages were placed in chronological order. Next, a DOS deletion algorithm or manual procedure removed extraneous header, salutation and signature information, leaving only essential dialogical text. Where necessary, typographical or other non-deliberate stylistic renderings were corrected to assist the software in making accurate counts.

The volume of dialogical text of each of the small-group participants ranged from 4,581 words for the least voluble student in the course and in the small group, through 11,760 words for the most voluble student in the small group, to Erin’s 33,982 words. A study of the text entered in terms of absolute chronological quarters -- about three weeks each -- would have seen very uneven sample sizes since the text over the course was not distributed evenly in terms of dialogical word count. To the end of achieving samples of near 1000 words for less voluble performers, it was decided to measure the data in terms of the entire dialogical corpus for each individual along with that corpus divided into four equal volumes sequentially. Interview or thinking-aloud data were not included in the dialogical corpus. Thus, each small-group participant’s entire individual corpus containing all that person’s dialogical text from all the
conferences in the course (40) was measured once in its entirety and measured again divided into four equal parts chronologically sequenced. The latter measurement of equally large quarters, chronologically sequenced was intended to uncover trending during the course.

Four types of measurements -- basic textual characteristics, style characteristics, vocabulary-related measures and cognition related measures -- were made of each of the five dialogical corpora. The results of the quantitative study are found in Appendix B along with the definitions of each measurement, and the software sources for the counts.

It was my original intention to undertake both a quantitative and a qualitative analysis of the message data in order to explore certain notions around changes in vocabulary and style which might lead to greater insight as to how learning was happening. Having accomplished some part of that activity with the small group, I believed it necessary to scope out major patterns in the meaning aspect of the text which could be uncovered through qualitative research. It was at this point, after undertaking the qualitative analysis, that the content analysis material diverged widely from the qualitative. Given the richness of the qualitative findings, no attempt was made to direct the two aspects of the study toward convergence. I chose, at that point, to make the qualitative work the thrust of the thesis.

I do not believe that the qualitative findings would have been contradictory or otherwise significantly different from the quantitative. At the point of deciding to proceed with the qualitative work, the findings were simply so divergent that no apparent category related the two. This category, imitation of modelling, did not become sufficiently apparent until I was long into the qualitative work -- too late to seek triangulation on the imitation notion by shaping further research. That students imitate based on the instructor's modelling or the modelling of significantly visible students who are being seen as successful at understanding course-related material, is suggested as a fruitful hypothesis in Chapter 6.

IV. The Qualitative Study

In this part I document the data sources for the qualitative study and present a synopsis of the heuristic research paradigm and the grounded theory paradigm, both of which approaches were used in this study.

A. Message Data Sources.

The 40 conferences associated with this course were categorized as (a) content-centred, (b) guest expert-moderated, (c) individual student projects, (d) technical, social, (e) student small
groups, closed (private). (An extended discussion of conference types will be found in Chapter 4: The Data, associated with Table 4-2.) Of the 15 content-centred conferences, five proved to be rich sources of dialogue: CLASS, PARADIGM, INTERVIEW, ETHICS and ACCESS, as did COFFEE, a conference dedicated to purely social interchanges. The feedback and response found in the individual student projects were similarly rich. As will be noted, while dialogical text was still the central genre, a broader range was considered, especially banter which encouraged the social cohesion of the class.

The unit of analysis was the thematically coherent and contiguous text. This meant that there was extreme variability of length in samples. This was true in the interview data also, as it was in the thinking-aloud monologues (TAMs) -- the unprompted verbalizations of participants as they worked online at the learning task, in response to my request: “Just say out loud what’s in your mind.”

**B. The Research Paradigms: Heuristic Research, Grounded Theory and Hermeneutics**

The detailed method which I applied to the data is consistent with the grounded theory approach of Glaser and Strauss (1967; Strauss, 1988). However, after much reflection, I conclude that the heuristic research paradigm originally articulated by the philosopher Henri Bergson (1955) and more recently described by Douglass and Moustakas (1985), Moustakas (1990) and Beckstrom (1993) best characterizes my overall research journey as it relates to this case. Since the data are textual, certainly the art of interpretation has had to be applied almost constantly and, to that degree, the journey has included hermeneutic elements (Allen & Jensen, 1990) as well.

Grounded theory is, comparatively speaking, simply much too tidy a description of my entire dissertation experience. I argue that grounded theory as a technique is not inconsistent with heuristic research; while the former emphasizes the primacy of the data, the latter emphasizes the interplay of the data gatherer and the data. In my view, the heuristic paradigm subsumes grounded theory; if there is *prima facie* contrariness relating the two notions, this I take to be an issue of emphasis, not contradiction. Indeed, that the data have a life independent of the researcher, while conceivable, is not demonstrable: as Kant declared, “Perception without conception is blind; conception without perception is empty” (cited in Blumer, 1969, p.168; Lofland, 1974, p.108).

Heuristic inquiry is a process that begins with a question or problem which the researcher seeks to illuminate or answer. The question is one that has been a personal challenge and puzzlement in the search to understand one’s self and the
world in which one lives. The heuristic process is autobiographic, yet with virtually every question that matters personally, there is also a social — and perhaps universal significance. (Moustakas 1990, p.15)

The word *heuristic* comes from the Greek word *heuretikos* meaning "I find," and is related to the familiar Greek expression *eureka* (Douglass & Moustakas, 1985, p.42). Under the heuristic paradigm, the researcher proceeds through a number of phases of heuristic research which are linked to associated concepts, processes and phases. (Douglass & Moustakas, 1985; Moustakas, 1990; Beckstrom, 1993). The concepts and processes which characterizes the heuristic research process are (a) self-dialogue; (b) tacit knowing; (c) inverted perspective; (d) intuition; (e) indwelling; (f) focusing. The process proceeds through the following phases: (a) initial engagement; (b) immersion; (c) incubation; (d) illumination; (e) explication; (f) creative synthesis. These processes and phases are presented in greater detail in Appendix C.

It is my observation that, while the ordering of the processes and phases may imply a linearity to the process, the experience has been, to the end, much more organic for me. While the phases appear to proceed grossly in order, there has been a constant sortie-and-return-and-redirection-and-sortie pattern to the work, with many of the processes operating at once, especially self-dialogue!

As would be true with most other research paradigms, the process does not end with explication. In the creative synthesis phase, "the researcher is challenged to express the components and the core themes in, "... the form of a narrative depiction utilizing verbatim material and examples, but it may be expressed as a poem, story, drawing, painting, or by some other creative form" (pp. 31-32). For the purposes of this dissertation, a Shakespearean sonnet will conclude Chapter 6.

3. Some essential characteristics of heuristic research design.

Two characteristics of heuristic, and indeed other species of qualitative research, which separate it from quantitative and more positivistic approaches and which deserve comment here are the process of validation and use of hypothesis.

With respect to validation, the basis is subjective and turns on a truthful, honest response to this question: "Does the ultimate depiction of the experience derive from one's own rigorous, exhaustive self-searching and from the explicatons of others present comprehensively, vividly,
and accurately the meanings and essences of the experience?" It is the process of heuristic research by a faithful researcher which ensures truth:

The heuristic researcher returns again and again to the data to check the depictions of the experience to determine whether the qualities or constituents that have been derived from the data embrace the necessary and sufficient meanings. The heuristic researcher's 'constant appraisal of significance' and 'checking and judging' facilitate the process of achieving a valid depiction of the experience being investigated. They enable the researcher to achieve repeated verification that the explication of the phenomenon and the creative synthesis of the essences and meanings actually portray the phenomenon investigated. (Moustakas, 1990, p.33)

Moustakas believes that such verification would be enhanced by returning to the research participants and seeking their assessment of comprehensiveness and accuracy.

The role of the scientific hypothesis in heuristic research plays a far more subjective role than in more positivistically-oriented research. Under the heuristic paradigm, the hypothesis becomes, I believe, a personal hunch or intuition which needs exploration:

The object is not to prove or disprove the influence of one thing or another, but rather to discover the nature of the problem or phenomenon itself and to explicate it as it exists in human experience. . . . Formal hypotheses play no part, though the researcher may have initial beliefs or convictions regarding the theme or question, based on intuition and on prior knowledge and experience. (Douglass & Moustakas, 1985, p.42)

Issues of relating to verification, reliability, and adherence to paradigm will be addressed further in Chapter 7. The categories which form the fabric of my findings and the examples which provide its texture are the stuff of Chapters 4 and 5 which now follow -- The Data Part I: Living the CMC Learning Experience and The Data Part II: Creating and Maintaining the Learning Community.
Chapter 4
THE DATA PART I:
LIVING THE CMC LEARNING EXPERIENCE

The general research question asks me to determine those factors in the facilitation and medium of this course which afforded or limited its effectiveness as an adult education experience. In this chapter I examine that experience, which is the interplay between the facilitator, Erin, and the students, and the students among each other, all of which takes place, as I have indicated, through an exchange of electronic messages.

In Part I: Prologue, the scene is set for the drama of the message interchange and we are introduced to the actors. Also in this part, we synopsize the class’s on-line participation through a review of the PARTI-generated message and character counts.

Part II, Participation Dynamics, examines personal issues which the individual student encounter and must resolve in order to participate fully. Part III, Managing Communication, describes how students cope with the practicalities of reading, creating and posting messages. Part IV, Learning Through Message Making, investigates elements in the dialectic process which contribute to position taking and meaning making, especially feedback. Part V, Creating and Maintaining the Learning Community, considers the social environment which developed over time in the class. Part VI, Epilogue organizes some course-ending learnings including a metaphor which, it is suggested, characterized the relationship of Erin and the students to each other and the learning task.

I. Prologue

In this part we set the stage for the drama which unfolds through messaging by profiling the participants in their setting. Counts of various features of the message stream provide some sense of the contours of participation.

A. The Drama: Course Participants in their Setting — Time and Place

Between January 9th and April 14th, 1993, 15 graduate students - six female and nine male -- were enrolled in the course Qualitative Research: Principles and Practicum offered by the education faculty of a major Canadian university, through long-distance education. During this activity period of approximately 14 weeks (96 days), the group was supported by a resource cadre of six individuals led by the instructor, Erin, three guest experts with experience in
specialized aspects of qualitative research, and two technical resource persons, one of whom supported students in their access to the faculty’s library while the other assisted students in the technical use of the institution’s computer-conferencing system. It was my pleasure to be the computer-conferencing system resource.

While 11 of the students were centred within 400 kilometers of the institution, one “came in” from Baffin Island in the Northwest Territories, another from Saskatchewan, another from northwestern Ontario, and yet another from Manitoba. On January 9th, immediately prior to the course, those students who were centred near the institution met face-to-face with Erin and later in the day with myself to be briefed on the content and operation of the course, along with its technological demands. While not everyone was able to attend that session, two students joined the group for certain of the activities by means of audio conferencing technology.

B. The Actors

My experience of the course was to encounter a drama: a vibrant, often passionate interplay of ideas and feelings climaxing in the completion of fieldwork and the recognition that a lot of learning had taken place. The fifteen students that were central to the drama were as diverse in background and personality as they were in geography. Not all the students were registered with the institution but were able to take advantage of the long-distance education capability to pick up needed graduate credits in their own universities. The names of the actors are listed below with a brief introduction. A fuller biography of each individual is found in Appendix D: Dramatis Personae.

Alan: a career adult educator with international qualifications.

Alma: a community college official and grandmother who is enrolled full time in an American university but taking courses at the institution.

Beth: a professor of nursing at a major Canadian university at remote distance.

Bev: a social justice advocate working as a consultant to Native communities

Bob: a training and development manager with 12 years of varied experience in the field.

Carl: an adult educator who runs his own theatre school.

Dick a professor of nursing at a major university at a long distance from the institution.

Etta: a wife and mom and head of business in a special education high school

Ezra: a freelance government consultant, the youngest participant in the course and an English-French bilingual.
Fran: a sales and marketing trainer for a major crown corporation.
Harv: a supervisor of schools for a board of education in Canada’s high Arctic.
Ivan: is an instructional designer and adult educator at a major Canadian university.
Jack: a health studies research project director at a major Canadian university.
Mona: in her late 40s, a community college academic director.
Paul: works for a consulting company that specializes in social issues in the workplace.
Erin: the instructor, a nationally and internationally known qualitative researcher in the field of language issues.

C. Character Data

The institution’s conferencing system generates character data for each message in terms of keystrokes including spaces. Since this information is displayed in each message header, it becomes possible to tally the volume of strokes. Unfortunately the system does not count words as such, but by using the convention of the *standard word* familiar to most who have studied typing, where five strokes equal one word, it becomes possible not only to estimate the volume of words but to give meaning to the macro numbers.

Table 4-1 reveals that 1,839,238 keystrokes were registered by the system in course-related traffic representing 367,848 standard words. Erin alone was responsible for over 65,000 standard words. Beth, the female high scorer was also the class high at 32,956 standard words; Paul, the male low was also the class low was 8,030 standard words. Alan was the class median scorer at 16,853 standard words.

D. Conferences, Messages and Volubility

A ‘conference’ is an electronic filing space on the institution’s computer system dedicated to filing messages related to the same topic in a linear fashion. Table 4-2 stratifies the course’s 40 conferences by function with volume of messages (*N* = 1765). The presentation of content, whether directed by the instructor or guest experts, accounted for 45% of both the conferences and the message traffic. Individual and group projects accounted for 48% of the conferences and 40% of the messages. While the potential for socializing appears to be minimal under this arrangement, it should be pointed out that class *rapport* or *esprit* made itself evident throughout all of the messages and was not simply confined to the conferences where is was obviously intended as we shall presently see.
Appendix A provides a detailed table of participation in conferences by both the students by gender, and the resource cadre.

Table 4-1
Course-Related Textual Output in Typographical Characters with Conversion to Standard Word Equivalents by Types of Participants

<table>
<thead>
<tr>
<th>Participant Types</th>
<th>Characters</th>
<th>Standard Words*</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Students</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>All Females, N = 6</td>
<td>703,589</td>
<td>140,718</td>
</tr>
<tr>
<td>Female, Mean</td>
<td>117,266</td>
<td>19,545</td>
</tr>
<tr>
<td>All Males, N = 9</td>
<td>710,869</td>
<td>142,174</td>
</tr>
<tr>
<td>Male, Mean</td>
<td>78,985</td>
<td>15,797</td>
</tr>
<tr>
<td>Total Students, N = 15</td>
<td>1,414,458</td>
<td>282,892</td>
</tr>
<tr>
<td>Total Students, Mean</td>
<td>94,297</td>
<td>18,860</td>
</tr>
<tr>
<td><strong>Resource Persons</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Instructor</td>
<td>325,052</td>
<td>65,010</td>
</tr>
<tr>
<td>All Others, N = 5</td>
<td>99,718</td>
<td>19,944</td>
</tr>
<tr>
<td>Total Group</td>
<td>1,839,238</td>
<td>367,848</td>
</tr>
</tbody>
</table>

*One standard word is the equivalent of five keystrokes.

Table 4-2
Distribution of Conferences and Messages by Conference Type

<table>
<thead>
<tr>
<th>Types of Conferences</th>
<th>n</th>
<th>P</th>
<th>Msgs^b</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Content-Centred Exposition</td>
<td>15</td>
<td>38</td>
<td>679</td>
<td>40</td>
</tr>
<tr>
<td>Guest-Expert Moderated</td>
<td>3</td>
<td>7</td>
<td>109</td>
<td>6</td>
</tr>
<tr>
<td>Individual Student Projects</td>
<td>15</td>
<td>38</td>
<td>398</td>
<td>22</td>
</tr>
<tr>
<td>Technical, Social</td>
<td>3</td>
<td>7</td>
<td>258</td>
<td>14</td>
</tr>
<tr>
<td>Closed Student Small Groups</td>
<td>4</td>
<td>10</td>
<td>321</td>
<td>18</td>
</tr>
</tbody>
</table>

^N=40. ^N=1,765.
While the nine male students accounted for slightly better than half of the 1,383 student messages, it was the six female students who were the more voluble averaging 113 messages each, as opposed to the men's 78. Figure 4-1 displays this difference graphically along with the relationship to the student mean of 92 messages.

**II. Participation Dynamics**

As has been suggested in Chapter 2, the management of all course-related agendas through messages is a political activity where the concern is to meet not only personal agendas but also to participate positively in the learning community's many obligations: respect its values, respond to its learning needs and, generally, be mindful of its well-being. In this part we examine the implications of that imperative on the students in terms of the course-related stresses it creates and working dynamic it fashions.

The notion of 'participation imperative' is a generalization which embraces the totality of personal and communal obligations implicit in taking a course, especially a course delivered through CMC. The decision to take the course, for whatever reasons, binds the student to these formal and informal 'musts.' When this participation imperative is internalized, it generates a number of personal stressors, the reduction of which may be understood as the motivational engine that drives course-related activity. Needless to say, if those stressors overwhelm the student, the course cannot be completed. Section A explores this notion further.

Figure 4-2 depicts this dynamic -- in large measure a reflection of the organization of the remainder of this chapter -- in diagrammatic form. The approach to the diagram is organic, intended to reflect the dynamic of learning within the CMC environment. More importantly, it
points to the critical interplay of agendas resulting in the message stream. At a macro-organizational level, as opposed to the micro-organizational level of message interchange (to which we will address ourselves presently), this activity may be understood as largely political -- the artful, diplomatic management of the learning community’s many obligations, values, needs and general well-being expressed as educational, personal and communal agendas.

A. The Participation Imperative: The Givens of Course Participation

1. Managing essential agendas: participation and content.

Having once chosen to take any course, CMC-delivered courses included, the student’s goal, simply put, is “to get” the course -- to see a passing grade on the transcript at the end of the experience. The degree to which this goal is well-achieved depends on the management of self-interest through personal participation and content-oriented agendas. In the case of CMC-delivered courses, this means, as noted earlier in Chapter 1, accomplishing significant off-line, paper-based projects in addition to participating in the dialogical message flow, on time and, at least, at the intellectual level determined by the instructor. Implicitly, peer pressure would compel on-line performance at the level of activity perceived to be generated by the colleagues.

2. The class as audience and community: personal and social implications.

Again, implicitly, on-line participation means, among other things, participating in the class as a community, presenting one’s personality and interests, and generally conveying a notion of a genuine living, breathing self. Above all it means representing that self in such a way as to be seen to be mastering the content of the course.

The audience for CMC messages is first and foremost the instructor, Erin. Colleagues as a group and individually constitute the second and third audiences. It is this community with its three audiences that dictates appropriate on-line behaviour. Lakoff (1990, p.1) suggests that in any communication situation, no matter what the level or the function, “... we all have the same basic needs which we try to meet through our linguistic interaction. We want to be liked, first of all; the rest follows: we want to be authoritative, to have our instructions or advice followed, to be admired...” This is no less true for Erin than the students.
DECISION: "I'M GOING TO TAKE THAT COURSE!"

INTERNALIZING THE PARTICIPATION IMPERATIVE
- Formal Obligations
- Personal Student "Musts"

EXPERIENCING STRESSORS: THE MOTIVATIONAL ENGINE
See II. B. Psychological Implications of the Participation Imperative: Stressors

MEETING COURSE-RELATED POLITICAL AGENDAS
- Educational
- Personal
- Communal
- (Technological)
See Part IV. Learning Through Message Making: Dialogue to Dialectic
Chapter 5: Creating and Maintaining the Learning Community

MAKING MESSAGE CREATION DECISIONS
See Part III: Managing Communication: Creating and Processing Messages
Section A: Managing the Message Flow; Section B: Message Production

[IN] MESSAGE STREAM [OUT]

*Figure 4-2.* Interrelationship of dynamic elements within the CMC learning context.

For the sake of introduction, in addition to my analysis of the course data, let me share my observations gleaned over 16 years of experience as a participant in courses, facilitator, facilitator trainer, technical coach and researcher. Aside from messages in conferences dedicated to non-course-related matters, every response in a content-centred conference must engage the subject matter under discussion in a manner beyond simple acknowledgment. Permissible behaviours here include, among others, questioning, clarifying, providing feedback, and providing personal opinion. All of the above are intended to elaborate the meanings explored in the content.

Language, then, takes on the additional characteristic of also being driven by obligation, first to say something, say it in a non-hurtful way, and genuinely advance the topic. Invective of any kind -- 'flaming' as it is otherwise known -- violates a tacit norm of politeness, as does atypical linguistic virtuosity, or "showing off." Further, it is a style gaffe to post a message which has been written without reference to those messages which have preceded it in the conference queue that bear on the focus of its content. The implication here is that the author has "not caught up on the homework." In short, indiscretions which would be out of place in a graduate seminar because they overstep the line between good taste, academic professionalism and boorishness are not welcomed.

B. Psychological Implications of the Participation Imperative: Stressors

A stressor, for our purposes, may be defined as a resistance or dilemma which impedes a student's personal direction or will to proceed with the business of the course. The "participation imperative" generates two kinds of stressors: those dealing largely with participating in on-line life and those dealing with course content -- understanding and working with the subject matter and process of naturalistic research. While many of the stressors which follow are unique to the CMC learning situation, many are common to the participation imperative that drives any course. However, in the case of CMC, the response to all the stressors must be addressed through the on-line medium which adds its own measure of technical difficulty and the additional psychological dislocation of asynchronicity.

Message from Alan, Bev and Mona exemplify the kinds of stress some students found themselves experiencing, especially earlier in the course. In addition to meeting a not-so-covert
political agenda, Alan, Bev and Mona identify a clutch of participation and content-related stressors:

Good job I didn't write a message yesterday. I was feeling grumpy about the mammoth amount of work in this course. And I had a cold too. I still see a mammoth amount of work reading articles, UNDERSTANDING articles, reading messages, struggling with first gear in computer technology - it all seems to take me 10 hours a week to do just that. THEN there's the research project, AND the annotated bibliog. items...the class presentation... I'm not as grumpy today, but I still have a cold, and a wife who wants to throw this computer where the sun don't shine... Good thing we're here in the coffee shop where Erin can't hear me complaining... what? you mean ... Erin CAN?... / Alan

To which Bev replied: “Hey Alan, hang in there. I sat before this mean machine about a half hour ago and began to plow through 116 notes.”

Stupendics: [Mona’s small group], I know my consent form is hiding in some file, but do you think I can find the sucker!!!!!!! Will get back to this tonight and download if it rears its ugly head. Thank goodness I ran off a hard copy but I really don't want to type it up again. I feel as if I'm snowed under and I don't know how I'm going to get at all those annotated bibliographies done by the 22nd. And, I'm running as fast as I can. Help!!!!!!!!!!!!!!!!!!!!!!!!!!!!!! Moral support needed!

Stressors may also be categorized by reference to the generating condition, whether it be largely a personal disposition or largely an externally imposed condition, or both. The first category is represented by (a) confusion, (b) lack of self-confidence, (c) existential crisis and (d) inability to write. The practicalities of actually doing research in the field represent the second category. The situation where a personal disposition is matched with an external condition includes: (a) lack of time, (b) technical problems, (c) a variety of dissonances between individuals and contexts.

1. Stressors reflecting both internal dispositions and external conditions.

i. Lack of time to represent one's self to one's own satisfaction remained throughout the course a fundamental problem. As well as for Alan (above), Fran and Alma (below), among others, the issue turned on the dilemma of course time versus personal and family time.

A few times I have felt that I have been glued to this screen. If I am not reading or downloading notes, I am writing or working on assignments. My family thinks I am nuts and wonders when it will all end. Found I can't get to everything like I would like to but am resigned to do the best I can and to try and set specific times to work on the computer. / Fran

This week has been a write-off, what with another trip to Arkansas [to pursue graduate study] and the family and grandchildren here for the weekend (two
family dinners for 16-18 in the last three days does not leave time for much else). 
/ Alma

For Bev, the need to be original was also compromised by lack of time:

I would have logged on more often. I found that by the time I logged on, most of what I might have contributed to any of the discussions had already been said in a number of ways and I often scrambled to think of something original to say! Again, having access to my computer would have prevented this and next time I shall have this access. /Bev

In their on-line critique of the course (see Part VI) both Bev and Beth cited time as a problem with respect to integrating information and feedback:

I found that because its a course that there's so much information coming through, I'm having a lot of trouble dealing with any of it. / Bev

Sticking point: The workload. Although each of the requirements was worthwhile, it was difficult to get ahead or at best keep up. I felt that the time for integration and synthesis was too short to feel comfortable with each of the various aspects of qualitative research. / Beth

Il. Technical impediments formed the second most often cited category of participation stressors. Most technical impediments were related to computers, but the mail system which failed to deliver readings to Etta and Harv for fully three weeks after the course began tested their resourcefulness. As was hinted by Alan and Mona above, problems with personal computer systems, uncertainties with large-scale organizational computers and a combination of the two proved vexatious to many -- especially when combined with other stressors: Ivan's irritation cited below was echoed by others who were often communicating through university, college or other institutional computers:

Hi gang! Whew! You sure can talk a lot! I think I'm around the corner on the brutal task of playing catch-up ball . . . Sorry if some of messages got repeated but today I was having fisticuffs with [university computer] It kept bumping me out MID-UPLOAD!!! Consequently, I wasn't sure what went and what didn't so I sent most of them again tonight. / Ivan

Especially near the beginning of the course, those students who possessed only low-level computer skills were in a double jeopardy: first from the need to master personal computer and conferencing-related skills and then from the need to work on the content of the course. It is especially important to note that no students left the course who were enrolled at the beginning. The first month, however, before the technical aspects of participation became transparent,
almost all of the students experienced some technical difficulty which provoked insecurity, mistrust or outright disbelief in the system.

This is my fourth log-on in less than 48 hours and I am slowly getting over my nervousness about communicating through a box! For some strange and unexpected reason, I was reminded of the first time I talked into a tape-recorder. / Bev

Activity in front of the very small screen did invoke a physiological stress reaction in varying degrees for some. Ezra, for instance suggested: “I know that I can read the screen for about an hour. That’s about the limit, then . . . I can’t read it anymore.”

Dick was forced to climb an additional technical learning curve when he chose to buy and operate a new computer while coping with the course: “DON’T buy a new computer in the middle of a LDE course, especially one of your first courses. There is enough in life to worry about than your computer laughing at you.”

A combination of personal and system problems bedeviled students variously throughout the course. Inexperience with the finer operating points of the conferencing system often coupled with an ability to interpret the manual led to apparently lost messages, lost conferences, flawed uploads, downloads, and a host of irritating but minor screen formatting problems.

Bev, for instance, was unable to eliminate the on-screen presence throughout the entire course of residual key strokes left there by a faulty backspace / delete procedure.

Why is this [D[D[D[D[D[D[D[D[D[D[D[C[C[C I'm wondering why this is so unfortunate? / Bev

And despite best efforts, the conferencing system itself often confounded the students with its own capriciousness. Carl reported a genuinely annoying phenomenon: “If you log in here in the middle of the day, it’s like someone poured syrup all over the [system].” Ivan was cursed throughout the entire course by an inter-system institutional computer misalignment -- two university computers which did not really care to talk to each other: “I cannot use certain punctuation marks, such as quotations, so bear with the bare-bones text. I'm [sic] just thankful . . . .” In this instance the conferencing software computer translated his apostrophe in the word ‘I’m’ as an upper case ‘U’ -- and did so for the duration of the course.

iii. Dissonances reflect values which are not shared between or among individuals, or between individuals and the values implied by some system external to the individual. While not all of the students demonstrated dissonances a minority did, and these dissonances are worthy of
note even if they were not widely-spread among the students since they uncover genuine impediments that must be overcome by the individual student in order to get on with the course work.

(a) Epistemological dissonance implies a student’s inability to value the “way of knowing the world” characterized by the research paradigm under consideration. In the case of this course, some students, in varying degrees, had genuine problems with the qualitative research paradigm. Fran states the general problem clearly when she comments: “My background originally was medical research. It was drilled into me that when doing research I must produce a hypothesis and then try to prove it.”

Ezra’s concern is more technical:

Like Paul I have the most problem with the lack of generalization. Even though I read Guba and Lincoln’s response (i.e. go for transferability instead), I still feel some resistance. I guess I was well indoctrinated into the school of positivism. I understand the concept of "context-bound transferability" but I wish I could just call it "generalization." / Ezra

But it was Jack, perhaps more than any other student, who was deeply troubled about the validity of this paradigm and his work in it:

You [his on-line classmates] are being turned on by qualitative research. In some ways, I am being turned upside down. I am living and working in an environment where positivistic research has a strong hold. With a new set of lenses on, I am viewing it differently. Yet I can’t (or don’t feel right) saying all that I have done is invalid. Nor can I immediately change the projects that are in motion from a quantitative to a qualitative orientation. As we work at new components of the research, I try to bring a "qualitative perspective" to the discussion. Yet, I also do not want to be seen as a zealot, who cannot see an alternative point of view. It is a fine line I walk. One step forward: we are going to devote at least one of our work group seminars to discuss the assumptions we make in our research, and to gain a better understanding of the different perspectives. I have asked to delay the seminar for a month or two until I feel more competent to express / defend qualitative paradigm. I am looking at it as a growth experience. . . . While I agree with the concept that people (the world) needs to be viewed holistically, I also find that it is not always an easy concept to put into practice. My progress has been evolutionary rather than revolutionary. I have a knot that develops inside when I think of using only qualitative methods for my research. / Jack

(b) Dissonances with colleagues occurred largely over conceptual misunderstandings, unclarified assumptions, meanings and assumed or unassumed imperatives relating to class work. A discussion of this type of dissonance will be extended in the section following later on
feedback, but it is worthy to point out that even some disturbing interpersonal dissonances were addressed with decorum, quite within the bounds of the rule of politeness.

Harv and Bev entered into a dialogue with respect about how to deal with native people. A fuller exploration of this issue follows in Part IV. Harv’s response to Bev’s description of her work highlights the sensitivity with which students dealt with each other over issues which might have led to otherwise highly emotional on-line reactions:

Bev, From your description of the interview, and the comments of the "elder" (what is your, or the tribe’s definition of an elder?), I wonder what this person thought you meant, or what meaning the term "cultural relevance" had for him? It’s a pretty complex term. Maybe the "I don’t know" was the answer. Even if you and your participant /elder had the same ideas about cultural relevance, or you both could understand each other’s ideas of the term, then maybe the participant just didn’t have anything to offer at the interview . . . It’s interesting about your thoughts on language. I wonder if the elder had similar thoughts. . . . Your assumption about your needs would be interesting in terms of the elder’s needs. / Harv

As Bev’s comment in her on-line course critique points out, not all the students shared a common sense of compulsion to perform all group projects all of the time:

The small group exercises were stressful at times; perhaps the assignment of these without the pressure of making a 'small group response' would have made the exercises a little less stressful. I always wondered about 'learning partners' as an alternative to 'small groups'. / Bev

(c) Dissonance between the instructor Erin and one student, Carl, was not abundantly evident on line, but certainly a felt condition by both, as revealed in the interview data. The problem was rooted in Carl’s unfortunate circumstance in taking the course which compromised his ability to participate fully. Beyond the grumbling which is directed at the instructor of any course when the reality of the course load becomes apparent, there was no other evidence of dissonance between Erin and any student. Carl reveals the nature and genesis of the dissonance in the following excerpt from his interview:

And I've had occasions with Erin. I've asked her, especially, deciding my research topic. I couldn't describe it properly. And I thought, "If you were standing here, I could do it." She said "Carl, you’ve got to write me a longer note. I can't understand what you're saying." And you know, the fists just started to clench and I just thought, "Boy, I wish you were here. I could show you." That's when it [the medium] felt limiting. . . . I try to write in a simplistic way, unless . . . . You see, I ran against this problem, too, I had with Erin. I couldn't express myself for her to understand. And she misinterpreted my message. So, that may not be an online problem. That may just be my writing problem. / Carl
2. **External conditions impeding progress in coursework.**

i. Bureaucratic hurdles. Ezra captures the essence of bureaucratic hurdles when he advises: “Avoid conducting research with administrators in colleges in March. The budget comes before anything else, including scheduled interviews.” Certainly a time delay among other hindrances stressed Beth as she awaited clearance to proceed:

I am having trouble accessing appropriate people at the University to get the project moving along. The VP Academic stated that she would be pleased to give me administrative consent to proceed if I went through the ethics committee first. . . . Waiting to obtain consent from the ethics committee resulted in a 3-4 week delay in my progress. This was very difficult for me because I had to find a diplomatic way of requesting that the process be moved along. The dilemma as to whether I should proceed when the chair gave me the go-ahead really made me re-evaluate my philosophy regarding ethics. / Beth

ii. Unanticipated process realities of fieldwork caught both Beth and Carl unaware.

Well, I did my 20 minute interview today. It took me 2 hours to transcribe it into field notes. I found that I was feeling desperate for a tape recorder because I knew I wouldn't remember everything that was said. I have approximately 6 pages of notes based on the session! I jotted down some notes as the interview progressed, however, I found that it was difficult to take notes and pay attention at the same time. / Beth

I sat down at a table that I am used to writing notes on, but it seemed so uncomfortable. I finally figured out that it was too low to write and look and look and write, so I took to my knee. I realize now for such an endeavour, a higher table would suit my needs. / Carl

3. **Stressors reflecting largely personal dispositions.**

The process of the course may be understood as the successive disambiguation of concepts and the meaning of relevant percepts leading to an ability to execute successfully an act of qualitative research. The process of disambiguation, however, is often muddied by personal dispositions which deflect the student from a direct engagement of the content.

i. Confusion around the ambiguity of content and to a lesser extent confusion about the on-line process of the course occurred at some point for all of the students.

(a) With characteristic humour, Alan, Bob and Mona expose the conceptual confusion and confounded understandings with which students must cope as they move intellectually toward clarity and firm understanding:

Reading Lincoln and Guba, and then Morgan and Smircich caused my brain continually to leap towards the door and shout "Lemme out! Lemme outa here!" Whereupon I would go and drag it back, sit it down, and say "You're
gona read this and you're gonna ENJOY it!". It would read on for another paragraph, then yell "Gimme an example of this!" Tough sledding . . . BUT, I find it difficult now to grasp what constitutes "legitimate" or "good research - almost anything seems possible. And as one who is about to embark on it, I find it a bit scary. Rules would be so convenient. / Alan

I tried reading L&G to my daughter last night, but she just gurgled. I think she prefers Good Night Moon. After using the dictionary so much maybe I prefer it too! / Bob

Classmates, Help!!!!!!! I'm lost in an ethnographic ecological, ethnology of holistic, symbolic interactionism which is neither human nor does it communicate to me! Anybody else a whole lot less clear on qualitative research after reading "Clarifying Qualitative Research" by Evelyn Jacobs? Anybody else babbling? / Mona

(b) Beth captures the essence of the confusion around online process:

In my opinion, there were too many conference spaces. It became confusing with conferences opening and closing at different times. Sometimes it was confusing to decide where notes should be sent most appropriately. The instructions and criteria were clear for each of the "classrooms", but I found I had to keep going back to check if I was sending my notes to the right place. / Beth

ii. A Lack of self-confidence could only be heightened with the exposure of the self in situations of public focus:

The up-coming interview is very much on my mind. I have a background in social work, and several years as a family counselor behind me, so I thought I "knew" interviewing. But after reading Spradley - which I found VERY interesting and informative - I feel a bit like the centipede who was going along just fine until someone asked him, "How do you do that". At which point he answered, "I don't know...I've never thought about it" and then began falling all over his own feet. / Alma

I decided to comment on the section in the literature on values in the naturalistic paradigm. Something I felt a little more confidence in addressing! / Mona

Carl used the distance and relative anonymity of the medium to request information from a colleague to whom he might not otherwise have had the courage to speak:

If I'm taking a course with you and we get to talking, but not really talking, Because you don't get to know really everyone in the group. Not only here in this class but, say there's 25 people: I'm not going to know everyone that well. But, for example, Bob is the Training and Development guy and that's what I want to get into. So, I saw his note online and I sent him a personal message. I didn't have to face him right? I thought, what the hell! It went wonderfully. You know, I don't know how I would handle that in a face-to-face situation. I'm an outgoing type of person but, would I go up and ask him "Hey, give me some names or something. I'd like to do this." Whereas the online allowed me to distance myself and sort of
just say "Hey, Bob, I read your note . . . ." . . . Instead of just saying: "Oh, I heard you say this." It almost seems forward of me to come up to you as an individual, but, "Let's talk," you know, maybe not. But that note created a distance and allowed me to investigate another possibility with him and he was more than happy to give me the information. So that kind of thing made it easier for me to approach. A lot easier. / Carl, interview

iii. Existential crises or dilemmas represent life situations which make pursuit of the coursework problematic. Carl's situation places the notion of existential crisis in relief: "Yes. I've had a lot on my mind recently with Caroline [his wife] almost having a baby. And Madeline's just . . . starting to walk so I've been really busy. So my circumstances have led me away from the course."

Perhaps even more dramatic was the situation of Etta who had to face a potentially negative career impact for participating in the course:

My critical moment for this course came from a superintendent in my school system. He said "Why are you enrolled in the E.D.D. program? What do you want to do with a doctorate? A doctorate program takes up huge amounts of your energy and time. I'm not telling you not to take it. You have enough education to become a vice-principal. How could you raise your profile in the board by devoting your time and talents as a leader for the board instead of as a student?"

This continues to be a crisis for me. This is my first course, will it also be my last one (for awhile)? There is a course . . . this fall that looks good. Will I sign up for it, or will I find a high profile committee and aim for the next round of vice--principal openings? / Etta

iv. The inability to write, regardless of the technical medium, is itself a significant stressor in graduate school. Indeed, the ability to write is the *sine qua non* of participation in distance learning through CMC. When students lack strong writing skills, it is my experience that they quickly leave CMC courses. Writers in this medium must perform easily, spontaneously and steadily at a graduate level. Most of the fifteen students in the course had no particular problem with their skills. Carl, however, made reference to his problem with writing on several occasions, as has already been noted. This aspect of his work will be addressed in his profile which follows later.

4. Conclusion.

Losing control, or rather failing to gain control, appeared to be at the root of almost all stressors, especially early in the conferencing process. Perhaps as a community-building device, some confessions of stress seemed a formal or rhetorical nicety. Genuine stress was, however, characterized by hyper-textual emotional signs including strings of exclamations (Mona above)
unusual combinations of punctuation (Alma above) and emphatic capitalizations (Alan above). The community-building relevance of these devices will be examined further in Part V.

While it may be argued that the stresses identified here are, in large measure, the same as the stresses that might beset any student deciding to take any graduate course, under any set of circumstances, the difference between stresses encountered under the conditions of CMC must be worked out in terms of the medium -- its affordances and constraints. In a very direct way, the medium shapes not only the message -- pun intended -- as McLuhan argued, but the process of meeting agendas.
**III: Managing Communication: Processing and Creating Messages**

Having introduced in Part II of this chapter the participation context of the course along with the motives and agendas which propel it, we turn now to an examination of the products of that activity, the 1,765 messages and some aspects of the art and science of that production.

**A. Managing the Message Flow**

I was much more aware initially of the message becoming public and now it's much less of a pressure. I'm aware that there's an audience there, and I literally visualize that audience: I see it in my mind before I write. But I'm so much more at ease. . . . I tended to see people as very critical before: 'Oh my God if I make a mistake they'll think I can't write or they'll think I can't think!' — or that kind of stuff. Today it's not that important. / Ezra, interview.

The first question I ask myself when I go on is how long do I want to stay on? Time management for me is really important. / Ezra, interview

The practical on-line regimen is driven by two motives (stressors): (a) optimizing the representation of self to the instructor and colleagues as audience through messages (self-representation); (b) finding / making time to accomplish course-related tasks. Ezra is keenly aware of the relationship between messages and how messages represent one's self to others. Bev's use of the word "scrambled" in an earlier quotation implies that Bev feels a need not only to participate going on-line but a need to be seen as an original, thoughtful contributor. Ezra's second comment about time places course-related time into the broader context of personal time.

Eventually, as Ezra hints, each participant resolves these stressors in some personal way. However, there appears to be a general principle and two very practical maxims extracted from experience which determine the final mix of on-line participation strategies: *Managing time means aligning one's personal read/write volume to optimize self-representation.* But, given the enormous volume of the message flow, (a) *every message cannot be read*; (b) *every message that is read cannot be responded to*.

Indeed, the anxious, hyper on-line activity demonstrated early in CMC courses is an indicator of the search behaviour which will resolve itself into the less-frenetic, steadier-state routine that characterizes later on-line behaviour, and is driven by the principle of achieving participation objectives with greatest economy. Ezra's advice to Mona is an encouragement to think about her personal regimen in a way which will ease her pressure to produce:

Mona was saying that she was taking everything down . . . and responding to everything. I was saying, "Do you do that in a class?" She said, "No" and I said, "Why do you do it on computer?" . . . When you're in a class and there are
people talking at times somebody will say a comment; it’ll be really important to you . . . . You’re not going to focus on every single person and you’re not going to respond to what everybody says: you’re not expected to do that . . . . You’ve missed a few things, so what? Fine, I mean, you got what you wanted out of the hour with the group. / Ezra, interview

Carl explains how external pressures have changed his on-line behaviour:

So, my circumstances have warranted me to only give my opinion about things that I've had to, rather than everything, as I did when both of my babies weren’t born. I’d talk for the sake of talking. / Carl, interview

As it is in any course, the establishment of a manageable, personal regimen is a necessary condition for success. In the case of a CMC-delivered course that need is intensified by the necessity to manage a technologically complex communications mechanism which is orders of magnitude beyond simple reading, hearing and responding or the putting of pen to paper.

1. Strategies for managing the message flow.

The strategies that follow are unique to the CMC setting, while certainly in a generic sense each could be applicable to any learning experience. I observe that course-engagement strategies that were perceived to work in the past in other circumstances, CMC or otherwise, tend to be the strategies that are used first, particularly among those new to the medium. This may be a mixed blessing, as will be noted below.

1. Using appropriate technology efficiently. As I have observed in many courses in my role as a technical coach, the first tendency in neophyte computer users is to treat a highly-sophisticated text processor as an electric typewriter. In this mode the output is paper-based, and the digital information stored in the computer’s memory as files is an accident of the process: the value is what is on paper. At the other perhaps unlikely extreme of this continuum is the case where the entire process is paperless. Here the value is placed on the electronic nature of the information. Certainly, that the process could become totally paperless in the CMC context is certainly moot, and beyond discussion here.

Hi Alma (and others). It was nice to see the outpouring of empathy for Alan (feels good, huh, Alan to get an electronic hug?) . . . . I certainly can identify with your downloading, printing, sorting, and placing it all in a binder and THEN feeling, wow, now I have to read all this stuff! To add another twist, I cut and paste everything I download into the running topic file in electronic form and continuously update between by H[ard]D[isk] at work, floppy [disk] backup, and my HD at home. This course is not just about qualitative research but also about data management skills. Hey, with the 21st century around the corner, it’s good practice! / Ivan
Ironically, Ivan’s sentiment about data management skills, while undeniably true, is sadly out of keeping with his own undoubtedly effective, but sadly inefficient process. Unnecessary duplication of course-related information increases the time necessary for its management, which in turn erodes the time one can devote to its consideration for course-management purposes. Again, while Beth’s system here following is rigorously effective, it is cumbersome and uneconomical from a data management point of view, since it duplicates the information, storing it once on-line, once on her hard-drive, and again in print -- three-hole punched print, marked with dividers! Her final two sentences, however, characterize what was really true for each student:

Etta, I read your note and sensed your frustration with the technology. What I find helpful is to batch-read and immediately download everything onto my hard drive. Then I can log out and read all the notes at my leisure. I like to have a hard copy of everything...so after I’ve read the notes I print them according to the conference they belong to. Then I put them into a binder with dividers separating each of the topics. I also like to highlight the name of the person and the # of the note for easy reference. If I choose to respond, I make a little note in the margin and if I have nothing profound (ha) to contribute, I just place a check-mark next to the note to remind myself that I’ve read it. Anyway, decide on what will work best for you and hang in there! It takes a bit of getting used to. /Beth

In large part, our traditional reliance on paper-based information creation, storage and communication creates a genuine discomfort for many CMC participants because of the seemingly transient nature of the digital information which they are accessing from the main computer. Even though all of the participants were assured that no information was lost on the system, and access procedures were clear, the psychological comfort level with this condition was very low for most. The notion of “going paperless” -- or doing their work in a nearly paperless mode was not an option for the majority of the students, especially early in the course. Ezra’s comments about learning to compose on-screen capture a procedure relating paper and text-processor to task fulfillment which I observed became standard for most students:

Last Sunday . . . I wrote my bibliography for this course. I sat down there with my pile of articles, took one little pad of paper and said, ‘This is the way I’m going to organize it -- title, short summary, relevance to my paper and a critical review.’ That’s all I did on the short piece of paper was the main structure and then went on the computer and wrote. Ten pages later is was done. And as I was writing I realized that I was doing it and it was: stop, reread on the screen, organize it. I was going right through . . . Then I’d write [the piece’s] relevance and before going on, I’d go back to the summary, revisit it, work it a bit, then go
mark the next paragraph, reread it, and see how I felt about it. . . I never
did [this kind of writing management] before. / Ezra

Over time, students' reliance on duplicated sources of course-related information,
whether they be duplicated on paper, in any number of digital formats, on any number of
personal or university platforms was reduced through the necessity to be more economical. What
was necessary, not only for the students but for Erin also, was to find a psychological comfort
zone -- a personally optimal mix of paper-based information and digital information appropriate
to the many tasks associated with the course.

ii. Routinizing: creating an on-line routine to realize an economy in time. For most every
student, the pattern outlined here by Paul in his interview became the norm -- a balancing of
course-related activity with the regular job, given the realities of working on the conferencing
system:

Don: How often do you come on line during the week?
Paul: Depends on the week. I travel quite a bit for my business. On one of the
normal weeks I would probably sign in 4 to 5 times a week, anyway.

Don: When, during the day, do you go on-line?
Paul: Usually I go on at night. It's so busy during the day. That's why I've stopped
going in [during the day].

Don: How long do you stay on line when you do it?
Paul: Depends on the number of messages. So, the longer the number or messages
... I don't like to back-log [of, say]16 messages because then I become very
selective in what I read. So, I sign on more regularly and spend less time, each
time. Then I'll only have 10 or 15 messages. I can deal with those.

iii. Discriminating in advance the important from the unimportant.

So what I'll try to do when I go in, I look at my inbox. What do I want to keep and what
do I just want to read on line? The kind of stuff that I want to keep, to refer to again later, I'll go
into those and retrieve them. / Ezra

Ezra identifies the practical issues implicit in optimizing his time on-line with his sense
of the importance of the information presented to him by the system. Ruthlessly efficient, Paul
knows in advance exactly what he wants: he absolutely ignores any technical information since
he assesses it to be of no value to him:

[Reading on-line] Now, I'm probably not going to read this [message] in
some [/ any] detail right now. . . . I'm going to end up keeping this [message]. It's
all the stuff on the final paper which I'll end up keeping and down loading. So I'll keep that [message]. / Paul, interview

iv. Prioritizing: what has to get done in what order.

Mostly I'm ignoring some of the stuff in the readings right now because I've given up on the readings and I'm just trying to get my project done now. / Paul

(a) What has to get read: some criteria for exercising selectivity include:

* relative importance of the author
* date of the message
* relevance of content / interest as assessed from the first and / or last sentences,

skimming

* personal relevance as triggered by form of address (irrelevance as triggered by direct address to some recipient not the reader)
* length of the message

Don: What factors enter into making the following kinds of decisions: to read or not to read a message?

Paul: Number one: the author. Some people. . . I'm just not really interested in what they have to say. [2]I think the length of the message. Longer messages I will tend to skim more than I will read. [3]Probably the [conference] category that it's in. I will go to some before others. But those would be some of the bases upon how much of the text I may read. I may read, but I may not read it all.

Yes. I would say that if it's something that I'm interested in [the content of the message]. Or, if its near the beginning of a course, I'll read them all thoroughly. As the course wears on, or I get more tired, and the notes become longer, I'll also speed read them. And, sometimes you can skip them. Sometimes I'll skip peoples notes. Individual's notes. I'll see their name and I'll just skip it. Because, I know from their past notes that what they have to say, doesn't interest me. / Carl, interview

Ezra makes an interesting procedural decision with respect to what he will read based on the distinction between emotion and content:

I'm looking at the name, and then I'm looking at the date, then I'm looking at the first sentence, what it's about, is it worth my reading it slowly or is it just worth skipping through it and going to the last sentence and then moving on. And again because this is Erin I tend to pay more attention to it and read it more carefully. Since this is less content and just more about realizations about how people feel I'll read it more quickly. . . . If it's [a message] directly talking to somebody . . . I tend to skip it because to me it's like a private message. / Ezra
(b) What has to get answered: some criteria for exercising selectivity --
* genuineness / relevance of the response in the mind of the responder
* somewhat randomly selected to meet externally imposed participation requirement
* maintaining personal working relationships with sender -- symmetry, *quid pro quo*

Don: What about commenting or not commenting on a message?

Paul: Number one: it's going to be based on time for me. Do I have time to make a comment that I think would be worth while? Because, I don't want to be sort of flippant about comments, and just comment for commenting sake. I've been on a couple of courses where people will do that and I'm certain they're bull-shitting. [2] And I think the other thing would be whether it resonates with me in terms of something I want to carry on about. / Paul, interview

Don: Out of, say, 25 messages, how many would you address?

Carl: Two. No more than that. With Carmichael's course it's different. And I hope this isn't becoming a pattern here, but, with Carmichael's it would have been 12 out of the 25. It was tons and tons of stuff. 'Cause with Carmichael's stuff, you see, Carmichael's a smart dude. Contributions, if there's more than 5 per week, you get an A+ in that component. Erin does not have that component in hers. So, I don't know. Am I the student that looks at his marks too carefully? No, not really, but, you're aware. And I noticed with Beth she's not saying as much. 'Cause you can count how many notes that everybody does. / Carl, Interview

If I were looking at these responses that Bob has given me, I could probably just write a short note back to him saying "Thanks very much, great comments" etc., etc. But I feel, since he took the time to answer my questions individually, I should send him back an individual response to each of his points. It may seem a bit wordy or maybe its unnecessary, but I think that if you took the time, I should respond individually to his points, so, I will do that right now. Now, I'm going to have to turn the printer on and get a copy of this so I can have something to work from.

(c) What deserves special technical treatment. Carl's last comment touches a point about the relationship of course-related tasks to the technical treatments needed to carry them out. Technically-related procedures such as downloading, printing off, three-hole punching are time consuming. Carl's use of paper here as an aide-memoire and the process he must undergo to generate that paper reflect an energy hurdle one must be willing to overcome in order to respond. Often the effort is simply not worth it in the mind of the respondent, and a course of least effort is taken:

I never download. The only time I will download, like in this course, I will download presentations for printing so I can make comments in these cases. But other than that, I don't download. . . . I usually [answer] on line except where a
large piece. When I am preparing a large piece, for instance for my presentation that I did on line, I would do that off-line and then upload it. / Carl, interview

To recapitulate in communications terms, what deserves special treatment and the time necessary to carry out that treatment -- the signal -- is messaging activity which optimizes the representation of self to the instructor and colleagues as audience and minimizes what is personally deemed irrelevant -- the noise. The net result is the conscious limitation of message output.


At least four strategies are obvious with respect to the posting of a message. Most obvious was (a) the careful compliance with the instructor’s stated wishes. Erin made her instructions known with respect to deadlines and these were generally met. Less obvious, but present by implication, was the fact that students (b) devoted advance time to preparation of complex projects. Less obvious still was the fact that most students were consciously (c) optimizing posting frequency by posting messages sufficiently often to ensure that performance met their perception of being seen to be participating appropriately. This varied, as has been already noted, from twice a week to daily. Only some students deliberately (d) timed the public filing of messages strategically to achieve a desired impact. The consciousness of strategic turntaking will be examined in the element which follows.

3. Turntaking.

When asked whether or not there was a consideration made to the order of placement of messages in their posting to conferences, Carl and Mona replied as follows:

I used to be [ concerned]. I find with trivial matters such as leave a note about yourself, I'll be first in... why not? But for really important things, I'll go back to the editor in me. I look for other people to talk to see what they're saying and enter after to see how things are moving along. . . . I'm doing my presentation this week. I didn't do it first because I didn't know what format. I hadn't a clue on what Erin really wanted until I saw other people presented and saw remarks about those. Then I put my [conference ] in after. / Carl, interview

Now I think that [ idea generation] happens naturally in this asynchronous mode because you download and you look at this and you get a blank screen and you write up and you want to send one message. Then you read a little more and you send two messages and you read a little more and then it's time to do dinner. Then you read a little more and then you have to go to the physiotherapist or the kids drop in or whatever. And so . . . I have continually downloaded and read what came on-line [over] two days, responded to it, send it and then download everything that's connected in the two days that I have been off responding to
Monday's thing. Well, anybody who came on Monday night or Tuesday morning or Tuesday night or Wednesday could have said what you have said [that there might be a pattern]. Where you would see it is this pattern of week after week, this person is on late or you might see it if it is their first every time [or if] they're the ones that want to control the discussion or be the lead. / Mona, interview

These comments suggest an analogy with putting up your hand in the conventional dialectic lesson situation: you do, when you are very sure of yourself, and you know what you are talking about. But, even when you are not sure what you are talking about, **you know you are going to have to put your hand up eventually or everybody including Teach will think you're stupid or something!** The virtuosi have their hands up all the time -- even if they turn out to be wrong; the more timid only when it really matters; the dullards, rarely if ever.

A study of turntaking in the conferences PARADIGM and ACCESS revealed results which were very consistent with the kind of patterning identified by Mona. Excluding the identifier message, and two withdrawn messages, 116 active messages were posted to PARADIGM which was active for 30 days. Forty-six messages were posted to ACCESS between January 24 and February 18. Erin and the students responded in what I term ‘clumps’ -- one, or a series of messages posted by the same author at a working or message posting session. Regardless of the time when the messages were composed, which may have been long before their posting, the messages in a clump form an almost contiguous sequence uploaded over a closely bounded period of time, to the same conference, as in this example drawn from the message headers in ACCESS:

44 (of 46) FRAN Feb. 18, 1993 at 21:10 (674 characters)
45 (of 46) FRAN Feb. 18, 1993 at 21:11 (351 characters)
46 (of 46) FRAN Feb. 18, 1993 at 21:11 (344 characters)

Clumping is among the first phenomena to present itself as a surface feature of CMC turntaking. It is, of course, quite possible that Fran uploaded other clumps to other conferences at the same working or posting session. The PARTI system arranges messages serially according to the time of their arrival in the message input queue on a first-come-first-posted basis. Thus, often clumps are interspersed with the messages of other participants also posting to the same conference at almost the same time. However, the four messages that follow represent four discrete clumps, not three, as might be supposed, as Erin’s two postings are fully a day apart:

23 (of 46) BOB Feb. 9, 1993 at 20:46 (909 characters)
In PARADIGM, a major content conference of the course, the 116 messages were contained in 60 clumps. The mean number of messages by each student in the conference numbered almost six, and the mean number of student clumps was close to four. In ACCESS, we have 46 messages in 34 clumps, the largest clump being only three messages long -- one of these clumps posted by Erin and another by Fran.

In PARADIGM, Erin herself was responsible for 10 clumps, her largest numbering six messages, with two clumps measuring five. Each individual message in a large clump would be feedback directed at a specific individual’s posting. Beth, Jack and Ivan were among the big clumpers, with each posting, on occasion, batches of five messages, specifically addressed, as were Erin’s. It appeared that Erin entered the message stream when there was sufficient content to reply to, and often enough that in her role of advisor she would not be overwhelmed with the volume. An examination of the message stream in ACCESS also bears out this last assertion (see Appendix E).

Paul, Mona and Ezra were the first three into PARADIGM, while Ezra, Jack and Dick enjoyed the last words. Harv, Ivan and Etta received their print packages late which restricted their input early in the discussion, while Jack and Ivan had inter-computer communication problems which likely accounts for their late entry. Fran, Harv and Carl were the first entrants into ACCESS, while Fran was the last.

It may not be accidental that Fran and Beth were early entrants to both conferences. Fran’s placement of six messages in four clumps represents an intense performance in a conference which occurs later in the course, during a time in the life of the course when already the total number of messages per conference is declining. Fran and Beth have both been seen to participate. Later in the course with the pressures of papers, less time was spent in overall message production. Carl, for instance, posts one message and no more; Dick and Paul post none. Similarly it may not be an accident that Fran has the overwhelming last word, given her persistence with the issues discussed in this conference. It should not go unnoticed that Harv, in a conference where he had equal opportunity for access, placed his three messages strategically -- one at the beginning, one near the middle, and one at the end.
Carl’s stated concern about being in too early and thus not acquitting himself well may operate at some level in everyone’s placement of messages. Table AE/2 in Appendix E which keyed the placement of clumps in relation to Erin’s messages suggests that Paul, Mona, Ezra, Fran and Beth chose to post messages in PARADIGM without being informed by any substantive feedback from Erin. Bob, Alan and Alma entered the discussion after Erin’s first round of feedback, Bev, Dick and Carl after the second. In ACCESS, as already noted, it was, Fran, Carl, Harv and Beth who committed first; Carl clearly felt easy with what was required of him.

It appears that turntaking in the CMC environment is a function of message management, driven by motives more mechanical and reflexive than conceptual or opportunistic. Turntaking cannot be divorced entirely from the twin pressures of performance and time, where the personal-life schedule appears to be the fundamental contributing factor. The surface features of the message flow are a result of a response hierarchy in which the leisure to argue fine points of philosophy and process, coupled with an almost-face-to-face style of conversational finesse in message placement can only occur when fundamental course survival needs have been met. Under stress, it appears that the law of least effort prevails.

An intense comparison with turntaking in the face-to-face context may not be productive, as each situation is driven by substantially different motives, mechanics and the opportunities to take “conversational” turns.

**B. Message Production**

Understood as literature, the message interchange in this course context resembles very much the epistolary novel — that genre of literature wherein only through letters exchanged between the persons in the story is the plot revealed and character developed. Here we have 15 heroes plotting to conquer 15 qualitative research events which represent the climaxes of the online tale — all connected and developed over time through electronic messages. High drama!

Message creation, as Ezra suggested to us earlier, can be an anxiety-laden event early in the course. This discomfort quickly gives way to routine and a sense of personal security as classmates engage each other socially, about the content of the course and, of course, about their upcoming field adventure.

Early in the life of the course, Carl queries Erin about the niceties of messaging, e.g., toleration of typographical errors, limits of directness, etc. Erin replied in an informal way
indicating that small errors do not matter, and that she will make mistakes too! It was this easy informality that characterizes the bulk of the messages for the rest of the course. But, lest an erroneous conclusion be drawn from the on-line informality, the content was handled in a very rigorous manner.

1. Message production-related strategies: Poetics

In their poetics, students employed at least six strategies to craft their on-line messages.

1. Focusing in a disciplined manner on chosen content. It was Ezra and Carl who were most articulate in the art and mechanics of message posting. Ezra consciously limits messages to the meaty topics:

Now, I can stay away for a while [from on-line activity] and when I go in, I can summarize I can say [to myself that] that point of view or that idea is particularly important now, and I feel that people are interested in that now, so it'll be important for me to leave something. I really try to focus on what seems to be important to people in the group right now. . . I think for some people it's a means of security [placing many messages or long messages]. /

Ezra, interview

2. Economizing on intellectual effort through reducing message-making to a formula or template: Ezra makes his job easier by strict adherence to a formula:

1. I always put RE: the content I am referring to. I always start my messages that way because for me it's important: it's modeling. I want that in the messages I read.

2. I might put names . . . .

3. I always start my first sentence by summarizing what I'm going to be talking about.

4. I always try then to express a point of view.

5. If it's particularly long, I'll try to do one or two paragraphs. I always limit myself to one screen unless its a presentation that requires a message with many screens.

6. [Conscious use of questions] I'm consciously aware of trying to ask questions. When I go in, I know I want to do that: I want to leave a question at the end . . . . because I want to go for that interaction [encourage more dialogue].

7. [Consistent signature]

...and I always sign my name at the end. That's another thing I always do and that's the practice I do in other conferences and in other systems as well. It's first name EZRA: it's ended now, a question, then my name, that's the format. You know now that I've ended. / Ezra, interview
ill. Controlling length overall in total words. In the beginning controlling how much was composed was inspired for many by simply overcoming the technology at all. Over time the unofficial limit of “two to three screens prevailed where one screen filled is bounded by 20 lines with about 15 standard words per line, or 300 words per screen. Overall, dialogical messages became shorter over the length of the course.

iv. Controlling writing style for appropriateness including formalism through sentence complexity. As Ezra suggests, writing style is determined by the purpose of the message: “and heavier sentences if it’s your report about how your research is going.” The degree to which writing style decisions are consciously controlled -- as Ezra’s always are -- by other students is moot: certainly Carl consciously considers stylistic tactics -- often as a defense mechanism. Mona suggests, after reflection on the issue, that she does too. However, for most of the students, writing style in the dialogical message mode appears to be an extension of the unselfconscious kind of public speech that they might use when participating in a graduate seminar. It was neither simplistic nor “in-good” -- the kind of formal or, as Ezra calls it above, “heavy” style usually found in academic writing.

Ezra is especially conscious, for instance, of unwanted directness:

I wouldn’t tell you to your face; I would never say that “God that was really stupid what you just did!” I wouldn’t say that to you even though I might think it. I would never say it in public, so I won’t certainly say it on the computer either. / Ezra, interview

v. Imitating the modelling of the instructor or prominent students. This item will be discussed further in Chapter 5.

vi. Controlling Vocabulary. One obvious stylistic mechanism to demonstrate that learning is taking place is to use the vocabulary of the field. The modelling of vocabulary by the instructor is as potent an opportunity for student emulation as the modelling of writing style.

The first word I looked up was "paradigm". After reading Morgan and Smircich and Lincoln and Guba (once for vocabulary, again to try to understand it), I wondered what I had gotten myself into. However comments 1-16 in Paradigm are starting to make some sense to me now. / Etta

In this course there’s a certain jargon that is now acceptable and that people understand so that you can use it. . . .It’s a sense of a shared vocabulary. . . . My vocabulary had increased. Either the first or second course I took at [institution] was CMC and I thought "God, I need a dictionary beside me". And then, as they started to use the words more and I understood them, I started to use them myself. And I find now that in off-line writing I use them tremendously. I

89
use them in reports and things we submit. I use them in my essays that I send in. It's fantastic. / Carl, interview

Communication cannot occur without the use of signs, in our case words, the meanings of which are shared by communicators. In addition to a rich general vocabulary, participants developed a special vocabulary of words relating to the field of study -- qualitative research. As a category, these words are referred to as domain-specific vocabulary (DSV). As Carl and Etta suggest above, with time, participants acquire or develop meaning around these special, sometimes intellectually daunting notions, and eventually the field of study becomes represented more and more fully through them by the learners. In its worst sense, it DSV becomes, pejoratively speaking, the "jargon" or "argot" of the field.

Domain-specific vocabulary is also of interest because it is through this vocabulary that learning is demonstrated. For instance, one can track the development of a notion such as "hermeneutic" from halting, definitional questionings through the use of that word by the entire class in varied appropriate ways. Often participants do not even recognize that they are learning the scope of a word as concept -- assorted contexts for the word, its use when inflected through many parts of speech, synonyms for the word. Individuals who can uses a large variety of individual words -- word 'types' -- appropriately have something of an intellectual advantage in that they are able to describe their world in richer ways. (See Brett, Scardamalia, Bereiter, & Rukavina, 1989, March; See also Appendix B)

Selecting style tactics becomes the ultimate strategy in message making.
IV. Learning Through Message Making: Dialogue to Dialectic

In this section we document the cognitive processing experience of learning through the exchange of messages (dialectic) in terms of the learning-related behaviours demonstrated by students: communicating, employing cognitive strategies and managing feedback.

A. Learning and Dialectic

The obligation to grapple with the content of the course works itself out over the thirteen weeks of intense, on-line, dialogue. This dialogue, composed largely of assertions, questions, exclamations, and quasi-imperatives in the form of feedback, is asynchronous and thus allows students some time to consider responses to each other in a genuine way. In the consideration of feedback -- new assertions, questions -- new understandings are established which broaden the knowledge base of the participants. It is this process of ever-broadening syntheses which allows us to understand the learning process as dialectical.

Dialectic is that manner of thinking which moves through the triad of ‘thesis’ (that which is, or seems to be) through a consideration of ‘antithesis’ (that which is other than or outside of the thesis, the different) to a ‘synthesis’ -- the generation of an alternative cognitive construction or thought entity which embraces aspects, if not the totality, of the thesis and the antithesis. Feedback loops are examples of dialectic and dialectic is basic, ultimately, to the social construction of knowledge. I use the term in the same sense as Basseches uses it (1984, 1986) as a philosophical notion at the logical root of the interplay of ideas such as scaffolding.

Jack, whom we have met earlier, makes a significant contribution to the class’ information bank with this message about thinking styles. It is worthy to recall Jack’s own struggles with the qualitative research paradigm, and his exclamation in the second-last sentence underscores the depth of his concern:

Hi Class. Just returned from a day-long retreat with my colleagues from the [topic] research group. We wanted a tune up our working styles. The facilitator took us through a few inventories, e.g. social style and thinking style.

Among the styles of thinking was one called synthesist. I thought, that sounds familiar (even if it doesn't sound like me). It is characterized by an integrative view of the world, seeking conflict and synthesis of apparent unlikes and feel that data are meaningless without interpretation (among other characteristics). I wonder if most researchers who adopt the naturalistic paradigm use primarily synthesist thinking styles. Thinking style could be an added category in the continuum proposed by Morgan and Smircich. At the end opposite to the synthesist thinking are the analyst (seeks "one best way", interested in
"scientific" solutions, uses formal logic and deduction) and the realist (empirical view, relies on "facts" and expert opinion).

Interesting that in studies done of thinking types, only 11% of the population predominantly use synthesis, while over 30% use analytic thinking style. Idealists (whom I would categorize closer to synthesists) are the other most common thinking style. So, if my belief that the naturalist paradigm would encourage a synthesis thinking style, qualitative researchers can count themselves in a rather select bunch.

Two final points. According to our facilitator, it is possible to develop alternative thinking styles (phew! I was beginning to worry about my progress in this course). If anyone counts themselves as having strong synthesis skills and an interest in [topic] research, apply now. We may be looking for someone with these strengths, since we cannot count that style among our group. / Jack

Over the period of the course, another three-phase pattern of increasing understanding emerges: initially students grapple with the unfamiliarity or ambiguity around concepts related to the domain under study -- in our case, the new vocabulary of qualitative research; increasing evidences of the concepts in the "real world" -- percepts-- are introduced which clarify and amplify the notions under discussion; finally, the newly-acquired domain-specific concepts, enshrined in a new, broad vocabulary are being used to describe students’ own actions as qualitative research practitioners. This movement from conceptual, through perceptual to executive understanding characterizes another process that emerges in this on-line learning environment.

For Carl, as well as others, “... thinking and writing usually go hand-in-hand ... I just thank God for my thesaurus.” The very act of writing is dialectically-driven when considered from the perspective of having to choose words with some care for not only connotative but denotative value.

Learning on-line is a shared undertaking: in theory, since every participant reads what every other participant has submitted -- including the instructor -- what emerges is a body of shared understandings, arising out of the collective experience of the participants, amplified or corrected, where necessary, by the instructor. It is upon this body of understanding that participants can base their professional action.

Learning under these conditions, then, may be characterized as the search for, and creation of shared domain-specific meanings, including action prescriptions, through message writing. While the dialogue -- the fundamental exchange of knowledge -- is electronically
mechanical, the learning for each participant takes place through the cognitively transformative power of dialectic.

B. Communication Behaviours and Cognitive Strategies

The first word I looked up was "paradigm". After reading Morgan and Smircich and Lincoln and Guba (once for vocabulary, again to try to understand it), I wondered what I had gotten myself into. However comments 1-16 in Paradigm are starting to make some sense to me now. / Etta

Erin .....................................help! / Mona

Etta’s candor reflects both the initial difficulty in coming to grips with new material and a confirmation that personal learning is taking place. Equally important, it displays an elemental cognitive strategy for moving herself to greater understanding -- clarifying vocabulary. The examples of basic communication behaviours and cognitive strategies identified below may be each in itself unremarkable, when viewed in detachment, but put into the growing learning context, each contribution informs the whole in some not insignificant way. Indeed, this is each participant’s objective: to create a contribution, however weighty, which will inform the group through the introduction or soliciting of substantially new knowledge.

In its essence, the following list of communication behaviours and cognitive strategies encompasses virtually all of the messages that engage the content of the course. Basic communication behaviours are broadly those that assert and those that question. Exclamations convey affect and will be dealt with at length in Part V: Creating and Maintaining the Learning Community. Imperatives, or more precisely quasi-imperatives -- assertions giving strong, almost imperative direction -- will be dealt with in section D. Feedback: Giving and Getting, Good and Bad. Any message can extend a conversation thread or begin a new direction for discussion.¹

Cognitive strategies are based upon the processes of generalization and discrimination (compare and contrast, the same and the different) along with induction and deduction as problem solving strategies. No attempt has been made to delve into sub-categories beyond obvious surface discriminations. Imitation-related considerations introduced below will be dealt with again fully in Chapter 5, but are mentioned here since imitation represents a powerful adult learning behaviour.

1. Communication behaviours here include:

¹ For a complementary discussion of cognitive strategies which approaches the issue from a more theoretical perspective, see Burge (1993, 1994).
i. Making assertions and / or providing feedback which: (a) cites literature, or reveals what others say; (b) provides personal experience or testimony; (c) provides examples; (d) reinforces other participants' positions; (e) confirms personal learning; (f) uses metaphors and other literary devices to explain difficult concepts.

ii. Asking questions which genuinely advance the understanding of the topic.

iii. Soliciting feedback indirectly by trying things out: "run things up the flagpole and see who salutes" -- a combination of assertion and questioning.

iv. Uttering exclamations to declare affect.

v. Issuing imperatives or quasi-imperatives.

2. Cognitive strategies evidenced through these behaviours include:

i. Disambiguating or discriminating behaviours including (a) inducing, focusing or identifying, (b) discriminating among alternatives, (c) clarifying vocabulary or meaning generally.

ii. Generalizing behaviours including (a) synthesizing, (b) integrating; (c) relating concepts to each other, (d) deducing or extending meanings or principles.

iii. Accepting or seeking direct help from others including the instructor or other colleagues, and directly related to this strategy,

iv. imitating the instructor's modelling (deliberate and/or subconscious) in selected characteristics and/or imitating model students.

Each of the examples that follow reflects an amalgam of the communication behaviour or cognitive strategy, discussed in the previous section. Inasmuch as they often occur together in discourse, each example is followed by an assessment of the major devices found within the example.

I found Merriam's very inspiring particularly the notion of qualitative research as process rather than goal oriented. I'm reminded of the 'discoveries within the process' and I likened this to crossing a stream. When one looks across to the other side and then looks at the rocks that must be stepped on to get there, the crossing is pretty straightforward and goal-oriented. However, if one steps into the stream and becomes side-tracked by the other rocks that could potentially lead to numerous detours or side-tracks, the process of crossing the stream takes on a whole different meaning. There is no longer one way of crossing the stream; there are instead many ways, each one potentially leading to more and more discoveries. / Bev
Bev: I really appreciated your metaphor in this note. I like thinking in metaphors. They always paint a picture for me that helps me put things into perspective. A metaphor which fits the qualitative paradigm for me is a kaleidoscope. One instrument (the researcher) looking through a lens...depending on how the kaleidoscope is turned (the participants observed) the picture (data) will be a little different. One way for me to think about looking at the same phenomenon and seeing many different things. / Beth

On the issue of "experts", I wonder if the difficulty naturalistic researchers would have with them is labeling them as such. / Alan

Good point Alan! I think the word "expert" scares some or gives others a sense of superiority. However, I fully agree that, whatever you may call them, supportive and experienced people can be a great help. / Ezra

I've been wondering -- when we conduct interviews in qualitative research, are we looking primarily for personal experience? Direct, authentic, personal experience? Or is it also legitimate to ask for opinions, to ask hypothetical questions. It seems to me that we are on most solid ground when we're asking for first-hand experience, i.e. "What happened to you?" "What did you see, hear, feel?" "What did you learn?" And it seems I am on less solid ground when I ask questions that begin with "Why did you . . . .", "What do you think about . . . .", "How might we . . . .", "What if . . . ." Somehow those kinds of questions seem once removed from a participant's realities. / Alan

Re: #22, 35: Researcher's values come into all they do. In some ways, is a researcher who specifies that (s)he is looking at the world through a particular set of lenses (e.g., theory of human behaviour) not simply clarifying the bias they bring to the research? That is, how can we set aside our biases, and simply let the data speak to us? / Jack

Re: Note #45, Ezra, In reference to the question you raised about when will qualitative research be fully accepted is an important thought.
I believe you answered in your "party" example how the qualitative paradigm will be accepted. People from ALL disciplines; teachers, nurses, social scientists, historians (people who incorporate this philosophy in their practice and those who don't), need to talk and dialogue to keep the conversation going about what the Constructivist or naturalist is, isn't, and about the differences or similarities that may exist between the various philosophical stances.

The trick to these "conversations" is to do what many people have mentioned in our dialogues... use REAL everyday language!!! Skip the intellectual jargon and sophistication which tends to turn off many people from being able to identify with this paradigm. Controlling language is a way to exercise power and possibly a way to be elitist??

Do as the paradigm suggests, to make concepts and ideas and theory understandable and concrete, combine theory with stories which use everyday language and contexts.

New ideas that challenge the status quo (or dominant paradigms) seem always to be initially rejected. Remember Darwin, Einstein just to mention a few who struggled with your question.

So, to answer your question, maybe when we new and budding "disciples" learn the language and dance, then we will accept this "alternative" paradigm. / Dick

[cites literature, makes personal assessment, solicit feedback indirectly; exclaims, asserts a quasi-imperative; synthesizes, extends]

Having read Jacob's article, I think I am getting a clearer sense about qualitative approaches to research. The process of qualitative inquiry seems to be so free, with so many paths that can be followed. Having been brought up on quantitative approaches I find myself wondering about steps and whether there is a right way. Can you make any mistakes with qualitative approaches? Is there such a thing? I'm still struggling with the most appropriate way of approaching my research interest in order for it to be meaningful. / Mona

[confirmation of personal learning, questions, discriminates among alternatives, indirect request for help through feedback]

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Mona, I agree Jacobs was tough reading. However, what I got out of it was a sense that qualitative research can be classified into many different branches, if you will, and should not be interpreted to be only one type of research style. / Etta

[personal assessment confirms personal learning; clarifies meaning]

Jack, you ask if both quantitative and qualitative methods can both be used?? SURE they can, this is called TRIANGULATION. There are "risks" during data collection for both qualitative research as there are in quantitative research. For example, if the selection of research participants is not well planned, the data collection may represent extreme viewpoints of a group and may
not be accurate. As well, the social context where data is collected is another risk to the "representativeness" (or "validity" for the quantitative people) of the data.

Therefore, the researcher will or may use various methods of data collection to make comparisons of similarities and differences before attributing meaning to the collected data. This TECHNIQUE of triangulation is important in determining the "validity" of data in qualitative research.

It is ALSO a useful approach that the researcher can use when applying both quantitative and qualitative methods to collect data about the same research concept (Morse and Field, 1985). For example, quantitative data about pain experience can be collected from research participants using close-ended questions, while qualitative data from the same participants can be collected using an interview.

No need to throw the baby out with the bath water, you CAN use the best of both worlds to meet your needs at a methodological level. I'll leave the idea of the compatibility of the two world-views at a conceptual paradigm level alone, especially after reading what Guba & Lincoln seem to believe. / Dick

[personal assessment, citing literature; discriminates and generalizes]

C. Feedback: Giving and Getting, Good and Bad

I seriously read every project. Is there anything in here I think that I might be able to say to this person that they haven't seen because they're so close to it? Did I ever appreciate that [feedback] from the people that gave that to me. / Carl


i. Definition. As in any use of the notion generally, feedback represents any evaluative response to a situation or information, which may or may not include an imperative for conceptual repositioning or action. The evaluation can be positive, neutral or negative, and can often be quite obliquely delivered implying faint praise or damning.

ii. Role. In a fundamental way, especially in the CMC setting, feedback, positive or negative, given or received, affirms community and thus acknowledges a student’s participation in that community. However, integrating positive or negative feedback, especially the latter, is a stressor to students which must be successfully overcome in order to progress through their courses. While this is true in most learning situations, it is even more poignant in the CMC context where the giving -- especially by the instructor -- and getting of feedback is a very public activity, where any student's 'self' is nakedly exposed. However, engagement in the ongoing feedback activity also exposes participants to a dialectical learning opportunity rich in information and opinion -- often expert opinion -- upon which to ground their learning. While it is not an overt role, socio-political positioning within the group is also achieved by managing
feedback since everyone is aware that everyone in the group is reading (presumably) what everyone writes.

iii. Elements: substance, language and agenda. Feedback may be understood from at least three perspectives: (a) substance, (b) language, and (c) agenda. Substance encompasses the assertion of a position, the evaluation of that position as basically good or bad, any argumentation or reasoning related to the proposition which is the object of the feedback or any new immediately emergent proposition. Language embraces the denotative and connotative -- especially emotional -- aspects of the communication of the feedback, including assertions, questions, exclamations, but more importantly, imperatives or quasi-imperatives which suggest action to be taken, or the assumption of a new conceptual position. Here we have considerations of the style of the delivery mechanism of the feedback message. Agenda refers to the intended sociopolitical result of the feedback: Simply participating is a goal in itself, given the course’s participation imperative. Feedback can also be used to signal positioning within the class on an issue, or it can be used to achieve an overt or covert personal goal. Being personally controversial or being in agreement with a position in an argument are such agendas.

iv. Acceptable behaviours. As was suggested in IA3, the precept for exchanging feedback in the course was: honour the norm of politeness which itself honours the good taste and academic professionalism of a graduate seminar. Acceptable behaviours, then, include: (a) confirming a colleague’s position which is stronger if additional reasons are put forward; (b) countering a position through argument by exposing factual error, demonstrating contradiction or identifying invalid or faulty argument; (c) use of conditional and quasi-imperative verbs (“could, might, should) and linguistic “softeners” such as “Perhaps you could . . .” as opposed to harsher imperatives which demean the recipient of the feedback. In his interview, Carl captures the essence of this latter situation when he tells us:

I think you can come up with a continuum of critical words that goes from neutral to highly emotive: all of your “shoulds,” “woulds,” some “maybes,” “maybe you could . . .”; “might” instead of “do,” [or] “must,” [or] “perhaps,” as well as those lead-in phrases “Because I was thinking that you must . . .”; “But I may be out in left field . . .” is very different from: “You must . . .” So, within the context of the way it's framed, you'll get a level of how ‘must’ is that ‘must.’

v. Unacceptable behaviours. Paul identifies the power of the language in which feedback is couched to deliver an emotional impact on specific readers:
One of the CMC courses I was in, I had some rather heated disagreements with one of the persons in the course, around some philosophical issues we were discussing. We sort of resolved those, I thought, but then in my reading of his text, or comments that he would make to me about other things, it was almost as if there was a sarcasm in the text. In the way the words were structured, or the sentences were short, or the words that he would use, .... I don't know how to describe it other than I read sarcasm into the text. So, in terms of a put down, no, he would not really say: "You're stupid," but boy, was it subtle. And I think that was an operating dynamic because of the earlier disagreement we had had. And I may have been projecting, but I certainly saw it being there .... on a regular basis. That would lead me to believe that it was more than chance. And, when I compared his text to me, and his text to other people, it had a different tone.

Clearly unacceptable behaviours include: (a) invective of any kind -- 'flaming' as it is otherwise known -- using emotionally negative violent language which attacks either the position or the person of the writer; (b) taking a contrary position without significantly denying the argumentative value of a first position; (c) the use of genuine imperatives which appear to threaten the participant who is the object of the feedback.

2. Stylistic behaviours.

If people don't read anything [else], they'll read the beginning and the end of your notes. ... They'll all try to understand what you're saying ... by your ending.  / Carl

Over time, students develop stylistic mechanisms for participating in the feedback loop including the careful choice of vocabulary to deliver feedback -- especially negative. The use of softeners reflects this latter point, where care for the feelings of the recipient is consistent with the goal of preserving community. Carl and Ezra like to take leave by asking a question and thus stimulating further dialogue. Paul, like many of his colleagues, has formulas for delivering feedback:

Certainly if I am trying to present something that people did well, I would use words like "good, excellent, fabulous" -- those kinds of words emotionally reinforcing types of words as part of that process. Then I would become behavioural in my text about describing why it was that way. In other words I would start out with "fabulous, good" things like that and then say, "Here is why I thought it was fabulous and good," and why exactly I thought was that way ....

[Regarding delivering negative feedback] I could have said "Listen, you did this shitty and let me tell you why you did this shitty," but instead I could say something like "Listen here, let me make some suggestions for making this more effective", which is a way I could express respect that would not ... downplay the person. / Paul, interview
Most of the students use humour as a leavening agent. Here is Ezra’s synopsis of a discussion which is not only both pointed and humourous but illustrates an aspect of his personal style -- focusing on one theme of a discussion for intense treatment:

Among some of the issues that are coming up, I focussed on ACCEPTABILITY today. Is qualitative research . . . worthwhile knowledge, taken seriously? When I did an M.Ed. in Boston 5 years ago, qualitative research was viewed by too many as an esoteric pastime. The word "nice" was too often quoted while any research with number crunching received words such as "intriguing" and "fascinating." . . . That being said, I found myself going to a party one night. As I entered, I was told most people there were into physics and math (right up ma alley... not!). After a few uncomfortable minutes, I ended up in a heated debate on the nature of science. It turns out that so-called "hard" sciences are now looking into qualitative and the "soft" sciences for inspiration. To make it short, I had a great time talking about "chaos theory" (turns out nature is not as ordered as it first seemed!). Question: When will qualitative research be fully recognized as worthwhile? Moral of the story: Qualitative research can be tough but you'll have a great time at parties! / Ezra

3. Characteristic examples.

Much of the substance of feedback is simply a shared dialogue proposing means for achieving ends -- scaffolding.

Alan, you said you were thinking of "starting" your research from a very wide perspective so that the participants would ultimately guide you to what is important. Even when I start with a very focussed question, I usually end up with a wide range of responses, the conversation starts changing course... i.e. it gets bigger and bigger. So where does one start? I would personally be scared of starting too wide but then I might focus too much. / Ezra

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Ezra, I take the point. Rather than starting wide, it's as if I am circling the house looking for a way in. Any door will do I suppose, but better I choose a door than a window. Once I’m inside I can explore. . . . / Alan

100
Once again, Bev is simply doing what is asked — providing a personal assessment of Alma’s plans. Note the almost-mandatory softener that accompanies any negative feedback:

Hello Alma! You asked for feedback re your interview question. I wondered if it was clear enough. For example, do you want to know why the person looked for a job at Lakefield, do you want to know how it was for them when they first came to work at Lakefield? Or do you want to know how it was for them when they first began work? Do you want to know how they became employed at Lakefield? If so, perhaps you might ask "How did you obtain employment at Lakefield?" or, "What attracted you to the job at Lakefield?" I hope these suggestions don't prove to be even more confusing. Happy days. / Bev

Many messages may be termed "get and gloss" where some colleague’s assertion — in this case Dick’s — is confirmed, personalized and a gloss provided. In this case the personalization is universalized; this too can be considered scaffolding.

I really appreciated your [Dick’s] point regarding making concepts and theories understandable. I think one of the most difficult things an educator has to do is to make learning meaningful. Bringing the abstract into personal realities is a useful and meaningful way to facilitate understanding. / Beth
The provision of examples creatively constructed for the occasion or drawn from personal experience enrich the meaning of domain-specific concepts and contribute to the shared aspect of that meaning:

I found Merriam's [article] very inspiring particularly the notion of qualitative research as process rather than goal oriented. I'm reminded of the 'discoveries within the process' and I likened this to crossing a stream. When one looks across to the other side and then looks at the rocks that must be stepped on to get there, the crossing is pretty straight forward and goal-oriented. However, if one steps into the stream and becomes side-tracked by the other rocks that could potentially lead to numerous detours or side-tracks, the process of crossing the stream takes on a whole different meaning. There is no longer one way of crossing the stream; there are instead many ways, each one potentially leading to more and more discoveries. / Bev

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Bev: I really appreciated your metaphor in this note. I like thinking in metaphors. They always paint a picture for me that helps me put things into perspective. A metaphor which fits the qualitative paradigm for me is a kaleidoscope. One instrument (the researcher) looking through a lens...depending on the kaleidoscope is turned (the participants observed) the picture (data) will be a little different. One way for me to think about looking at the same phenomenon and seeing many different things. / Beth
In-depth exploration of issues hints at the transformative power of dialectic. Here, Jack continues to grapple with his personal concerns reconciling the qualitative research paradigm with his own background in quantitative research. Note Jack’s point-counterpoint argument style:

Re: exploring research questions from "pre-ordained" perspectives. I am not convinced that people using a qualitative approach are less susceptible to being influenced by unsavory influences other than the pursuit of knowledge. If you paint all quantitative research with the same brush you risk generalizing beyond the sample you have investigated. And you haven't talked directly to the researchers you are accusing to discover their version of reality. I am still concerned about throwing out the baby with the bath water. Bob, you mention drug research as a particular culprit. Consider the weight of effective (and non-harmful) drugs that have been developed as a result of the research. I don't want to dismiss the problems, but neither [do I want to] ignore the benefits.

In an earlier message I suggested compromise, using the two approaches to complement each other. Others have also mentioned this idea. Is it possible?

4. Dialectic in action.

Near the end of January, 1993, a thread of 19 messages centered on issues relating to interviewing Canadian native persons who spoke with comfort only their aboriginal tongue. This thread demonstrates elements of the role of feedback, the substance and movement of argument, the language forms for its conveyance, and not trivially, the socio-political manoeuvring which can also be an important factor in participating in the feedback process. It also demonstrates the power of peer pressure to move people, the strength of which is associated with the strength of the community in which the feedback clearly matters. In summary, this thread may be seen as an example of inter-participant dialogue leading to transformative learning through dialectical process.

Eight of the 15 class members participated in this thread. Erin did not participate in the on-line dialogue, but in her interview with me she said she was fully aware of the subtleties in the transformation which was taking place. Bev, the student who sparked the exercise, saw a genuine opportunity in her working life to practice her interviewing skills, and it was her stated intention to seize this opportunity by interviewing a Native elder whose grasp of English was limited. This interview she intended to carry out through a translator. Of the 19 messages that
were generated, Bev wrote eight. It was Harv who initiated an argumentative counterpoint to her substantive position and who wrote three messages. The remaining six players wrote one or two, and may be seen as meeting the obligation to participate without going beyond a minimum either of participation or commitment to a position.

What is important here is that virtually all of the feedback to Bev’s original position was negative in varying degrees. Since the interview procedure which started the controversy was a genuine work-related event for Bev, in addition to being a course-related activity, the negative criticism, first of Harv, and successively of the others, represents an attack on her ‘professionalism’ – a word she uses herself in message 18 about what she does.

The stages in the dialectical process as they relate to this interchange are described below. It is important to note that after the first occurrence of the thesis, all of the stages noted save perhaps 7 and 8 operate at the same time as can be deduced from the time of postings; they can be described as having a phased relationship with each other. It is also important to note that the point of view is that of Bev, and it is she who most noticeably changes conceptual position. A fuller, annotated rendering of this thread is found in Appendix I.

Stage 1: Presentation of Position or Thesis. In Message 1, Bev moves away from equilibrium by stating her intention to interview a Native elder whose grasp of English was very limited regarding the “cultural relevance” of a training program for Native child welfare workers which she helped develop and which she believes is relevant, i.e., “balances traditional and cultural issues.” Bev closes the message with a request for feedback. As in other invitations of this kind, the invitation may be pro forma or rhetorical -- certainly a gambit used by most of her colleagues in presenting positions, whether feedback is genuinely wanted or not.

Stage 2: Generation of Feedback.

Some feedback is positive, most is negative (antithetical) and some structural, of the scaffolding variety. In response to Bev’s request for feedback, in Message 2 Harv identifies and challenges her assumption that she and her native elder respondent share the same meaning of the notion ‘cultural relevance.’ Harv responds with oblique, cautionary, negative, but genuinely discriminating feedback which suggests that (a) there is much ambiguity around the notion of cultural relevance, (b) she might be pursuing a non-meaningful understanding of that notion and (c) she may be begging the question by assuming that the program she has devised is indeed culturally relevant -- which is what her interview was intended to find out -- and all that is at
issue with the elders is the training. He softens his remarks through a final genuine (non-rhetorical) question which is an invitation to dialogue on the issues.

In message 3, Beth’s feedback is supportive as evidenced by her desire to keep the dialogue going. Beth’s question "What cultural issues do you think need to be included in the training program?" is more neutral than negative and would represent, if answered, an extension of Bev’s original definition of cultural relevance. This feedback at its best is scaffolding; it may also be interpreted as damming by faint praise.

In Message 4, Mona, like Harv, attacks the issue of the interpretation of the notion of cultural relevance by the elder. Mona suggests that Bev ask a question which opens up the possibility that the elder will have new material to share with her which might not have been shared by a question closed around a notion of cultural relevance. In her characteristic way, Mona is quite apologetic at having to poke a hole or suggest a flaw in Bev’s approach. Mona is generally upset by controversy.

Stage 3: Point-Counter-Point Argument of Feedback with Thesis and Other Feedback. In the fifth message, to Beth, written after her return from the interview, Bev maintains that from her point of view, the program is genuinely culturally relevant. Up to this point in the dialogue she really has not addressed or integrated the negative feedback of Harv or Mona. It is perhaps significant that she addresses this message -- her first after returning from her interview -- to Beth, whose feedback in message 3 can only extend the notion of relevance, not imperil it as Harv’s or Mona’s submissions do. Later, Harv and Bev exchange messages (8 and 9) but there is no capitulation by Bev to Harv. Alan adds a confirmation of Harv’s position in Message 10.

Stage 4: Deconstruction of the Thesis. However, in the sixth message, written immediately subsequent to message # 5 to Beth, Bev begins to integrate the feedback and question her assumption that she and the elder share a core of meanings, when some evidence suggests to her that the elder does not understand all of her words. Further, she recognizes that she cannot grasp all of the affect which the elder conveys, since translation fails to account for much of it. At this point we see the first suggestion from Bev that she recognizes that the translation system is not adequate to her need. Message 7, a major report to the class, confirms the deconstruction with her recognition that she is capable of misrepresenting the messages of Native peoples, speaking through a translator, by hearing what she wants to hear rather than what is intended for her by a Native-language speaker.
Stage 5: Concession of the Antithesis. Bev concedes the point totally -- to Alan, not Harv -- in message 11 and indicates that she has learned from the experience and, presumably, from the collegial feedback. At this point in the dialectic process, Bev has moved to an antithetical position.

Stage 6: Reflection and Glossing. Classmates reflect on the interchange from their personal perspectives, and through this intellectual distancing from the main point of contention, a psychological equilibrium is reestablished: Alan takes away a personal learning in Message 11 as does Alma in Message 12 while Ivan elevates the particular to a universal in Message 13. In Message 14, a rather obsessive Harv comes back for one more round! But it is Ezra, the enigmatic virtuoso in Message 15 who pronounces the substantively last words on the issue with his gloss on the meaning of silence in conversations -- a problem faced by Bev in her work.

Stage 7: Intimations of Synthesis. Bev’s responses in 17 to Ezra and in 18 to Beth suggest that Bev is working out -- synthesizing -- a translation method based on new assumptions whereby she can at least increase the amount of the meaning she shares with her First Nation clients and thus move toward a fuller communication with them. This message represents a dramatic climax to the thread as Bev’s learning transformation is complete, at least around this issue. We might also suggest that each of the seven other participants in this dialogue will have transformed in their measure from this experience. Ezra’s response to Bev in message 19 agreeing to hunt for the paper he cited in message 17 provides a fitting dénouement to the action of this thread.

Stage 8/1: Closure -- Redirection of Issue, Statement of New Thesis. In Message 16 Beth redirects the mainstream of the dialogue by describing back-translation -- an answer to a conundrum of Bev’s regarding effective translation. This gloss on the issue will be acknowledged and personalized by Bev in a good-natured response in message 18. The issue has now been closed by being redirected, and the dialectic cycle begins anew.

5. Erin’s Feedback.

Instructors’ messages usually clarify things for me if I’ve been going off on a tangent. . . . I’ll read thoroughly instructors’ comments because . . . I considered them experts in their fields. . . . I figure what they have to say is important. / Carl, interview.

Erin’s feedback -- virtually every utterance she makes -- is grounded in, and flows from, two complementary, but often apparently, contrary roles: (a) the instructor in the power position
in the class, (b) an equal participant in the class as a learning community. Rising out of the instructor’s role, she provides a model to the students for all on-line behaviour not only in presenting material, but also in delivering feedback. From this vantage point, Erin can enjoy a greater behavioural latitude than the students: for instance, she can be more directive and imperative in her language and really does not have to consider linguistic softeners to the same extent -- if she chooses not to. Her agenda is the class’ agenda!

But Erin has consciously chosen -- as some other instructors in this medium have not, and it is the instructor’s choice -- to participate fully in the life of this learning community. She participates as a person with expert opinion: she contributes to, and also grows personally through the dialectic.

Very nice observations Harv! Life is, in my view, one big qualitative research project. We interview people all the time, but how much responsibility do we take to listen. Of course, we lay our perspective more on some kinds of interpersonal contacts than others for practical reasons. Since it’s all value laden, then of course our feelings are involved and our sense of ownership varies. I’m very glad you told us that story. Cheers, Erin

What characterizes her interaction with the class is the management of formality: that ability to alter social distance as required to meet the needs of the course, the class, and herself. Her approach, while strong and directive, is largely informal. She is candid and honest, admitting when her knowledge base is thin. Erin addresses students directly, by name. Erin does not deliver generalized feedback when specific, individualized feedback is wanted; nor is she ever oblique in the substantive or evaluative messages that she sends.

Hi Alan. Re #79. I think your question is definitely on the right track. You might even make it simpler, like ‘What makes it good to be a student here?’, but your question is okay as it stands. You have a very good instinct for cutting through crap and seeing the bottom line, so I’m not worried about your being able to ask the right thing when you are actually sitting there across from a student.
Cheers, Erin

In her response to Carl in the message which follows, Erin is being very directive without putting the Carl down, even to the point of paying him a compliment. In the message to Bob and Paul we feel she is saying “No” just about as nicely as she can without saying it! This level of cautionary feedback represents an extreme; her message to Jack which follows further is more exemplary of the bulk of the feedback she delivers.

Erin, I’ve been doing some thinking about rephrasing my question. How does this sound: What does drama accomplish in the Adult ESL classroom? Other
Questions for Erin: 1) How many levels of students do you think I should interview? 2) 5 interviews--3 students, 2 teachers...sound O.K.? 3) How can I document visual responses to questions (when words are too difficult)? You have given me some great ideas...I'm rolling now. / Carl

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Hi Carl. Re 26. I still think that your question isn't very dynamic. You might ask it of the teachers, especially if they have experience in ESL both with and without drama, but it's still pretty abstract. There is always the old critical examples. How about asking them for an example where drama really helped them learn and one where it didn't really help? I'm not sure what you mean by levels of students. Certainly take the more advanced ones for now because of ease of communication. 3 students and 2 teachers sounds good. As for the visual part, you know I am wary about video. It's messy and intrusive. Here is a way out idea, but treat it with caution. Since this is about drama, get the students to make a skit about how drama helps them learn English and then videotape the skit. Appreciate that this puts you into a whole different level of problems of coding and analysis, but you're a pretty adventurous guy. Cheers and cautions, Erin

Hi Bob and Paul. The issues about using a video camera arise around the intrusiveness of the procedure and the difficulty about how to transcribe the text. The first problem has several dimensions. Can you do it in the space required? How do you instruct the person who is wielding the camera(s)? How do you transcribe the data? I gave you in your readings an example of how someone who was extremely interested in linguistic data would transcribe a text. There is a whole other dimension if there is visual information as well. I'm not saying not to do it. I just want you to think about the consequences. Cheers, Erin

Right on Jack about the fact that life will never be the same after qualitative research. But I should reiterate what Lincoln and Guba say about naturalistic inquiry. It is a philosophical approach or stance rather than a set of methods. Therefore, you can do all the quantitative research you want as long as you understand what it means in terms of values and the kinds of claims about truth you can make, etc. Does that help your "knot"? Clearly there are all kinds of questions that are much better addressed quantitatively. Cheers, Erin

As the executive officer for the course, there is an appropriate teacherliness in her behaviour. She is ever mindful of the process, and much of her feedback including weekly summaries relates to that process. But she is willing to reconsider objectives, reset time-frames, and realign assignments, based on student needs. From an educational point of view, she is ever aware of maintaining what Basseches (1984; 1986) refers to as the optimal mismatch -- the presentation of challenges which are sufficient to open the individual to development possibilities, but not so great that the individual will defensively close down. In the following, Erin recognizes the heavy-handedness in imposing her decision and adds a compliment to the
class on their process along with a softener in the closing: the conditional question is really an imperative.

Hi group. At the risk of interrupting an excellent conversation I think that we have talked enough about interviewing and ought to get on to doing it instead. I have kept this branch open to receive the group reports. I THINK that we have had only 2 so far. Could we get the group reports soon please and then I'll close the branch. Cheers and not too gruff rumbles, Erin

If the delivery of feedback in the CMC setting is public, then Erin's utterances, as we suggested, are scrutinized even more attentively. Her feedback to students does, more often than not, balance bad feedback with good. Her language is colloquial, but incisive without being banal. She is not afraid to allow her personality to show through: she lives in a world of thoughts and feeling, not just thoughts, and invites her students to live there too. Erin addresses specific propositions when structuring feedback, rather than approaching more generally. She uses feedback to extend the implications of the notions that she addresses.

NO ALAN. The point about a shift in paradigm shift is that you can't use the criteria of one to evaluate the criteria of the next. The naturalistic paradigm rejects the criteria of the positivistic paradigm. You either buy that or you don't. Wishful thinking, in my view, would be that there would be convincing HUMAN evidence that one paradigm was more useful in understanding the human condition than another. What is human evidence is up for cosmic grabs. A case study is usually considered to be within the qualitative paradigm in that it is bounded within one situation. However, you are quite right in suggesting that a number of case studies have been entirely quantitative. Cheers, Erin

Hi Beth. I am glad that you have described some of the things that I hoped would come out of this exercise. First of all, I loved your topic 'men cooking'; it was just the sort of fun thing that I hope a lot of your colleagues chose as well. It doesn't matter what. We all have a lot to learn from each other.

The point about taking field notes is that it TAKES A LOT LONGER THAN ANYONE WOULD THINK TO EVEN TAKE NOTES ON AN INTERVIEW. I'm glad that you only jotted notes during the interview. One has the choice of taking verbatim (or as close to it as possible) notes, or really doing a good job on the interview. There isn't much room for compromise.

I look forward to hearing how your interviewee responded to your field notes. Cheers, Erin

Hi group. Well, here it is Sunday night again. I can't believe that it's been a whole week since I was sitting here trying to figure out where we are and where we're going. I have opened 'Carl's Conference' and 'Fran's Conference' for this week's presentations. Alma has asked to be left on for a
while since she has gone to Carolina and doesn’t want to sign off with you yet. I guess I’ll leave Mona on for a few days as well. The dialogue has been wonderful.

Our special feature for the week (I feel like an impresario) is a visit from Kevin Baker who is a world specialist in participatory research. I expect that that will give us a chance to focus on the outcomes in real life terms of our research and our relationships with our participants.

Please keep thinking about the Trust issues. I’m too tired to comment in it tonight, but hope to pay attention to it tomorrow night because you have been bringing up some excellent ideas in that branch. I will comment in Junk Mail tonight or tomorrow. I hope that we can finish with that soon and get on to focusing on your own processes of analysis. / Erin

In most respects the objectives for Erin’s feedback are no different from the students’ except that she brings the expert opinion. This means that she is fundamentally encouraging student growth and research planning, through her assessing, probing, offering advice, referring to literature, citing experience, uttering cautions and giving the go-ahead.

Was she successful?

Have little to add to Erin’s questions that has not already been said. My critical incident was probably the point at which you finally said what you had been thinking, Erin, and got me started on the process of simplifying and clarifying my design. / Alma

Erin, I’ve enjoyed this course more than I imagined. I am particularly impressed with your approach to facilitating it given the class size and the amount of dialogue that has occurred between everyone. I appreciated the depth of your responses to all of us and your optimistic and uplifting greetings and wishes. Much thanks!! / Bev
Chapter 5
THE DATA PART II:
CREATING AND MAINTAINING
THE LEARNING COMMUNITY

A startling, but not entirely unanticipated, outcome of the course, made largely possible by Erin's facilitation, was the intense sense of community which developed on-line among all the participants. In many respects it resembled an informal face group with its high, positive affect, well-defined group-behaviour norms and in-language. This chapter documents the growth and maintenance of that social dimension of the course.

I. Recreating a Face-to-Face Community

In a standard course you're able to listen and hear the professor, so, therefore, you form an opinion on what they might like. You watch them, how they carry themselves, etc. The writing for the CMC, all I have in front of me is what Erin says, on line, and I try to picture her, then. It's really hard sometimes with online writing because you only see their words and it's up to you to totally adapt to what you think that person wants. . . . I watch people, their body reactions, and I sort of form my opinion that way. / Carl, interview

A reader cannot help but be struck by the atypicality of the messages across the conferences of this course in terms of the formality of their presentation. While they are formally written, in large part, dealing with the transactional business of the course -- written in well-made sentences -- they often display a reckless informality, indeed an counter-academic informality which proves delightful to read, yet would be inappropriate in strictly academic prose or even in a traditional face-to-face graduate seminar.

Hello Everybody, welcome to my presentation. Please sit back, relax, and do not adjust your modem. We'll be traveling at a speed of 2400 baud. Our flight plan today is as follows: 1) Takeoff - Lessons learned to date; 2) Cruising - Problems; 3) Project Proposal; 4) Release Letter; 5) Interview Extract; 6) Field Notes Extract; 7) Landing. Well fasten your seat belts and enjoy the free bar service! / Bob

Indeed, to me, many of these messages intuitively resemble the warmth and tumble of face-to-face speech attempting to be conveyed through a rather cold, unresponsive and asynchronous computer mechanism. It is important to consider various aspects of that communication here, to appreciate what it adds in terms of its social relevance to the course.
My first reaction to the elements of this computer-screen discourse phenomenon was to posit that the learners were simply replacing the prosody lost by having to communicate with words alone and no body-language. But the cumulative effect went far beyond that to include creating a very tight, friendly, caring group of learners. I submit that participants were recreating in the CMC learning environment aspects of communication and community that are present in the face-to-face learning context.

In its primitive, etymological sense, the word ‘community’ stems from the Latin cum meaning ‘with’ and munire meaning ‘fortify’ or ‘arm.’ Over time the word has come to embrace the notions of sharing with, or trading with, indeed sharing religious practice with, presumably, those with whom one shares the need to fortify one’s self.

It’ll [this course] make me laugh, it’ll make me think, it’ll make me feel good, I can literally feel a certain kind of warmth. People tend to see this [medium/course] as being really cold, even myself at times. There are some of these special moments and those will be the times when people are really creative and they’ll do things like sending hugs. I think that is so wonderful. . . . Those moments are particularly pleasant. . . . I really like this group. I think it’s one of the most supporting. . . . The wonderful thing about it is that people are much more empathic or there’s a great sense of friendliness and support that comes through. And I don’t know if people realize, how they respond to it: in terms of level, frustrations go up [and] the level of responding goes up. They are using the medium in a warm and human way and they don’t know it. / Ezra, interview

I feel very included in the group ‘cause they’re going through similar issues that I’m going through right now which is to sort out the data and those issues around it. Jack of course, being a quantitative born, much like I was for years, is having some difficulty with this, but I find his level of acceptance is very interesting. / Paul, interview

I thank you all for being such a supportive group and helping me stretch my brain in directions I didn’t think were possible. Thank you / Beth

Gumperz (1984, p. 24) defines a speech community as: “a system of organized diversity held together by common norms and aspirations. Members of such a community typically vary with respect to certain beliefs and other aspects of behaviour.” The degree to which this group became a genuine discoursing community will become more evident in the following elements of this section. In many respects, that this evolution happened was a function of Erin’s leadership. She molded the group but allowed a surprising intimacy to develop. It was also a function of the strength of character of the individuals who made up the group -- especially Alma and Ivan to name only two of the major community builders. At times the group behaved more like an on-
line therapy group, along with true confessions and all, especially in, but not confined to, the conference entitled COFFEE -- a forum where informality was invited. However, as will be pointed out again in what follows, the high spiritedness never compromised the central task, even among those who engaged in it most. Indeed, I would submit, they engaged the task with greater determination, taking more personal risk in an environment which spoke respect and trust.

Alma makes a rather ironic comment, appropriate to end this element:

Mona, how can we find a way to get together "in the flesh" (so to speak)? It seems Bob was at the same seminar at CLFR last week, when Erin was on the panel, and I didn't even know it and missed him. Funny to know each other so well on-line and not recognize each other in the same room. / Alma.

On-line was where this group's real community life was!

A. Replacing prosody

A lady slammed the video movie of "The King and I" down on the counter of the video store. "I want my money back!" she demanded. "There's nothing about Elvis in here!" / Alan

---

Alan, Ho Ho He He Ha Ha etc. etc. Somehow this medium does something terrible to spontaneity! DR:-) / Don

As has been suggested in Chapter 3, in its ancient Greek sense, 'prosody' refers to the tone, accent (stress) or voice modulation of a song sung to music. In its classical literary sense, the notion embraces the study of written verse including the study of material structure, rhyme, rhythm, stanza form, diction and vocabulary. The concept may also refer to a particular system of versification such as "Dryden's prosody." Today we might use the word "style" to convey much of the same thing. Contemporary sociolinguists such as Gumpers (1982) and Tannen (1984) who examine spoken discourse use the notion to refer to those paralinguistic features of speech such as loudness; intonation and voice quality; pitch and amplitude variation; pauses, especially strategically placed pauses; and expressive phonology -- generally all of those features of spoken discourse which provide "contextualization cues" (Tannen, 1984, Gumperz, 1982) that signal how one ought to interpret, or give meaning to words and sentences. For convenience, one might also include in this list the notion of 'body language'-- that non-verbal communication which is at the heart of the actor's expressive art.

While there is much overlap in the meaning of 'prosodic' and 'paralinguistic', the key point to be made here is that both notions speak to devices that communicate connotative or
intentional meaning in language written or spoken. For the sake of simplicity and clarity, the word “prosody” will be used throughout in this final sense as being appropriate to the textual analysis of computer-mediated discourse.

In his book *Discourse Strategies*, Gumperz (1982, p. vii) tells us that he sought, “... to develop interpretive sociolinguistic approaches to the analysis of real time processes in face to face encounters.” Computer-mediated discourse (CMD) takes place in an asynchronous time-frame, through written prose mediated in its presentation by a computer screen. What, then, are the contextualization cues that signal meaning and its interpretation in CMD?

Without venturing into an examination of the many purely literary devices that participants employ, such as domain-specific vocabulary and metaphor, the messages reveal at least seven broad strategies that are used to convey the prosodic content which is present in a face-to-face encounter, but only marginally available in CMD. Often, as we shall see, these devices occur together: (a) selection of and unusually high frequency of emphatic and emotion-laden phraseology; (b) use of unusual, phonetic or otherwise atypical spelling (orthography); (c) selection of colloquial language, often irreverent, earthy, risqué or nouveau; (d) use of atypical typography including upper case letters and extra punctuation; (e) use of typographical “smilies”, otherwise known as “emoticons”, e.g. :-) > representing a bearded man smiling -- to convey a variety of emotions; (f) unusually high use of exclamations, often onomatopoeic; (g) inclusion of stage directions, especially to clarify ironic intent.

This replacement begins quickly with a recognition that this medium lacks the possibilities for signaling meaning that are available in the face-to-face situation, and in response to a generally-felt need to convey affect. In his interview, Carl expressed the essence of the problem when he talked about how he conveys emotion in his messages:

You know it’s funny because I would use italics, I would use larger fonts if I could, but I can’t because the online can’t pick it up. So I find if I’m angry my vocabulary may step up a notch. If I really want to express anger I will go out of my way to use language that I wouldn’t normally use. It’s almost like a...it’s like I want to suggest a point and the only way to really suggest it it’s with one of those really big, long, juicy words. Whereas if I’m sort of a soft, mellow mood I could use flowery, soft sort of language -- you know, a lot of adjectives, descriptive type thing. Sort of flower up things. And then in between I just do whatever comes to mind. Reacting to strong emotions in others...I’ll get pissed off sometimes to, perhaps, friends online personally [sic]. That’s where the long language will come up. Maybe back to the person that has the strong emotion, I might just be very to the point and say no more. I’m not one to ramble on if someone has perhaps given
me hell about something, I'll just say my point and leave. There's no carry on. / Carl, interview

1. Selection of and unusually high frequency of emphatic and emotion-laden phraseology diction including foreign words. It can be argued that the use of expressive language in and of itself does not necessarily distinguish the CMD context from any other. However, the unusually high occurrence of exceptionally expressive choices in words across all participants throughout the corpus does.

I am desolate to have missed . . . (conveyed in a non-ironic context)

Hi there Erin and class! I am highly frustrated today...actually I have been for a little while. I am having trouble accessing appropriate people at the University to get the project moving along. The VP . . . / Beth

Erin: MUCHO gracias for the time you spent with me on Tuesday. / Alma

ii. Use of unusual, phonetic or otherwise atypical spelling (orthography) including near-words (coined words) to convey friendliness, emotional meaning and emphasis. Erin explains this phenomenon by suggesting that, "We deviate from standard spelling to show that we're friendly." Such spellings often start out enclosed in quotation marks to indicate the linguistic atypicality, but inevitably the law of least linguistic effort obtains and the quotation marks are abandoned.

Looking forward to getting the "doo-bop" from Kingston. / Ezra

Don't want to make messages too long winded so will tell you later what I liked/didn't like about the paradigm schtuff. Bye, Ivan .

Nuff said. / Ivan

. . . through a humungus week . . . / Erin

Whaddyathink? / Alan

iii. Use of colloquial language -- words and sentence constructions -- including irreverence, earthiness, and the risqué to reduce social distance, demonstrate openness and friendliness and indicate emphasis.

earthly language: crap used in an earlier example

Hi Dearlies, I'm enjoying . . . / Alma

Damn! This thing is so slow on-line, even tonight (9:30) Time to bye-bye. / Ivan

The overall message to us was, "Work your asses off!" / Ivan

115
Alma! You sure have talents in synthesizing! Whew! Wow! and Gee-whizzz. / Ezra

If the devil finds work for idle hands, I must be either very safe, or very bad. (Take your pick). Like - ahh - later, guys... / Alma

iv. use of atypical typography including upper case letters and extra punctuation to indicate affect or emphasis. As Ivan put it: "Capitalizations for heavy accent: they scream at you!" Speaking on the same subject, Carl opined: "It's almost like throwing a punch."

I couldn't believe how LOOONG 20 minutes could be. / Beth

The point about taking field notes is that it TAKES A LOT LONGER THAN ANYONE WOULD THINK TO EVEN TAKE NOTES ON AN INTERVIEW. I'm glad that you only jotted notes during the interview. / Erin

Thanks TONS to those of you who gave me the electronic hug; who says computers are impersonal!!!! / Ivan

Re: Note 101: EXACTLY!!! Good point. / Dick

Feeling better now and logged in to find 66 NOTES!!!&%*$ AHHHHH! /Beth

v. Use of 'smilies' (emoticons) to convey a variety of emotions. This feature is genuinely an extension of the use of atypical typography, but as a phenomenon it became a formal feature of the group's communication when Ivan presented a major collection of emoticons to the class (see Appendix F for the total list) about six weeks into the course. While many of the emoticons reflect body language, each enjoys some aspect of affect.

Hello everyone! Ivan, thanks for all the computer body language info. It's marvelous. Have you seen this before? @--->----- I got a dozen on the computer the other day. See ya. / Beth

Beth: re: @--->----- I see someone with their arms around me tightly. o the arms (and bodies unravel, proceeding via the arrow, to a prone position? I can't imagine what they do there, especially not 11? times. I hesitate to send this, especially if I am way off base. Will Don have a fun time coding it? / Jack

Aw c'mon, Jack, this is a family show!!! On second thought, your explanation is WAY more interesting than a dozen rose (brings a whole new perspective to the line about "a rose by any other name......." / Alma

The mid-February blues call for a little humour. Have you ever wondered what some of those funny punctuation marks are that appear in the middle of
messages. Here is a pictorial glossary that you may find useful. It came to me via the Problem Based Learning list out of Australia. / Ivan

:-C    Just totally unbelieving
:=|      Baboon
:-B    Drooling
:-v    Speaking
:-r    Smirk
:-w    Speak with forked tongue
:-T    Keeping a straight face
;(-)    Sardonic Incredulity
:-D    Said with a smile
%<-<>() Drunk with laughter

000 / Bob [who goes on to explain] -- computer hugs at the end of a message

Fun Stuff eh! / Beth :)

vi. Use of exclamations, often onomatopoeic. The ubiquitous “Oh Oh” generally signals a typographical error or other “booboo” which may or not be corrected -- generally the latter.

Greetings everybody! Got back from town early this evening. Anyway, I finally sat down to download and was shocked by 26 notes! Ahhh! / Beth

vii. The giving of stage direction, especially to clarify ironic intent is the most direct of all the mechanism to signal meaning -- especially ironic.

I would hate to think that qualitative researchers would start thinking of themselves as some elitist group of thinkers who are, in some mysterious way, beyond the comprehension of the more common quantitative researchers! (tongue-in-cheek). / Ivan

B. Friendliness, Friendships, Concern and Intimacy

Making a personal connection with some of the other learners. When I responded to a message and then heard back, it was like ‘Hey, there really is someone out there who knows that I am here at this other end.’ / Bev, interview

Arguably, the central process for creating and maintaining community is the management of social distance which, in this particular situation, speaks to the need of representing one’s self in a scholarly fashion while at the same time serving one’s need for fellowship or companionship. In the learning community which formed around the course activity, that distance ranged all the way from the extremely formal to the strikingly intimate. The range included the distance achieved through academic presentations, banter, public and private true confessions, to the intimacy of off-line e-mail exchanges. Itself a risky act, self-disclosure,
whether direct or indirect, characterizes all devices in this category, whether the move is to 
increase (formalize) distance or to decrease (familiarize).

Since course activity began with participants at a fairly formal distance from each other, 
given the nature of this group, most of the activity in community creation and maintenance 
consisted of devices selected to close distance. See also parts IA3 and IIB concerning allowable 
messaging behaviours and feedback. The following five devices occurred with greatest 
frequency: (a) use of warm humour to disclose friendliness and reduce course-related stress; (b) 
expressing personal concern and consolation; (c) use of irony in a non-hurtful way; (d) 
communicating through off-line, interpersonal messaging; (e) personalizing public 
communication.

i. Use of warm humour to disclose friendliness, reduce course-related stress. Already we 
have encountered examples of such humour in many of the messages which have preceded; 
however, here follow three more, all of which are generated from, or build upon a personal, 
course-related sub-text. Notice the direct personalization in the third example below (see also v. 
below).

Say, did you hear the one about the successful farmer?.........he was outstanding in 
his field! (it's late). / Alma

Help! (I am being held captive by my computer.) / Jack

Harv! Alan! How yu guys doin? Dudes! What you don't remember me? I 
served you drinks all night long and had to finally kick you out of the bar. The 
bartender remember? I mean, really guys, a popcorn popping distance contest 
using your navels? Even in T.O. this is a bit much. But hey, you don't get out 
much, right? Your Swill-Meister.(IM >:->) / Ivan

ii. Expressing personal concern and consolation.

So, my E-mail pal, don’t be grumpy. Be happy. There are lot’s of good 
people here in Electronic World that understand and can at least give their moral 
support. Hang tough. It's sunny outside... I'm going for a walk! (Now, THAT'S 
something you cannot do in a regular face-to-face course!) / Ivan

Dear Fran, I'm very sorry for your loss. This happened to me last term 
when a good friend died. It's so difficult to get back into the pace when your 
head keeps drifting off to more immediate concerns. Will be thinking of you and 
sending you a computer hug ( ). / Mona

iii. The use of irony in a non-hurtful way. Here follow two quite obvious examples, and a 
third which is less obvious. In the third example, Jack creates a delightfully ironic moment 
through the extensions of sound (bell) and net imagery. A first reading might miss Jack’s point
were it not for his smiling emoticon -- unusual for the most-often-straight Jack -- at the end. See 4.VI.B.1 for the Myth of Indra’s net and bells.

I assumed that . . . Not!!

"See" you Monday.

I found your telling of the native myth Indra’s Net engaging. This legend and others I have heard tell me that Natives are more in harmony and aware of the links in our world. Sounds very consistent with the naturalistic perspective. I resonate with it, but don’t understand all its implications. Your story adds to my understanding. Thanks. Jack :-D

iv. Communicating through off-line interpersonal messaging. This device is intended to make communication private. One manifestation is the delivery of serious negative feedback from the instructor to certain students. Erin felt compelled to use this device as a formalizer or social distancer at least once. At the other extreme is the development of Platonic intimacy which is a common-enough phenomenon on the Internet or on-line scene. This latter phenomenon evidenced itself at least once in the context of this course between a male and a female student who had been acquainted in another face-to-face course, and, according to the male in the pair, regularly exchanged confidential, course-related private e-mail messages.

If I’m just chatting up with her, we send each other messages all the time.

[Talking about Her:] Really short sentences [tell me that she’s not feeling well]. She’s abrupt. How she begins her note: she rarely calls me by my name. It’s usually ‘Friend’ or something like that. She’s never had occasion to be mad at me. She’s had times when she’s obviously not feeling well, so her note is very short and it’s just to the point. I’ve asked her for advice on occasion. She’s written me pages and pages of stuff for one little question. / Male Student interview

v. Personalizing public communication. Being specific in naming individuals in a warm, friendly, inviting way or giving credit reduces competitiveness, and creates a culture of inclusiveness. It further “strokes” individuals in many ways as an act of positive feedback. Jack, for instance, addressed only issues when he began the course and avoided using any names at all. This persisted long enough in his message stream that it was noticeable. Needless to say, he warmed considerably over the duration of the course from this original formalistic, straight-laced position.

Because of technical problems Ivan joined the course late and Alan had a difficult start up period. On the day of my interview with Alan we were able to resolve one of his major technical problems hence the reference to myself in the second note that follows. Note Alma’s
ironic but very supportive comment designed to intensify the as-if-face-to-face component of the message. A fuller discussion of naming follows.

Hi there Ivan! Welcome to the class. Nice to have you on board. Hop in and hang on...this train is chugging along. / Beth

Hey, Alan, I'm reading you. Don succeeded. YOU succeeded. Nice to hear your voice. / Alma

C. Naming

That's good old Business Writing 101: mention the name at least three times in the course of the letter. / Paul, interview

Two procedures were followed to assess how names and naming functioned in the context of the course. In the first case, a direct question was asked of the select small group. Secondly, naming events (namings -- who names whom) were counted. The target conferences for the latter initiative were Paradigm with 118 notes and Class with 140 notes. These two conferences represent two of the three conferences dealing with the substance of the course and having over 100 messages. The first message was placed in Paradigm on January 12, very early in the life of the course and the last note was placed on February 10. Class ran from January 11 to April 12.

Naming an individual signals any one or more of a host of conversational management conventions used in order to convey some special meaning, such as feedback or discriminating nuance. In its most elementary function, naming signals audience identification -- deliberate identification of one or more addressees as opposed to the larger group. This is true especially in messages responding to an number of addressees, ordered serially. Naming generally represents informed involvement or engagement in the business of the group. The depth of the engagement appears to, but may not in fact, vary with the frequency of the naming: naming can be a simply social activity without engaging the stuff of the course. Certainly naming and being named represent the potential to influence the group and the conference of leadership. Often this is done by asserting personal concurrence, admiration (courting) or delivering kudos.

Etta started us off with this great idea and Alma did it [wrote it up] . . . Etta did start it off with this great idea with the junk mail with hook, line and sinker. I mean we all loved it and Alma gave her credit for it. In the collaborative group, as the writer of it, she [Alma] could have just collaborated and put it under hook, line and sinker without giving credit to Etta. / Ezra, interview
While invective or sharp criticism was not an option for delivering negative feedback, naming became generally a mutual conferring of “worthiness” -- accentuation of the positive. In this context naming also acts as a persuader by trading on the increased vulnerability occasioned by closing social distance. Erin, on the other hand was allowed to deliver directive feedback and did so in both large and small group settings -- certainly not destined to close social distance!

Figure AG-1, found in Appendix G, is a matrix of all the naming events found in the the conferences CLASS and PARADIGM conjoined. Based on Figure AG-1, Table 5-1, following, sets out frequencies for five aspects of the naming phenomenon. Columns have been divided into high, medium and low scores based on the number of scores divided roughly into thirds.

On all counts, Jack and Beth will be in the high third, representing their deep involvement in the business of the class. Alan defines the centre while Bev, Etta, and Carl will be in the low group. While individuals tended to behave in both conferences in the same manner, Harv and Dick ranked high naming in Paradigm but very low in Class. Bev and Etta were totally ignored in Paradigm on all counts. The ebullient Alma reached out more than she was recognized.

While naming someone may be understood as an invitation to reciprocal naming, in truth those who name others frequently are not themselves necessarily named as frequently. A correlation between Tnms and Tnmd, above, yielded $r = .38$, a correlation between the two only slightly better than chance. Opinion leaders, for instance Ezra and Mona, are named by others at least twice as often as they themselves name others.

Jack represents a genuine anomaly. While his numbers are amongst the highest, at the beginning of the course, Jack referred to note numbers and content labels, even when the perspective was unique to one individual. While Jack was always deeply involved in the content issues, early in the course his social posture remained formal. As the course progressed, Jack’s involvement in the social dimension intensified. While Jack is a high-side outrider in naming others, he remains high, but not outstanding in being named, ranking below Beth and Ezra. This suggests that he may be an opinion leader, among other opinion leaders, simply because he cannot not be ignored.
### TABLE 5-1

*Five Aspects of the Naming Phenomenon: Frequency of Occurrence in the conferences PARADIGM and CLASS Conjoined*

<table>
<thead>
<tr>
<th>Name</th>
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<th>Name</th>
<th>Tnmd&lt;sup&gt;b&lt;/sup&gt;</th>
<th>Name</th>
<th>Ting&lt;sup&gt;c&lt;/sup&gt;</th>
<th>Name</th>
<th>Tcir&lt;sup&gt;d&lt;/sup&gt;</th>
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<td></td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ivan</td>
<td>3</td>
<td>Etta</td>
<td>3</td>
<td></td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Etta</td>
<td>2</td>
<td>Carl</td>
<td>2</td>
<td></td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>0</td>
<td></td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<sup>a</sup>Tnms: Total number of individuals named; N = 93.

<sup>b</sup>Tnmd: Total number of times the individual was named by others; N = 93.

<sup>c</sup>Ting: Total namings by the individual in Paradigm and Class conjoined; N = 186.

<sup>d</sup>Tcir: Total number of individuals in the cited person's circle, being the total of Tnms and Tnmd, unduplicated.

<sup>e</sup>Trc: Total number of reciprocated namings, unduplicated.

*For the sake of adding definition to the table, participants who consistently rank in either high, medium, or low sectors are emboldened.*
Figure 5-1. Sociogram of 44 reciprocated naming relationships in the conferences PARADIGM and CLASS conjoined, unduplicated.

Figure 5-1 is a sociogram of the reciprocated naming relationships also drawn from the data of Appendix G. Reciprocal naming generally implies close social distance or social bonding. Reciprocal naming is the basis of the group’s social network and social leaders are bound in a network of reciprocal namings (Labov, 1972). To what degree do the big influencers name each other? Beth is linked strongly to Jack’s network but Paul does not establish symmetrical relationships with Jack or Beth. He controls a kind of social epicentre along with Alan, Bob, Ezra and Fran.

Paul’s words which led off this element are consistent with his actions when it comes to naming other colleagues and Erin in his messages. He is consistently in the middle third of the class when it comes to naming events -- occasions where he names other individuals, the number of people who name him, total namings and the number of people in his naming circle. With seven individuals in his naming circle, he ranks one below the median score of eight. While he has reciprocal naming relationships with four classmates thus putting him in the top third of the group, he comes nowhere near the top outrider, Jack, who has nine.
Some folks never use them [names]. I do. I usually use them, I'd say 90% of the times positively. If someone has made a good point and I can tie it in with something I'll say it "and so and so said this". I will always start a note to, if it's to respond to a specific persons note, I'll always say "re: so and so, note number", that's how I'll start it. A note to a specific person, I'll mention their name a number of times throughout it. A general note to the class, if it's just a note, I probably won't say anything. I won't say "so and so are you up? Are you listening?". It just depends. But if it's personal, yes. All the time. / Carl, interview

Carl, on the other hand, is not avowedly social as he imagines: on all counts he ranks in the bottom third of the group.

**TABLE 5-2**

*Erin's Namings*

<table>
<thead>
<tr>
<th>Erin names</th>
<th>Total</th>
<th>Erin is named by</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alan</td>
<td>9</td>
<td>Alan</td>
<td>0</td>
</tr>
<tr>
<td>Alma</td>
<td>11</td>
<td>Alma</td>
<td>13</td>
</tr>
<tr>
<td>Beth</td>
<td>6</td>
<td>Beth</td>
<td>4</td>
</tr>
<tr>
<td>Bev</td>
<td>5</td>
<td>Bev</td>
<td>7</td>
</tr>
<tr>
<td>Bob</td>
<td>4</td>
<td>Bob</td>
<td>2</td>
</tr>
<tr>
<td>Carl</td>
<td>10</td>
<td>Carl</td>
<td>5</td>
</tr>
<tr>
<td>Dick</td>
<td>5</td>
<td>Dick</td>
<td>2</td>
</tr>
<tr>
<td>Etta</td>
<td>7</td>
<td>Etta</td>
<td>2</td>
</tr>
<tr>
<td>Ezra</td>
<td>9</td>
<td>Ezra</td>
<td>2</td>
</tr>
<tr>
<td>Fran</td>
<td>10</td>
<td>Fran</td>
<td>5</td>
</tr>
<tr>
<td>Harv</td>
<td>10</td>
<td>Harv</td>
<td>5</td>
</tr>
<tr>
<td>Ivan</td>
<td>2</td>
<td>Ivan</td>
<td>0</td>
</tr>
<tr>
<td>Jack</td>
<td>14</td>
<td>Jack</td>
<td>7</td>
</tr>
<tr>
<td>Mona</td>
<td>11</td>
<td>Mona</td>
<td>8</td>
</tr>
<tr>
<td>Paul</td>
<td>7</td>
<td>Paul</td>
<td>4</td>
</tr>
</tbody>
</table>

The correlation between Erin's namings and Erin being named (Table 5-2) shows $r = .57$, not unlike the correlation between naming and named scores among class members. Alma and Erin are highly involved with each other, while at the other extreme, Ivan is involved with Erin barely at all. In addition to Alma, Erin names five other as often, or more, but who do not name her as often in return -- Jack, Mona, Carl, Fran and Harv. However, Erin is very professional and is not influenced by the close social distance of the naming relationship: a correlation of Erin's
final ranking of students on the basis of their skill as qualitative researchers with E/ing and E/nmd generates the insignificant scores of \( r = -0.18 \) and \( r = .03 \) respectively.

D. Large Groups and Small Groups

Between January 23 and February 28 -- that period of five weeks in the centre of the course -- the students broke into four on-line discussion groups to deal with technical and ethical issues relating to field research. While the groups were intended to be relatively equal in size, the freedom to self-select yielded a range in group size from three to five individuals. Transactions in this space were intended to be private, although Erin was an official observer as was I, after having asked all group members their permission.

Five tasks were undertaken each of which required small group discussion with eventual output to one of the public conferences: (a) a report on salient observations made about individuals’ interviews by interviewees; (b) a discussion of the institution’s ethical protocols and their impact on each of the individuals’ research, along with one major dilemma posed by the ethical review process; (c) issues of presenting one’s self to the field; (d) preparing and coding transcripts; (f) analyzing and coding junk mail. Especially in the case of the ethical review discussion and wherever she felt coaching necessary, Erin dealt with students individually as each piece of research required the official sanction of the institution.

Group Sensational, the largest and most voluble, consisted of five students: Alan, Alma, Etta, Ezra and Mona. This group generated 112 messages for a total of 27,772 standard words. Erin contributed 11 messages. Students averaged about 20 messages each. Group Spectacular composed of four individuals -- Beth, Carl, Dick and Ivan -- generated 22,089 standard words in 89 messages. Erin authored five messages. Here students averaged 21 messages each. Bev, Harv and Jack who made up Group Splendid contributed a total of 77 messages consisting of 19,464 standard words. Erin contributed three times. The student average is about 25 messages each. Bob, Carl and Fran who composed Group Stupendous spawned 7,616 standard words in 43 messages, about 14 messages each. Erin wrote only one message here.

Community building is intensified in the small group setting. It is compelling to hypothesize that the smaller or more intimate the group, the greater the potential expressive amplitude of the communication and the learning. To understand the phenomenon using Tannen’s continuum (1984), communication style was more expressive (“in your face”) than considerate (nicely polite and therefore unengaging). As a result of the almost face-to-face safe,
informality, communication could get a little bit ‘kvethchy’ here which did not occur in the public fora.

Some notes tended to be much longer than the usual two or three screens as students dumped out raw detail which would become précied in the open conferences. Here “lesser” issues were dealt with that were relevant, say, to only two or three people, but might not surface in the larger group. Self-disclosure was marked by “I think . . . .” which led to unabashed, high level sharing around content issues. Etta, for instance, began the course very much as observant and quiet, but truly blossomed in an uninhibited way in the small group, providing an active leadership role:

Hello to all the Sensationalists: Alan your comment to Ezra that you should clearly understand what you want to know from the interview has me sitting on both sides of the fence. I think it depends on . . . . I think that if we have our central question as the basis of our interaction and observations it should all come together somehow. All this said, I volunteer to do the first report of our group. Any objections? Chastise me if I miss something when you read the SENSATIONAL REPORT in "Interviewing " / Etta

Perhaps the essence of working in this small group space was summed up by Alan who suggested: “Whaddya know! Look where I am! Hey, it’s nice in here, quieter already!

In summary, the small groups reflect the contours of the mainstream conferences except that they amplify the parameters: community is more intense, informality is the norm, long narratives ramble rather than being shaped into tightly knitted prose, language is more colourful, intimacy much more intense, feelings and opinions are freely shared. Here we have deeper dialogue with fewer personal safety agendas operating. It is the small groups which give texture through depth exploration. Personal meanings are clarified with respect to issues in the content. It is here that the transformations driven by dialectic are most apparent.

II. Social Glue: Caring – Laughter and Tears

The two elements which follow demonstrate the strength of community and mutual support which developed over the duration of the course. In the first, Etta shares her intense feelings of sadness and frustration over the suicide of a Native youth which touches off a thread demonstrating poignant caring. The second provides a humorous counterpoint which gives new meaning to the sociological notion of naming.
In a message quite uncharacteristic of the rather retiring Etta, she shares her innermost feelings with the group. Immediately colleagues, including myself, acknowledge and respond to the obvious hurt with expressions of sympathy. Seven students actually address the issue, three males and three females plus Erin and myself, totaling nine persons caught up in the thread.

While the Indra's net story in message 4 appears unrelated to the suicide thread, it will become apparent how this new theme -- a thread in itself -- will contribute in poetic way to the meaning of the drama as it unfolds.

1. ETTA (in Coffee 94 of 139) Mar. 3 at 23:33, to “Qualitative Classmates”

I'm down this week. One of my native students was absent for three days last week attending a funeral. Two of his friends back on the reserve had attempted suicide. One was successful. This week he has returned to his reserve again--another suicide. Why are Native young people in [location] dropping-out in this fashion? Why are both levels of government ignoring the problem? I guess I don't expect answers to these questions. Thanks for listening.

2. DON (in Coffee 95 of 139) Mar. 4 at 0:17 to Etta

But YOU are listening. And, while that cannot alter anyone's yesterday, it just might change someone's tomorrow.

3. BOB (in Coffee Break 98 of 139) Mar. 4 at 14:50 to Etta

You have identified an issue for all of us to think about who are concerned about the future of all young people!

4. DICK (in Coffee 102 of 139) Mar. 5, at 14:45 to Jack and Alan

I found this story while reading about "caring" the other day. It's about the Indian myth of Indra's Net. At the beginning of the world, the great God Indra tied strands to everything. Earth, sky, clouds, stars, sea, mountains, fish, animals, birds, plants, trees, men and women, all were connected. The connecting strands formed Indra's net. Therefore, the movement in any one place caused movement in others. Also, the strands were hard to see, almost invisible in some places, invisible in others. At the intersection of the crossing strands, Indra placed a bell. Thus the movement effects other movements, and the bells ring. (Dooling, 1977).

Why the bells? The bells sound the connections between things. When these sounds are not heard, connections are forgotten. Strands are neglected, damaged, and destroyed. Holes rip in the net. The web unravels. Life falls through the holes.

Maybe teachers need to listen for the bells???

5. BEV (in Coffee 103 of 139) Mar. 5 at 20:40 to Etta
I'm so sorry to hear that yet another native youth has succeeded in suicide once again. I'm pretty much in touch with most of the communities in which Native suicides are occurring - was it [location]? You wonder why and I was compelled to write and tell you from my experiences with Native populations. If I sound trite, forgive me - it's really quite simple - they do not have dreams or even one dream for that matter. Let me explain a bit. Several years ago, I was asked, more out of desperation, why Native communities were losing their youth to suicide. I'll never forget my response nor the response I received.

I replied "Your children do not have any hope that their lives will be any better or any different than yours. What they live today is all they have to look forward to in the future." The living conditions in most of the northern Native communities are shocking. When the media states that we have third world conditions here in Canada they are not exaggerating. Around the same time that I responded to the suicide question, I developed a presentation entitled "Plant A Dream"

I strongly believe that life without dreams is a life without hope; when a person decides to suicide, they have resigned themselves to the idea that their situation at the time will never be different or better than it is, thus the hopelessness (profound!). I could chatter on about this but won't. Let me just say that I'm deeply saddened to hear that yet another Native child has died and we are no closer to preventing these senseless deaths that we have been in the past. Keep well.

6. ERIN (in Coffee 104 of 139) Mar. 5 at 22:08 to Etta re #1

I'm listening but sure don't know what to say. Today, a bunch of [institution] students mostly Aboriginal) and I went down to a meeting at [institution] to take part in a workshop about how they could get the Aboriginal agenda into their programs. The amount of conservatism was breathtaking, but there were some great people there too. It sure is a long and uphill battle and the amount of resistance and ignorance leaves you speechless. Our students were great and left saying that they were definitely glad to be at [institution]. That made me feel better. Yours in concern, Erin

7. MONA (in Class 72 of 140) Mar. 6 at 9:32

Dear Etta, My thoughts have been with you this week. Sincerely, Mona

8. EZRA (in Coffee 107 of 139) Mar. 6 at 13:59 to Etta

Last week-end, I had friends who came to stay with me for a few days. They are Haida. All three of them live on the West Coast although only one lives in a native community (the other two are in Vancouver). We talked a lot about natives in this country. One discussion was particularly interesting. We are all very good friends. We tried to understand why 1) the two who live in Vancouver were able to adjust to "city life" while still feeling native; 2) we could all be such good friends while having different experiences and different perspectives. We
certainly did not come up with definitive answers, but I just wanted you to know that there are some of us out there who care and who are asking questions.

9. BETH (in Coffee 109 of 139) Mar. 7 at 15:57 to Etta

I was sorry to hear about the suicide. There certainly are no easy answers to these occurrences, only more questions. I hope that you have the strength to carry on. My thoughts are with you.


Well, Dick did his spiritual inspiration thing again with his story of Indra's net this week. How do you feel about qualitative research as making visible some of the invisible strands and their knotted relationships. Perhaps the bells are the action that comes of the outcomes of the research.

Etta, I think that you were a bell in your concern about the suicides. The hard thing is to figure out how to make your concern make a difference.

---

I want to end by saying again how impressed I am with the quality of your discussion in this course. Some of you have apologized for saying again what one of your colleagues has said earlier. But my observation is that each comment has its own unique perspective. There is no way that I could teach you from where I sit what we all are teaching each other here. Back to Indra's net and bells, I guess.

11. IVAN: (112 of 139) Mar. 10 at 18:22 to the “Gang”

...Wanted to comment on the great discussion around the Indra story. I would agree with Dick that teachers need to listen to the bells. I would add that we all need to listen to the bells. I would also like to mention that I am disturbed by the situation in our Native communities. Bev, I would like to cautiously add that we as the dominant culture, need to reflect on the idea that perhaps part of the problem is not that these youth have no dreams but that they have someone else’s dream. Consumerism is the dream machine and it affects our youth as well; the resistance to these fabricated needs may not be as possible in the Native youth.

How often have we all felt somewhat hopeless and that our situation is truly dire. Yet, with only a few moments reflection we can snap ourselves out of it and become thankful for all that we do have. To determine how much is real when we are inundated with the fabricated, glossy, Unreality, is indeed difficult. I don’t know exactly what all this means except that I feel we are all tied (like Indra’s web) to these youths deaths.

12. BEV (in Coffee 119 of 139) Mar. 12 at 18:10 to Ivan

Nice to have you on-line again. I agree with your comment that we are all in some way tied to the deaths of Native youth. My comment about dreams was intended to mean anyone’s dreams - not at necessarily those of the dominant culture. I wish these kids had a dream - any dream! I see many of these youth every week and I admit to perhaps over-identifying with their despair. In the majority of First Nation communities I go into there is very little to look forward
to. 'Family' is what binds the people (primarily) and they know that if they leave to pursue anything outside their community, they are leaving the only thing they have - their families.

These youth are inundated with the glamour and gloss brought to them via television dishes on every channel, 24 hours a day. These kids are swayed by the same advertisements as my kids and yours - the difference of course is that our kids are more likely to have or eventually get what they see either from us (parents) or through their own efforts in the workforce. There is no 'workforce' as most people know it in rural, remote Native communities and 70% of Ontario's Native communities are rural and/or remote. So, these youth see a lot and you know that saying, "many people want what they can't or don't have" - imagine for a moment that you suddenly realized that you were never going to have any of what you want/need/desire - and I'm not talking strictly concrete, materialistic 'things'. I'm sorry I'm rambling on about this. I believe passionately that education is power and I'm convinced that the empowerment of Native people lies fundamentally in education. It's a message I sing/deliver every chance I get. Unfortunately, money is seen as power by many and as a result, I'm seeing people squandering every dime they have in Bingo halls that are being erected almost overnight in First Nation communities across the nation. More recently, the pot of gold has been determined to be in casinos. These I fear, are where dreams are being woven - but I guess these are better than none at all.

13. ETTA: (in Bev 6 of 23) Mar. 31 at 22:10 to Bev as a PS to a note dealing with Bev's presentation

P.S. I brought Bob's Toronto Sun article about Native teen suicide to school today. It was an instant success with the staff as well as with the [location] students. It may be a couple of days before I get it back and mail it to you. I've sent this to your personal notes by mistake. I've just read your note to me and I will keep the articles from Bob. The staff are all asking to read it. Thanks.

Table 5-3 sets out the message stream of the Native youth suicide thread. Understood as a drama in which the colleagues participate, the thread moves from a condition of emotional and intellectual equilibrium, through the emotional disequilibrium occasioned by the news of the suicide, through developing opinion about the situation which tends to intellectualize the conversation and thus calm the original emotional turmoil. By the time we get to messages 10 and 11 we are generalizing the meaning of the suicide and the Indra metaphor gives the whole event a rather transcendent feeling. In French tragi-comedic fashion, with the re-establishment of emotional and intellectual equilibrium we, both the actors and audience, have integrated the event into our experience, and healing is taking place. It should not be without note that Etta provides a bell-like nexus between two communities which share her sorrow, and have now become mutually supportive.
B. Purposeful Nonsense: Gladys, Raoul, 'Arv, Étienne and Annie

Over a 35-day period between February 23 and March 29, a delightful bit of nonsense encircled the more serious stuff of the course. This phenomenon centred on a discussion regarding the use of pseudonyms when dealing with informants in an interview situation where anonymity is demanded. The phenomenon touched five of the course's fifteen conferences -- Coffee, Class, Bob, Alma and Harv. The *dramatis personae* included four of the fifteen students -- Alma / Raoul, Bob / Gladys, Harv / 'Arv and Jack / Étienne. Erin was the fifth actor and took the name Ann or Anne Landers. She was also referred to as Annie. Four other classmates alluded to or played along with the naming game but did not assume pseudonyms: Mona, who started it all, Ezra, Beth and Alan. Thus eight of the 15 students in the class plus the instructor “went along” with the activity. While being very much a part of the usual class activity that was interlaced with the pseudonym fun, seven classmates chose not to enter the game -- Fran, Etta, Bev, Dick, Ivan, Paul and Carl. The entire annotated script is found in Appendix H.

**TABLE 5-3**

*Message Stream of the Native-Youth Suicide Thread*

<table>
<thead>
<tr>
<th>Conference</th>
<th>Message #</th>
<th>Date / Time</th>
<th>Author</th>
<th>Thread #</th>
</tr>
</thead>
<tbody>
<tr>
<td>COFFEE</td>
<td>94 / 139</td>
<td>Mar 03; 23:33</td>
<td>Etta</td>
<td>Suic(1)</td>
</tr>
<tr>
<td></td>
<td>95 / 139</td>
<td>Mar 04; 0:17</td>
<td>Don</td>
<td>Suic(2)</td>
</tr>
<tr>
<td></td>
<td>98 / 139</td>
<td>Mar 04; 14:50</td>
<td>Bob</td>
<td>Suic(3)</td>
</tr>
<tr>
<td>[Indra Introduced]</td>
<td>102 / 139</td>
<td>Mar 05; 14:45</td>
<td>Dick</td>
<td>Indra(1) &amp; Suic(4)</td>
</tr>
<tr>
<td></td>
<td>103 / 139</td>
<td>Mar 05; 20:40</td>
<td>Bev</td>
<td>Suic(5)</td>
</tr>
<tr>
<td></td>
<td>104 / 139</td>
<td>Mar 05; 22:08</td>
<td>Erin</td>
<td>Suic(6)</td>
</tr>
<tr>
<td>CLASS</td>
<td>72 / 140</td>
<td>Mar 06: 09:32</td>
<td>Mona</td>
<td>Suic(7)</td>
</tr>
<tr>
<td>COFFEE</td>
<td>107 / 139</td>
<td>Mar 06: 13:59</td>
<td>Ezra</td>
<td>Suic(8)</td>
</tr>
<tr>
<td></td>
<td>109 / 139</td>
<td>Mar 07: 15:57</td>
<td>Beth</td>
<td>Suic(9)</td>
</tr>
<tr>
<td>SUMMARY</td>
<td>10 / 11</td>
<td>Mar 07; 22:16</td>
<td>Erin</td>
<td>Indra(5) &amp; Suic(10)</td>
</tr>
<tr>
<td>COFFEE</td>
<td>112 / 139</td>
<td>Mar 10; 18:22</td>
<td>Ivan</td>
<td>Indra(6) &amp; Suic(11)</td>
</tr>
<tr>
<td></td>
<td>119 / 139</td>
<td>Mar 12; 18:10</td>
<td>Bev</td>
<td>Suic(12)</td>
</tr>
<tr>
<td>BEV'S Conf.</td>
<td>6 / 23</td>
<td>Mar 31; 22:10</td>
<td>Etta</td>
<td>Suic(13)</td>
</tr>
</tbody>
</table>

In many respects, this tapestry of conference threads related to the pseudo-naming phenomenon demonstrates the dynamic of genuine on-line asynchronous turntaking where various respondents “pop in” where and when it feels psychologically appropriate to do so. It
further relates to issues of naming in conferences where names not only convey aspects of friendliness but other attributions including power.

While to some readers it might appear that the game gets out of hand, it must be noted that never does it detract from the seriousness of the real work going on in the course. The editing of the messages in Appendix H obscures the fact that even with the at times outrageous Alma, her prose in the middle of her major presentation is straightforward and formal. The game is played as a prelude and postlude. It is noteworthy that when Alma or Bob respond to people who are not playing the game, their responses respect that condition and are written in very straight prose (see Appendix H, Message 15).

There is dramatic action woven into this tapestry, as there is so often in other threads and tapestries associated not only with this course (the suicide-related thread preceding) but with CMD generally. The classical elements of drama obtain here: the introduction of the pseudonym notion; rising action associated with exploring that notion; a turning point where some element of the story -- the direct mutual interchange between some colleagues using only pseudonyms -- propels the action to a climax, the outlandish persona assumed by Alma as a prelude to her presentation; the falling action where the frequency of game-related elements decreases; and the dénouement where only a memorial hint references the intensity that has passed.

And, the purpose for all this? Certainly community maintenance, if not community building can be considered at the centre, witness Jack’s ability to have some fun with the course after having passed through some genuine course-related angst. Tension release can also be achieved by participating in this kind of playfulness. In the final analysis, a message goes out: “We’re all bright, complex individuals and we’re all in this serious course business together. So, let’s enjoy it as much as we can, to the degree that we can!” And what a motivation to come online!

III. Epilogue

A. Indra’s Net and Bells

What oft was thought, but ne’er so well expressed.
An Essay on Criticism, Alexander Pope (1688-1744)

Certain messages are notable in that they capture the essence of an issue or situation. The technical notion of a virtuoso in the CMC field is a writer whose messages are always read by others and who often draw written positive feedback. These messages get kept and downloaded.
Dick is such a virtuoso and in one message near the end of the course he articulated a metaphor which became the central theme for the class’ learning adventure. The message thread (see Table 5-4) exemplifies learning as understanding through the grasping of metaphorical meaning, learning as the making of personal meaning, and learning as the participation in shared meanings. Teaching, then becomes understood as the sharing of personal and group meanings through a dialectic process — adult learning at its interdependent best.

All of the direct references to the myth of Indra’s net and bells appear in seven different notes, five in COFFEE which was the conference set aside for light conversation not necessarily related to the course, one in SUMMARY where Erin references the story in her weekly summary, and the last appears in CLASS as a part of Dick’s evaluation of the course with reference to the role of Erin the instructor. Appendix I demonstrates a remarkable juxtaposition of messages where the Indra thread and the Suicide thread are happening in time together and their ultimate confluence in two messages, 5 and 6 below.

**TABLE 5-4**

*Identification of Message Elements the “Indra’s Net” Thread*

<table>
<thead>
<tr>
<th>Conference</th>
<th>Message #</th>
<th>Date &amp; Time</th>
<th>Author</th>
<th>Thread</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coffee</td>
<td>102 / 139</td>
<td>Mar 05; 14:45</td>
<td>Dick</td>
<td>Indra(1)</td>
</tr>
<tr>
<td></td>
<td>106 / 139</td>
<td>Mar 06; 8:30</td>
<td>Jack</td>
<td>Indra(2)</td>
</tr>
<tr>
<td></td>
<td>110 / 139</td>
<td>Mar 07; 15:58</td>
<td>Beth</td>
<td>Indra(3)</td>
</tr>
<tr>
<td></td>
<td>111 / 139</td>
<td>Mar 07; 17:33</td>
<td>Bev</td>
<td>Indra(4)</td>
</tr>
<tr>
<td>Summary</td>
<td>10 / 11</td>
<td>Mar 07; 22:16</td>
<td>Erin</td>
<td>Indra(5) &amp; Suic(8)</td>
</tr>
<tr>
<td>Coffee</td>
<td>112 / 139</td>
<td>Mar 10; 18:22</td>
<td>Ivan</td>
<td>Indra(6) &amp; Suic(9)</td>
</tr>
<tr>
<td>Class</td>
<td>137 / 140</td>
<td>Apr 11; 20:53</td>
<td>Rick</td>
<td>Indra(7)</td>
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</tbody>
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1. DICK: (102 of 139) Mar. 5, at 14:45 to Jack and Bob

I found this story while reading about "caring" the other day...

It’s about the Indian myth of Indra's Net:

At the beginning of the world, the great God Indra tied strands to everything. Earth, sky, clouds, stars, sea, mountains, fish, animals, birds, plants, trees, men and women, all were connected. The connecting strands formed Indra’s net. Therefore, the movement in any one place caused movement in others. Also, the strands were hard to see, almost invisible in some places,
invisible in others. At the intersection of the crossing strands, Indra placed a bell. Thus the movement effects other movements, and the bells ring. (Dooling, 1977).

Why the bells? The bells sound the connections between things. When these sounds are not heard, connections are forgotten. Strands are neglected, damaged, and destroyed. Holes rip in the net. The web unravels. Life falls through the holes.

Maybe teachers need to listen for the bells???

2. JACK: (106 of 139) Mar. 6, at 8:30 to Dick re 102

I found your telling of the native myth Indra’s Net engaging. This legend and others I have heard tell me that Natives are more in harmony and aware of the links in our world. Sounds very consistent with the naturalistic perspective. I resonate with it, but don’t understand all its implications. Your story adds to my understanding. Thanks.

3. BETH: (110 / 139) Mar. 7, at 15:58 to Dick re 102

I loved the Indian myth of Indra’s Net. Thank you for sharing it. I heard something kind-of interesting the other day about a pendulum. This was the new dean of education’s idea. He said that a pendulum never swings back to where it was (in relations to old ideas being tried again) because even though the idea may be the same, the context to which it will be applied will always be different. The world, and the individuals in it, are always moving and changing.

I found this was very true in the world of nursing education. Inevitably you will have someone on faculty say that they tried something 2 years ago and it didn’t work, so why bother. The point this person is missing, is that 2 years ago was another space and time than today.

4. BEV: (111 of 139) Mar. 7, at 17:33 to Dick

Hi Dick, Appreciated your sharing ’Indra’s Net’. If the bells ring when connections are made, maybe the teachers and learners you are referring to are not making connections and perhaps, having never had, need to be taught how to make connections. Let me with something to think about. Keep well.

5. IVAN: (112 of 139) Mar. 10, at 18:22 to the “Gang”

Wanted to comment on the great discussion around the Indra story.

I would agree with Dick that teachers need to listen to the bells. I would add that we all need to listen to the bells. I would also like to mention that I am disturbed by the situation in our Native communities. Bev, I would like to cautiously add that we as the dominant culture, need to reflect on the idea that perhaps part of the problem is not that these youth have no dreams but that they have someone else’s dream. Consumerism is the dream machine and it affects our youth as well; the resistance to these fabricated needs may not be as possible in the Native youth.

How often have we all felt somewhat hopeless and that our situation is truly dire. Yet, with only a few moments reflection we can snap ourselves out of it
and become thankful for all that we do have. To determine how much is real when we are inundated with the fabricated, glossy, Unreality, is indeed difficult. I don’t know exactly what all this means except that I feel we are all tied (like Indra’s web) to these youths deaths.


Well, Dick did his spiritual inspiration thing again with his story of Indra's net this week. How do you feel about qualitative research as making visible some of the invisible strands and their knotted relationships. Perhaps the bells are the action that comes of the outcomes of the research.

Etta, I think that you were a bell in your concern about the suicides. The hard thing is to figure out how to make your concern make a difference.

I want to end by saying again how impressed I am with the quality of your discussion in this course. Some of you have apologized for saying again what one of your colleagues has said earlier. But my observation is that each comment has its own unique perspective. There is no way that I could teach you from where I sit what we all are teaching each other here. Back to Indra's net and bells, I guess.

7. DICK: (CLASS, 137 of 140) Apr. 11, at 20:53 to the “class”

Thank you to everyone for sharing so much of yourself and your ideas, and Erin, you were the Indra in the net for this course, tying together our ideas and anxieties. Thank you.
Chapter 6

FINDINGS AND FACTORS:
EVALUATING THE EXPERIENCE

The behavioural patterns found and enunciated in Chapters 4 and 5 represent the outcomes, effects or results of the factors or “causes” which can be correlated or associated with them. In this chapter we identify those factors. In Part I we find a synopsis of the on-line evaluations of the course made by the students. Parts II, III and IV provide specific answers to the general research question: What factors in the facilitation and medium of this course afforded or limited its effectiveness as an adult education experience? The factors identified and evaluated below are organized according three perspectives: (a) facilitation of the learning experience through the person of the facilitator, (b) student considerations and (c) learning-community related factors.

I. Student Evaluations

A. Some Course-End Learnings

What is one thing you learned? WOW, what a loaded question! / Etta.

. . . the closer we get to individual personal experiences of "reality", the less relevant is quantitative research and the more relevant is qualitative research. The closer we get to impersonal measurement of "reality, the more relevant is quantitative research. / Alan

On April 3, Erin posted a message to the class requesting that they respond to a set of questions about “our experience in this course.” Erin made it clear that a response was not mandatory. The questions included (a) important content learnings, (b) ‘sticking points’ -- “intellectual, technical, time allocation, the rest of your life, . . .” (c) how the course might have been approached differently by Erin herself, (d) how the students themselves might have acted differently, in retrospect, (e) the description of a good or bad critical incident, (f) some sense of their own intellectual maturation, (g) the relevance of this course in their academic and / or personal lives. Of the women, Alma, Beth, Bev and Etta responded; of the men, Alan, Bob, Dick, Ezra, Paul and Jack responded. Carl, Fran, Harv, Ivan and Mona did not respond. Student responses included at least seven categories of assessment as here follow.
1. **Positive reevaluation of qualitative research.**

All eight respondents who alluded to this question -- Etta, Ezra, Jack, Beth, Alan, Bob, Dick and Paul -- gained a deeper understanding of the meaning and value qualitative research, including those of this group who had been skeptical at the beginning of the course. Even the arch-positivist Jack, at the end, mitigated his doubt: “Qualitative research would, I think, perceive the human as a whole. Therefore, it would ask ‘What is the role of qualitative approaches, even in the mending of a bone?’ How can we have the two approaches work side-by-side and complement each other, rather than discard one for the other, even in the same project?”

2. **Confirmations of the support and value of learning in community, and**

3. **Confirmation of the value of dialectic process in adult learning.**

The above two items are joined, with the common term being group participation. In addition to affirmations by Alma, Beth and Dick, Alan, “…enjoyed the strange intimacy of computer networking. I feel I have a good bunch of friends, yet you are virtual strangers to me! But you're not!” Paul thought that, “… the giving and receiving of feedback on the presentations was very important.”

4. **Confirmation of personal epistemological style.**

Etta, Beth and Alan all found in qualitative research a confirmation of their personal epistemological style. Paul grew to appreciate the range of personal styles: “I tend to be far less argumentative than I was in my earlier text courses. Probably because I'm sure of my own positions more clearly. And I developed more tolerance of other people's philosophical positions.”

5. **“Conquest of the Computer” or “Mastering the Box”**

Alan: Coffee / Mar. 5, 1993: Hi everybody! Don's here teaching me how to upload. If you ever read this, you know he's succeeded!

For Alan, perhaps more than any of the students, early participation in the course had been a technical nightmare: Alan succeeded. Bev’s sticking point was, “… ‘mastering the box.’ I had been anxious about my limited computer skills.” Bob, “… learned how to participate in a LDE course (with Don's patience and help). What was a ‘sticking point’? The conquest of the computer as an on-line communication tool to talk to colleagues.”

137
6. Persistence of time-related problems associated with the course.

In addition to the time-related stressors identified earlier, four of the respondents cited time-related issues as persistent problems. As Dick opines: "How would I act differently? As Ezra noted, time management, especially when the 'rest of life' is starting to dominate contributions to this course." Bob suggested that the course "... be a full year course. The second half should be limited to interviews and final paper writing." For Bev, the issue was finding a way to balance the course with her job:

A 'sticking point' for me was trying to stay on top of the course while only having access to my computer on weekends. Logging on and discovering more than 100 messages (on 2 occasions) threw me. I did not skim them because I didn't want to miss the 'flavour' overall. I was home for 2 weeks of the course...and enjoyed logging in almost daily. I plan to take another CMC course next winter and I plan to put a modem on my lap-top so I can 'take the course along' with me.

7. Personal insights and affirmations.

Beth, Etta and Alma wrote particularly eloquently about the personal meaning of the course to themselves:

Good Critical Incident: Listening to my participants talk about what influenced them to pursue graduate studies. I felt very strange when I heard several refer to me as a role model and it took some reflecting on why I felt this way. It felt really nice to know that they were such confident professionals and that our program had had a small influence. ...Completing the research project has been a very moving experience. It reconnected me with some very special people. / Beth

What a way to start a degree program. I like this type of research. Quantitative research does not fit my thinking style. I expect that subsequent courses will be heavily influenced by the methods I learned here. ...I have found a type of research that agrees with my beliefs about knowledge and its acquisition. / Etta

How easy it is to make assumptions about the beliefs and values of others as well as be somewhat blind to the assumptions we hold. / Beth

And, a word by Alma in serious mode:

Hi dears, So glad I seem to have one more kick at the can before Erin switches us into read only mode. This really has been a terrific experience for me. I am a VERY social learner (I do not know what I think until I hear it reflected in what I say to others) (ENFP - for those who think in the Myers Briggs model) and I had some real misgiving about what it would be like to try to get to know a group of colleagues at arms length. Erin TOLD us we would get to interact beyond our wildest dreams. I should have trusted her. Alma: I have enjoyed the light-hearted nonsense. No matter how stressed and pressured I feel, if I can make
a moment of contact with someone else through humour, I know I am alive. I've
got to know you all far better, in some ways, than one ever does in a typical class
where you all arrive 5 minutes before start-up and leave when it ends. I know
what worries you, what inspires you, what touches you, what tickles your
funnybone - who could ask for better?

II. Facilitator-Related Factors

A. Exemplification of an Archetypal Facilitator

Erin exemplified the personal characteristics of the archetypal facilitator and exercised
the task and social skill identified earlier in Chapter 4 Part IV relating to online facilitation. Her
facilitative actions resemble more the narrative facilitator type than the episodic facilitator type
that are found at the end of Chapter 2. This issue will be addressed again in Chapter 7.

B. Successful Management of Affordances and Limitations in Course Design

This course provided an exceptionally rich learning experience for the students and for
Erin. She successfully shaped the elements of the course in a manner which exploited the
affordances of the medium and minimized its limitations, to produce a genuinely meaningful
learning experience for the students involved and herself. While she made no effort to exploit the
breadth of interventional repertoire that Paulsen offers (1995, e) or to use the resources of the
system as a database, her interventions were certainly sufficient to achieve the task as evidenced
by the positive feedback of the class at the end of the course. She did not try to thwart the
inherently social aspect of the medium by choosing to be an autocratic, lecture-driven facilitator,
but rather she allowed the students to participate as responsible contributors to the community.

She allowed the community to achieve integrity by participation, not direction, thus
feedback could happen in an atmosphere of respect and trust. As a result, the learning was
transformative in the way that Mezirow would characterize it: the scope and notion of 'research'
was transformed by the whole experience. From a Vygotskian perspective, the class developed
new intellectual tools.

She successfully integrated the roles of instructor and partner in the learning without
losing control of the task, or violating the social fabric of the learning community, especially in
her on-line moderation where she set up and sustained activity in the dialectic process. In this
same regard, she demonstrated flexibility in the management of the task so that excessive time
pressures related to course were adjusted as required in the students favour. The net result was
that the loading across the course was remarkably even by way of assignments and performance expectations, with adequate time for reflection and the shaping of feedback.

Among key moderator behaviours was Erin's ability to weave. In terms of Stephenson's (1996) summary, Erin gave sense of the common ground. From personal experience she was able to verify both sides of arguments and she never let flame wars begin. As a scaffold, she provided useful suggestions as to where the discussion could go next and she constantly asked people to reflect on their own positions. In the view of Perkins and Newman (1996), she is the ultimate virtuoso.

Given the distributed nature of the congregation, she made every effort to integrate the students into the course by holding a face-to-face introductory session and including those who could not be present in person by means of an audio-conference.

C. Modelling Excellence as a Qualitative Researcher

Overall, Erin modeled the archetypal qualitative researcher in all her actions. Most importantly, her grasp of the field was indicated by her ability to be strong and authoritative in answering student questions, her use of domain-specific vocabulary and her formal and informal writing styles.

D. Modelling Excellence as an On-Line Adult Educator

In addition, Erin modeled excellence as an adult educator: she respected the class members as adult persons and participated in the dialectic with sensitivity, scaffolding or directing in her feedback where it seemed most appropriate. In a Vygotskian sense, Erin utilized the teaching strategies which facilitate learning in the ZPD: (a) scaffolding in feedback and general student management, (b) through field-work, treating her students as apprentices (qualitative researchers-in-training) over the course of the learning and (c) initiating the transferring of responsibility to the students by coaching the field work and subsequent analysis of data from the side. She provided patient support for those whose private reality or experience needed scaffolding in order to internalize the element of the qualitative paradigm, notably Jack. She exhibited, without question, the on-line moderating and facilitating behaviours identified in Chapter 2 by Hiltz and Turoff (1978), Davie (1989), Feenberg (1989) and Burge (1993, 1994).

A word about bad practice is in order. Less effective CMC course delivery does not capitalize on the supportive power of the dialoguing community or make use of the instructor as a model of on-line behaviour, generally, or dialectical thinking, specifically — especially in
delivering feedback. It has been my experience as “The Coach” that where clear modelling of online behaviour was not present, students spent much time in stressful search behaviour which precluded high levels of trust and openness. There was simply no scaffold to build upon. Or, to quote Hamlet, their minds were “o’er smothered in surmise.” Less effective course delivery also fails to involve the students but rather distances their input by concentrating on the truth of the instructor’s position. As one respondent in Burge’s (1994, p.31) study characterized the situation: “no congenial atmosphere [was] created.” This situation can also be attributed to the traditional lecture method being badly cast in a CMC context.

E. The Entry of all Students into Full Group Membership.

Erin facilitated the entry of all the students into full group membership. Lave and Wenger (1991) in their situated model of learning understand this phenomenon as the movement from legitimate peripheral participation to centrality in a community of practice. This Erin accomplished through the field experience of the qualitative research study. In his assessment of a British CMC endeavour, Wegerif (1998) noted that there is “a line between feeling part of a community and feeling that one is outside that community looking in. This represents a change of state from being an outsider to being an insider” (e). In the case of our course, Etta, for instance, grew to become an insider.

III. Student-Related Factors

A. Class Size Critical

Brundage and MacKeracher (1980) assert that adults learn as much working alone or with one other person as they do in a group. Adult learners use groups in two ways: as a forum for helping them resolve their own individually-defined problems (individual learning) and as a mechanism for resolving group-defined problems where each member contributes to the total solution (group learning). A class size of 15 students certainly gave the course a critical mass by the standard of Hiltz and Turoff (1988) and situates itself at the low-normal participation levels outlined by Boettcher (1998, 1999). Given the volubility of the participants and the dialectical nature of their interchanges, an on-line group of 15 students was not too large to allow the individuality of each student to emerge yet be transformed by the belief-structure of the group as a whole. Recalling the significance of six participants in a face-to-face work group (a syndicate) for the Canadian Armed Forces, there may well be a difference in the point of equilibrium
between individual will and group will between the face-to-face condition and the on-line condition.

B. Group Membership Constant over Time of the Course

Since no one opted out of the course after it began, the class had course-long continuity in its membership which afforded the predictability of that environment as a place to learn. Predictability of the environment is a factor in the affording of social control, hence personal empowerment

C. Social and Existential Readiness

Students were socially adept or otherwise existentially ready to participate in this course which is marked by their maturity in interaction, e.g., lack of flaming, being capable of delivering feedback, however cautiously, and their ability to take personal risks in exposing themselves through personal opinions. A major component of this readiness was demonstrated early in the course by the rapidity with which genuine course-related dialogue began suggesting that students valued learning in community as much as Erin. It has been my experience that adults who have been schooled under traditional classroom circumstances are reticent to commit themselves to content discussion in the face of instructional authority figures who are prepared to tell them they are wrong! This group appeared to take their freedom to assert opinion right from the start.

Their subsequent participation behaviour emphasizes again the importance of learning in community without which the richness which is the basis for growth through the dialectical intellectual process cannot occur. This group strove consistently to create this community: warmth, mutual support, with no fear of public humiliation, hundreds of insights, ideas perspectives, questions, answers, elaborations, generalizations, discriminations and examples.

D. Intellectual Readiness

Students demonstrated intellectual readiness for the course. Moreover, the students were matched closely in terms of their ZPDs allowing Erin to manage that area successfully or, as Basseches (1984; 1986) would phrase it, “maintain the optimal mismatch.” Students overcame personal and course related stressors to achieve mastery of the content. With very few exceptions, perhaps only Carl (by his own admission), the students were excellent writers or became adequate to the need and therefore were not overwhelmed by the necessity of communicating in text.
E. Time Management

While the stress of balancing personal, professional and course time never really disappeared, all the students coped with the stress and performed better as they became more experienced. The available time for the course became sufficient to meet successfully the imperatives associated with participation -- a valuable learning in itself.

F. Overcoming Stressors

The CMC technology and its application was the most profound stressor for most of the students -- and at times for Erin (/ interview) -- early in the course. Only Ezra who had been himself a professional facilitator / moderator was spared significant irritation with the technology. Thankfully, this condition passed within the first three weeks of the course and the technical process became virtually transparent. The technical stresses in this situation were fatal for no one, due in part to the availability of a technical assistant, and the self-help generated by the group itself. The distress caused by stressors other than technical dissipated over the length of the course, or concern shifted to other matters other concerns as the community learned to learn under the conditions of the new medium.

The categories of stressors generated by Burge (1993, 1994) organize the minutiae in a manner different from my organization which was rooted in grounded theory. However, our respective categories of stressors appear to be two sides of the same coin.

IV. Community-Related Factors

A. Specialized Student Support in Place

Peripheral support mechanism including technical help and access to library-based information were in place to support the students.

B. An Experiential Approach to the Content

The experiential approach to the content was appropriate for this medium since it relies on the sharing of personal experience among members of a group -- a situation afforded by the technology.

C. The Narrative of the Course was Intensely Dramatic

In his 1997 paper, Ragsdale (1997) stresses the importance of serendipitous outcomes in the examination of educational technology settings. In the introductory remarks to one of her interventions, TAG QUESTIONS, Erin remarks:

The point of qualitative research is to find out patterns of behaviour or thought that operate below the surface of our everyday ways of understanding the
world. . . But to get beneath the surface takes some practice. . . One of my sociologist colleagues says that a research project has to come up with some 'news' -- something that has not been revealed before.

While it may not appear on the surface of the landscape to be newsworthy, that the narrative of this course was intensely dramatic is both a serendipitous outcome and worthy of note. Not only is the entire odyssey dramatic, so are many of the thematic threads such as the tragic suicide of the Native youth or the comedic naming interlude, or the personal, intellectual struggle of Jack.

At the heart of all drama is conflict and the struggle to overcome the antagonist, or be overcome. The dramatic narrative speaks to the two important aspects of learning, the cognitive and the affective. In the cognitive level, conflict is situated in the apparent opposition of ideas which seek synthesis through dialectic; in the affective domain, conflict engenders psychological tension which seeks its resolution through action and a return to equilibrium. Thus, any need to reconcile disequilibrium in either domain is accompanied by a parallel need in the other. Without some noticeable degree of affect -- some measure of passion -- the cognitive landscape is quite featureless. Without the imprint of the affective, our learning is simply uninspiring.

Traditional schooling, given the classroom power structure, is often uninspiring because the possibility of the dramatic does not exist; if there is conflict, it is borne of interpersonal power struggles as opposed to the struggle of ideas. Paradoxically, the dramatic needs the social aspect of the learning situation in order to sustain the right kind of conflict to stimulate learning. In our situation, the CMC medium along with a non-righteous, non-judgmental facilitator provided just such a set of circumstances.

V. Conclusion

Over the period of the course, the learning process proceeded through a pattern that prevails whenever the experience is successful: (a) conceptual confusion gives way to (b) disambiguation of concepts; (c) the learner's focus seeks out examples of those concepts operating in the real world -- percepts; (d) development of critical capacity based on theoretical knowledge and practice; (e) professional operating clarity. To achieve in Erin's specific course, learners had to deal with -- read, internalize, evaluate, cull, and respond -- to over 1400 messages. In short, intellectual resolution was required, ultimately in writing, across all aspect of
the course content. Learning took place through message making, the mechanics of dialogue and transformative power of dialectic. Information synthesis happened; community happened; learning took place; and, ergo, empowerment happened. Surely Cohen (1995) is shortsighted in asserting that "The CSILE program is the only program where the affordances of technology are central in fostering cultures of understanding" (p. 120).

In Davie's 1996 analysis of needed research in CMC he suggests that we need to know how to facilitate a sense of community. What makes the difference between community and isolation? Is it an individual characteristic or are there elements of the CMC environment that make it more welcoming or hostile? I believe that I have some small contribution to the solution: facilitating drama facilitates community — not the hostile conflict which beats on the ego but the drama of ideas in tension which demand reconciliation. In isolation, there is no conflict, no drama. While the CMC medium itself is neutral, experience demonstrates that the interactions of the participants can range from hostile to constructive. The key is in the facilitation, the subtle exercise of suasion which will afford the safe, considered interaction of individuals with other individuals, where affect can bind them into a trusting, respectful community.

Arguably, it is now an educational given that the degree of impact that instructors have on students varies directly with the amount of effort the instructors put into figuring out what students are interested in, and into making their presentation of subject matter interesting. From the perspective of achieving this task through learning technologies, Mason (1995) believes that their contribution to learning comes primarily from the ability of teachers and course designers to use learning technologies in context and add their instructional methods to these media as well as to the social, cultural, and cognitive demands of the learners. And so it was for Qualitative Research: Principles and Practicum. This was not a second-best experience.
Chapter 7
Conclusion

I. Contribution and Importance of this Study

The ultimate purpose of this thesis was to understand and exploit the adult education possibilities of CMC. To do this, we engaged an entire course which had been delivered in the medium. The immediate reaction of those involved with the course -- students, facilitator and researcher -- was that it was unusually successful in meeting its objectives. For this reason it was worthy of an examination into this success.

The intent was to bring the strength of both qualitative and quantitative paradigms to the analysis of the course. For this task I used the entire on-line transcript of a course: the first time, I believe, that this has been done. From the transcript I gathered and organized a new set of data around issues related to learning in this medium. Work began with some preliminary excursions into content analysis. The objective had been to find a way to detect and evaluate learning under CMC conditions -- a methodology to display in an empirically observable manner how learning manifests itself in writing, over time. Since the study of written composition unites a study of behavioural traces with cognitive processes, the importance of this work remains undiminished, in my view, even though the project was not carried through to completion. What emerged, at a more general level, was the powerful explanatory potential of theory relating to the modelling/imitation dynamic, especially in the areas of vocabulary acquisition and writing style. It should not be forgotten that content analysis techniques can provide not only gross but subtle performance tracking which I do not believe has been employed for assessment.

Next, grounded theory was applied to that material which represented the cut-and-thrust of discussion about course-related themes -- dialogical messages. Among the features which emerged most clearly early in the course were expressions of course-related stress (see also Burge, 1993). Student course-management practices emerged as a major category as did creating and maintaining the sense of group cohesion. Indeed, it was the powerful manner in which social needs were met which emphasized again that social and task considerations should not be separated in any analysis of learning, and that both must receive adequate attention from a facilitator. Once again the power of the modelling/imitation dynamic as a theoretical explanation for aspects of the group’s learning emerged.
Two sources of theory relating generally to adult education and specifically to modelling/imitation were then considered as germane to explaining the data: the general theory of adult education as codified largely in the work of Brundage and MacKeracher (1980) and writings in the socio-cultural educational research tradition developed out of the insights of Vygotsky.

Given the power balance between instructor and students in graduate education we assumed, a priori, that somewhere in the delivery -- the facilitation -- could likely be found the factors we sought. At this point the research question was made clear: what factors in the facilitation of this course afforded or limited its effectiveness as an adult learning experience? What also emerged was that some major factors relating to students were also part of the mix. The key to understanding the dynamic here, I believed, resolved itself in the actions of the facilitator. To that end I sketched the profile of the facilitator type most likely to achieve results within the medium -- a profile which deserves greater discrimination through additional research. From the study I identified factors which afforded adult learning under the conditions of CMC in terms of the person of the facilitator, what the students contribute to the mix, and the shape of the community as a whole.

I derived three very strong messages from the analysis of the data and the extrapolation of factors: (a) the importance of the development community to the success of an on-line educational adventure cannot be overstated; (b) that without community, drama cannot develop, and without drama, we can be robbed of the contribution of affect to cognition; and (c) subtle directions in the facilitation of learning may increase or reduce the effectiveness of the learning outcome as predicted by socio-cultural theory. All of these issues will be discussed again as we proceed.

A. The Emergence and Importance of Community

Community will emerge as an artifact of continued participation in on-line groups. This is a confirmation of Stephenson’s (1996) finding in her study of the interaction of deaf and hearing through CMC, and a debt of gratitude to her observation that information sharing is a manifestation of community. She concluded that bits of biographical information both arose from and promote the ideal of the on-line listserv she studied as a community of people who care about each other’s lives. “People post this information because they believe others are interested in them, and examples drawn from the data reveal that these expectations are grounded in
reality" (p. 120). My study also strongly confirms Wegerif's (1998) argument that the social
dimension is important to the effectiveness of asynchronous learning and his recommendations
for the support of community building in the design of courses.

It becomes important to account also for the enormous effort that students put out to
create community. Speaking once again psychologically, the role of community here was to
create an attitude of respect and altruism and an environment of trust among participants which
freed them to question without fear of embarrassment, assert -- "run an idea up the flagpole and
see who salutes" -- without fear of mockery or put-down and anticipate genuinely content-
centred relevant feedback. Participants were psychologically open to the myriad of views
expressed by the instructor and colleagues: what others thought was worthy of serious
consideration even if it was contrary, or even contradictory to any personal point of view. Indeed,
without this trust and the attendant openness, the huge volume of perspective generated on most
topics would not have been possible, and would have impoverished the potential of the
dialectical process. When intellectual and psychological security exist in a learner, then and only
then can a genuine transformation to integrate new knowledge and understanding happen. Or as
Anselm of Canterbury (1033-1109) suggested: "Credo ut intelligam" -- I believe so that I may
know (Runes, 1962, p. 70).

II. Implications for Practice

1. On-line courses develop community, and that community will afford intellectual
growth. The skillful management of learning under conditions of community will still require
asserting power, but with nuance, not righteousness, since the latter violates that relationship of
mutual trust and respect that must prevail among the students and between the instructor and the
students.

2. Since we learn by guided involvement, genuine direction as to how to achieve tasks
and goals is necessary information, whether it comes from the teacher or from other students.
Open-ended Socratic-type questioning implying "There's an answer out there, I'm not going to
tell you, you find it!" creates unnecessary anxiety and inefficient search behaviour under certain
conditions. Facilitators must learn how to join the community as learners without giving up their
prerogatives as instructors.

3. Conflict and the drama that ensues from it gives amplitude to learning. Interventions
which are problem-related, demanding the synthesis of many points of view, are valuable
learning devices which contribute to the bonding of community. The facilitation skill required here is the framing of problems, and the attendant management of intellectual conflict through assessment and weaving. Steering away from intellectual conflict is ultimately dishonest.

4. Facilitators who simply transport the lecture hall to the small screen violate a learning design principle which states that interventions crafted within the affordances of the technology have a better chance of delivering positive student outcomes than those which ignore the affordances and limitations of the situation.

5. The instructor / facilitator's art is keeping the intellectual tension or course pressure just right -- not too high or too low. Excessive pressures cause students to leave the course; low tension delivers disinterest. Theoretically speaking, we may choose to call this skill finding and operating in the students' ZPD or, as Basseches phrases it, "maintaining the optimal mismatch" (1984, p. 304).

6. The power of the instructor to control totally currents of thought among adult learners has passed. What has not passed is the need for intellectual rigor. The CMC facilitator's toolkit must accommodate a new way of achieving rigor and course objectives with students in the face of what can be the chaos of ideas. Reflection and sharing to discriminate the problems and solutions must be a personal style.

III. Directions for Future Research: Intimations and Issues

A. Facilitator as Scaffold Builder.

I would propose a study which discriminates more closely the outcomes for the student of facilitator styles such as what we termed the narrative and episodic facilitation styles. Such a study would be informed first and foremost by Vygotskian and later socio-cultural learning theory. In addition to a finer reading of Bailey (1999), such a study would also be informed by: the works of Burge (1994), who identified two key facilitator behaviours which were valued by students: discussion management and fast, relevant technical help; Sleightholm Cairns (1994), creating a safe, intimate community for learning; Chandler-Critchlow (1994) who has demonstrated that cognitive performance is related to the intervention role of the facilitator; Tagg and Dickenson (1995) who identified facilitation characteristics which encouraged participation where it might not otherwise occur; Winkelmans (1988), who, among other things, mapped the effects of instructor contributions on subsequent conference notes, and Norris (1998) who examined the use of electronically-based apprenticeships to facilitate the transfer of knowledge.
from experts to students. I believe that this study would have theoretical implications for the application of socio-cultural theory to adult education generally and the design and facilitation of on-line courses specifically.

B. Explorations of the Imitation of Modelling Adult Learning Strategy

Very soon after beginning my assessment of writing-style factors on the dialogical messages of Erin and four students, I intuited that class members were responding to the modelling she was providing through her writing. A number of small quantitative assessments were performed, the results of some of which are found in Appendix B. The notion that modelling plays a significant role in learning emerges strongly in Vygotskian socio-culturally-based theory (see especially Lave & Wenger, 1991). The project was suspended in order to proceed with the qualitative assessment of the messages under grounded theory and, unfortunately, never quantitatively pursued again.

But, imitation as learning strategy presented itself in the qualitative material. On February 21, Bob introduced the presentation on his research project thus:

Hello Everybody, welcome to my presentation. Please sit back, relax, and do not adjust your modem. We'll be traveling at a speed of 2400 baud. Our flight plan today is as follows: 1) Takeoff - Lessons learned to date; 2) Cruising - Problems; 3) Project Proposal; 4) Release Letter; 5) Interview Extract; 6) Field Notes Extract; 7) Landing. Well fasten your seat belts and enjoy the free bar service!

On March 8, Carl introduced the presentation on his research project as follows:

Could you all please take your seats. Excuse me sir, that seat belongs to this women...yes... no I'm sorry there are no refunds. Shhhh! I think it's starting. . . . Does everyone have their popcorn? Soft drinks? Great. Today I am going to perform a little something that I've been working on. This is my audition piece. If I get the lead role I will be performing in May, sponsored by Canada Post. The main critic at the show will be a Erin S. (pretty tough I've heard). So it is my hope that you can help me tighten my performance so that I can amaze, enlighten and mystify. So cut up, cut through, ask questions, give guidance, but most of all fine tune. AND no applauding please until the show is over.

At first glance, these two introductions -- unique among the fifteen -- share simply a kind of whimsy interesting enough to attract readers to the more serious purposes which follow immediately after. A second consideration reveals that both also approach the business of
introduction through the development of a sustained metaphor, in Bob's case enjoying an airplane flight and in Carl's case, enjoying a movie. Is it fair to suggest that Carl imitated Bob's model? If he did, it was a perfectly useful adaptation of Bob's metaphor to his own personal metaphor related to drama and the theatre -- a neat solution to a creative problem.

Burnaby (Personal Communication, 1999) notes the need: "We've never been able to examine the relationship between modelling and adoption -- whether it takes more modelling from the professor for them [students] to adopt, or do they adopt instantly." I believe that coherent exploration of the imitation / modelling dynamic could be undertaken including both a quantitative and qualitative study of stylistic features demonstrated by the instructor's text compared with the absence, presence or accumulation of those same features over time. See MacCallum (1953) and Davie (1993).

C. Stylistic Analysis of Discourse Features

While stylometry has been applied to problems of author identification, stylometry does not appear to have been applied to understanding the processes of learning. A study of natural language indicators as markers of changed cognitive understanding began my work, and some evidences of that work are found in Appendix B. Even though this was an exploratory study, I conclude that these indicators do provide a basis for further study especially in the area vocabulary acquisition as imitation of modelling.

D. CMC as an Educational Medium in Relation to the Cognitive-Scientific Study of Writing to Thinking.

While a thorough review of writing as an affordance of cognitive development is beyond the scope of this paper, both Davie (1989) and Kaye (1989) point out that the writing is the *sine qua non* of all scholarly discourse. Perkins and Newman (1996, p.167) emphasize the virtue of practice:

E-discourse seems not only to have made proficient writers more prolific, but also to have improved the writing skills of those who would be less likely to write as well if they did not participate in e-discourse. Elmer-Dewitt (1994, p. 53) the "cyberculture" writer for Time Magazine, at least grudgingly recognizes this when he quoted the computer reporter, Brock Meeks who stated that, "there are a bunch of hacker kids out there who can string a sentence together better than their blue-blooded peers simply because they log on all the time and write, write, write"
The CMC medium becomes a natural locus for writing and thinking studies where the power of the computer can be brought not only to the creation of a database but to the analysis. The work of Howard (1990) and Gagne (1985) would inform such an undertaking.

E. Computer-Mediated Discourse in Instruction: A Unique Sub-Genre?

The nature of on-line discourse in general appears to differ from the shape of on-line discourse within an educational setting. The latter differs from the former in that it takes on the additional characteristic of being driven by obligation when used in a course -- obligation, first, to say something, say it in a non-hurtful way, and to an obligation to deliver genuine, thoughtful feedback. It may be this aspect of being bound by rules to behave in a certain way that differentiates electronic educational discourse from other electronic genre. The work of Graddol (1989), Irizarry (1981) Lakoff, (1990) Tannen (1984, 1989) and Yates (1993), would inform that discussion.

F. Group Dynamics in a Face-to-Face Setting vs. CMC Setting

With respect to the dynamic interrelationship of groups with individuals, I noted in Chapter 2 that the Canadian Armed Forces limits the size of some of its face-to-face working groups to six individuals or a “syndicate” as that group size is known. Under these circumstances, it is believed that the tension between the individual will and group pressure on the individual to conform exists most poignantly thus optimizing the probability of the group’s making sound decisions (P.J. Taggart, personal communication, 1986). I believe that in the CMC situation such a balance also exists, except that the set point will differ from the face-to-face condition, probably toward the groups of ten or twelve. I suggest the higher numbers based of the observation that under the conditions of CMC more opportunity occurs to have “air time” by a greater number of participants around an issue. Recalling the example of Ruberg, Taylor& Moore (1996), some participants who might otherwise feel constrained in a face-to-face situation feel free to participate under the relative privacy of CMC. Davie, on the other hand, hypothesizes that optimum group size is a function of group’s task (L. E Davie, personal communication, November 25, 1999). Stated as a null hypothesis: there is no difference in the dynamic tension between an individual’s personal will to perform and the pressure exerted by a group on an individual to conform between learning in a face-to-face setting and the CMC condition. In addition to the work of Boettecher (1998, 1999) such a study would also be informed by Brundage and MacKeracher (1980) and Getzels and Guba (1957), both of which works address
extensions to psychological issues of human bi-dimensionality which is at the core of such a study.

IV. Hindsight: Reflection on the Thesis Journey

In a very real way, this thesis process has been the formation of what Meyer and Woodruff (1996) distinguish as the working out of personal explanations as opposed to formal explanations. This was intended to be an hypothesis generating thesis as opposed to a hypothesis demonstration and so it has been -- too much so, for which I accept full responsibility.

At my request, my committee granted me a “hunting license” so that I might openly explore the phenomenon of adult learning in the CMC medium. As a result, the settling on a dedicated question happened quite late in the process. I began with a content analysis which soon became a stylometric analysis. I then set that work aside and began a qualitative study using grounded research. Perhaps predictably, the grounded theory approach yielded results which were widely divergent from anything that I had begun to identify with content analysis or stylometry. By that point I had I moved so far away from my the original interest that I was left with two unique research directions and paradigms -- a hybrid of content analysis along with stylometry and grounded theory. I determined to pursue the qualitative work.

In reflection, I should have begun with the grounded theory, then proceeded to pursue content analysis or stylistic analysis if questions arising from either showed promise. Leaving aside the quantitative work, I could have done the whole thesis relying on the messages themselves as my data. The interviews, while the material was used and quite rich, were simply superfluous, as were the thinking-aloud transcripts. In the end, the interview material provided perspective on the motives for on-line behaviours, and for that reason they were useful.

I simply had too much data, and I tried, unsuccessfully, to deal with it all. However, the exploration of the various facets of the phenomenon was what I indeed wanted to do, what my supervisors let me do and the process from that perspective has been rewarding.

V. Experimental Considerations

Traditional notions of internal validity, external validity, reliability, generalizability and objectivity which allow us to evaluate quantitative research are replaced in qualitative research by the notions of credibility, transferability dependability, and confirmability (Lincoln & Guba, Ch. 11, 1985). Trustworthiness in qualitative research is thus a more elusive notion which cannot be demonstrated with the same mathematical rigor as quantitative research. Douglass and
Moustakas (1985, p.53) note: “It [heuristic research] does not aim to produce experts who learn the rules and mechanics of science; rather it guides human beings in the process of asking questions about phenomena that disturb and challenge our own existence.”

The heuristic research paradigm has its own process which must be honoured and has been outlined in Chapter 3. Moustakas asks: “Does the ultimate depiction of the experience derive from one’s own rigorous, exhaustive self-searching and from the explications of others present comprehensively, vividly, and accurately the meanings and essences of the experience” (1990, p. 32)?

Over the now seven years of the inquiry, I have experienced all of the heuristic design phases outlined by Moustakas (1990). While I have not returned the findings to all the participants, which, at this stage may be more than I can do to effect some closure on the work, in my own mind, I can say without equivocation that I believe I have honoured that process.

The keys to generalizability / transferability of findings are the factors in the facilitation including the behaviour of the facilitator and the responsiveness of the students. For instance, findings related to the development of community vary with the control of the facilitator and local discourse rules. I believe that the findings here are generalizable to other courses mounted on the PARTICipate software, or conferencing systems where all the public messages that enter the message stream are available to, and must be dealt with by all the participants in the course. Software filters programmed to exclude messages would make the conditions for learning significantly different than those in the target site. Increasingly the availability of graphics and sound on the World Wide Web increase the bandwidth of communication and remove the learning conditions away from my experimental situation. What is generalizable to any learning situation, I believe, is the need for dramatic engagement in the dialectic.

VI. Conclusion

On July 9, 1999, two messages appeared in the INTERNET FOR LEARNING conference of the OISE/UT conferencing system from Professor Les McLean. In the first he announces that two of his courses which have been running successfully on-line for ten years are to end after the 1999 fall offering. In the second, he tips his hat to Wegerif (1998) and sometime-colleague Linda Harasim (1986 and following) then adds these words:

More stress might be put on the instructor’s role in helping create a community. It may be the most important role the instructor has, since if successful the
participants often run away with the course while the instructor can watch and cheer, and occasionally attempt a gentle steer.

Erin herself articulated much the same feeling on March 7, 1993 when, in her conference entitled SUMMARY, she wrote: “Everybody: There is no way that I could teach you from where I sit what we all are teaching each other here.” That, of course, is the biggest news of all!
VII. Creative Synthesis

The Weaver

Taciturn, the weaver sits and spins:
The threaded spindle, formed to snug and bind
The richly coloured weft and woof, now zings --
A rising, falling cadence in his mind.

Scion of his trade by craft and blood,
Ten thousands souls inform these hands in flight;
Behind the racing cursor flows in flood
Whole cloth: his tapestry -- unique delight!

Of loom and shuttle, warp and weft I sing:
Of complex textures, patterned and profound.
Of human yearnings stirring deep within,
Giving form to figure, frame and ground.

So, thus the selvage of my little song:
Our burden’s to become, yet still belong.

DAR:-)>
References


### Appendix A: On-Line Course Participation in Conferences

**Table AA-1**

*Qualitative Research: Principles and Practicum -- On-Line Course Participation in Conferences between January and April 1993 by Student Groups and Instructors*

<table>
<thead>
<tr>
<th>Conferences</th>
<th>Student Messages</th>
<th>Instructor Messages</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Female</td>
<td>Male</td>
</tr>
<tr>
<td>01 QUALITATIVE</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>02 INTROS</td>
<td>17</td>
<td>21</td>
</tr>
<tr>
<td>03 LIBRARY</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>04 HELP</td>
<td>33</td>
<td>39</td>
</tr>
<tr>
<td>05 CLASS</td>
<td>50</td>
<td>40</td>
</tr>
<tr>
<td>06 COFFEE</td>
<td>58</td>
<td>66</td>
</tr>
<tr>
<td>07 SUMMARY</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>08 HOUSEKEEPING</td>
<td>19</td>
<td>19</td>
</tr>
<tr>
<td>09 PARADIGM</td>
<td>33</td>
<td>55</td>
</tr>
<tr>
<td>10 TAPING</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>11 INTERVIEW</td>
<td>48</td>
<td>42</td>
</tr>
<tr>
<td>12 TERRIFIC</td>
<td>51</td>
<td>33</td>
</tr>
<tr>
<td>13 MARVELLOUS</td>
<td>14</td>
<td>28</td>
</tr>
<tr>
<td>14 FANTASTIC</td>
<td>74</td>
<td>27</td>
</tr>
<tr>
<td>15 SUPERB</td>
<td>19</td>
<td>35</td>
</tr>
<tr>
<td>16 ETHICS</td>
<td>5</td>
<td>0</td>
</tr>
<tr>
<td>17 ACCESS</td>
<td>16</td>
<td>16</td>
</tr>
<tr>
<td>18 KATARINA</td>
<td>15</td>
<td>5</td>
</tr>
<tr>
<td>19 BETH</td>
<td>29</td>
<td>14</td>
</tr>
<tr>
<td>20 EZRA</td>
<td>6</td>
<td>20</td>
</tr>
<tr>
<td>21 CODING</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>22 ETTA</td>
<td>18</td>
<td>10</td>
</tr>
<tr>
<td>23 DICK</td>
<td>10</td>
<td>25</td>
</tr>
<tr>
<td>24 TAG QUEST</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>25 PAUL</td>
<td>5</td>
<td>15</td>
</tr>
<tr>
<td>26 BOB</td>
<td>9</td>
<td>19</td>
</tr>
<tr>
<td>27 JUNK MAIL</td>
<td>3</td>
<td>5</td>
</tr>
<tr>
<td>28 MONA</td>
<td>30</td>
<td>8</td>
</tr>
<tr>
<td>29 ALMA</td>
<td>19</td>
<td>9</td>
</tr>
<tr>
<td>30 TRUST</td>
<td>7</td>
<td>6</td>
</tr>
<tr>
<td>31 MORTIMER</td>
<td>7</td>
<td>7</td>
</tr>
<tr>
<td>32 CARL</td>
<td>10</td>
<td>31</td>
</tr>
<tr>
<td>33 FRAN</td>
<td>16</td>
<td>5</td>
</tr>
<tr>
<td>34 CARLA</td>
<td>8</td>
<td>8</td>
</tr>
<tr>
<td>35 ALAN</td>
<td>8</td>
<td>15</td>
</tr>
<tr>
<td>36 HARV</td>
<td>8</td>
<td>20</td>
</tr>
<tr>
<td>37 WRITING</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>38 BEV</td>
<td>15</td>
<td>7</td>
</tr>
<tr>
<td>39 JACK</td>
<td>7</td>
<td>20</td>
</tr>
<tr>
<td>40 IVAN</td>
<td>4</td>
<td>7</td>
</tr>
</tbody>
</table>

*N=15; conferences are sequenced in the order in which they were opened by Erin.*


168
Appendix B
Quantitative Study Elements -- Features of Text

A. Basic Textual Characteristics of Dialogical Messages

Table AB-1 sets out the basic textual characteristics of the messages for each individual member of our representative group -- Carl, Harv, Mona, Paul and Erin the instructor. The counts include every message of the individual’s dialogical corpus for the entire course. Let me remind the reader that the concept of ‘token’ implies every word within a corpus; the totality of tokens represents all the words counted in the work. The concept of ‘type’ refers to an item of vocabulary which may occur in the corpus many times. Tokens and types will figure largely in many of the statistics which will follow in subsequent sections.

Because student output across the chronological quarters of the course was very uneven, I decided to use the entire dialogical corpus of each individual and quarter it sequentially thus providing equal sizes of samples for each individual which approached the target of 1000 words per sample. Thus, output per chronological quarter cannot be assessed from these numbers.

In pursuit of the imitation hypothesis, selected measures were phase-shifted to represent the values of Erin’s first quarter with students’ second quarter to assess if there were grounds to conclude that some imitation had taken place. The evidence was only very slightly beyond chance.

TABLE AB-1
Basic Textual Characteristics of Dialogical Messages in the Representative Group

<table>
<thead>
<tr>
<th>Participant</th>
<th>Messages</th>
<th>Tokens</th>
<th>Types</th>
<th>Sentences</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carl</td>
<td>36</td>
<td>4581</td>
<td>1298</td>
<td>343</td>
</tr>
<tr>
<td>Harv</td>
<td>65</td>
<td>11760</td>
<td>2150</td>
<td>770</td>
</tr>
<tr>
<td>Mona</td>
<td>60</td>
<td>9615</td>
<td>1715</td>
<td>635</td>
</tr>
<tr>
<td>Paul</td>
<td>52</td>
<td>4693</td>
<td>1206</td>
<td>275</td>
</tr>
<tr>
<td>Erin</td>
<td>163</td>
<td>33983</td>
<td>3609</td>
<td>1824</td>
</tr>
</tbody>
</table>
Drawn in part from Table AB-1, Figure AB-1 displays the total number of dialogical messages in each of the individual corpora of the representative group -- four students and Erin the instructor -- quartered sequentially by volume. A caution here is in order: message counts in and of themselves provide one kind of evidence for course activity. When combined with word counts (see Figure AB-3 and Figure AB-4), the texture of this activity is accentuated.

Erin is the outlier at 163 dialogical messages, while the students range between 65 messages for Harv, and 36 for Carl. Over time, Erin’s output decreases to about one-third of the output of the first quarter. For the sake of clarity, Figure AB-2 displays the information of the students alone. The general tendency of the student representatives is to write slightly fewer messages across the quarters. Mona and Harv cluster together over the term of the course. Paul writes noticeably fewer messages in Q2 only to increase that volume substantially in Q3, and fall off again in Q4. Carl begins with the lowest quarterly output and diminishes from there right across Q3. His rise in Q4 is only to his opening value.

Figure AB-4 displays the mean number of words per message in the individual dialogical corpora of the representative group and quartered sequentially by volume. Once again Erin’s curve rises dramatically beyond the opening cluster of which she is a part. Once again Figure AB-5 separates out the student values which remain generally clustered with Paul and Carl lowest. In general, the words per student message tend to rise, but there is a very strong tendency for this measure to vary inversely with the number of messages.

Figure AB-5 displays the mean number of words per sentence in the individual dialogical corpora of the representative group and quartered sequentially by volume. Erin’s sentences grow longer over time. In distinction, student sentences tend to grow shorter over time but with noticeable amplitude variation, especially Carl whose third quarter sentence length is 24% higher than the values at Q2. These values appear to vary independently of the other two measures in this group of individuals.

Erin’s sentences are the longest at 18.63 words while Carl’s are the shortest at 13.36 words -- a range of 5.27 words. Among the students alone, the range of means in 3.71 words with Paul being the author of the longest sentences. Harv (15.27) and Mona (15.14) fall into the centre of the cluster and vary not a lot from each other.

To summarize on an individual basis, Carl wrote progressively fewer but longer messages over the first three quarters of the course, but, this trend reversed itself in Q4 where the number
of messages rose sharply to the value in Q1 and the number of words per message decreased dramatically. Carl’s sentences too increased in length over the first three quarters then declined from his high of about 17 words per sentence in Q3 to about 11 in Q4.

Harv wrote progressively fewer messages but the decrease in the trend was quite gentle and linear: 18, 17, 16, 15, across the four quarters. His message length increased 14% gradually from 168 in Q1 to 191 in Q4. Harv’s sentence length remained stable across Q1 and Q2 but fell in dramatic linear fashion through Q3 and Q4.

Paul’s message output fell from Q1 to Q2 along with all of his colleagues in the representative group. It rose sharply in Q3 and fell equally sharply in Q4. His message length varied in absolute contradistinction, rising from Q1 to Q2, falling to Q3, and rising again to Q4. His sentences increased in length from Q1 to Q2, decreased from Q2 to Q3, and remained generally at that level in Q4.

Mona’s dialogical message production across the course was generally stable as was the length of her messages. Her words per message varied directly with her number of messages. Her sentences varied similarly in Q1 and Q2 with a slight linear rise across Q3 and Q4.

Erin wrote progressively fewer but longer dialogical messages over the duration of the course and the sentences within those messages also became steadily longer.

What is strongly evident in Carl’s values and marginally evident in Paul’s is a major instability in Q3 which will become graphically more evident as we proceed. This instability is associated in time with the on-line filing of major project reports. while Carl and Paul often presents anomalous values, no attempt has been made to associate these values with course or personal events.
Figure AB-1. Total Dialogical Messages in the individual corpora of the representative group, quartered sequentially by volume.

Figure AB-2. Total Dialogical Messages in the individual corpora of the representative student group, and quartered sequentially by volume.
Figure AB-3. Mean words per message in the individual dialogical corpora of the representative group and quartered sequentially by volume.

Figure AB-4. Mean words per student message in the individual dialogical corpora of the representative group and quartered sequentially by volume.
**Figure AB-5.** Mean words per sentence in the individual dialogical corpora of the representative group and quartered sequentially by volume.

**B. Style Characteristics of Dialogical Messages**

Figure AB-6 represents the percentage of passive sentences in the selected corpora. At 8%, Erin reflects the central tendency of this group which ranges from Mona’s 11% high to Harv’s 6% low -- a spread of 4%. Paul’s value is closest to Erin’s at 7% while Carl is two percentage points above and Harv two points below. Mona uses the most passive sentences.

The trend values reveal that Carl’s and Paul’s behaviours are erratic: Harv, Mona and Erin all reduce the number of passive sentences over the course, with a very slight rise across the third quarter -- perhaps explained by the formality surrounding the on-line projects. Carl remains the same across the first and second quarters at 10%, doubles the value across the third quarter, then falls to the lower extreme of class values across the last quarter to 4%. Paul’s values fall dramatically from 13% to 3% from the first to the second quarters. The value remains low across the third quarter, but rises across the fourth quarter to converge with Erin and Mona. Harv’s pattern reflects a general decline from 10% to 3%. Erin’s values remain almost constant across the quarters around 9%.

Figure AB-7 represents an index of descriptive power (Descriptive Index, a measure of adjective and adverb use; see RightWriter, 1990). The values of all participants are clustered very closely together (0.39-0.46) within the normal range (0.2-0.9) of this index, ever so slightly
to the terse extreme (0.1). Erin is marginally more descriptive than the students (0.46) while Carl is the least descriptive at 0.39. Harv, Mona and Paul vary not at all from each other at 0.43.

Over time Harv, Mona and Carl move together through all four quarters, rising from Q1 to Q2, falling across Q3, then rising again across Q4. By contrast, Erin, exhibits contrary motion to the students. I caution here that while the patterns are strong, the absolute values vary within only two index points. Paul, again is an outrider: his values rise from Q1 to Q2 along with his colleagues, but soar, relatively speaking, from 0.40 by 30% to 0.52 in Q3, falling to close, back in the group cluster, at 0.44. While this motion from Q2 across Q4 varies with Erin, Paul’s divergence is far more dramatic. Carl’s motion too is exaggerated in the terse direction beyond the group cluster in Q3.

Figure AB-8 represents the percentage of subjective words-- I, me, my, mine, we, us, our, ours -- in the corpora. Erin encouraged the sharing of personal experience throughout the course, hence a healthy measure of subjectivism was demonstrated. Erin herself used the fewest subjective words by far at 3.38%. The students range between Paul at 5.48% and Mona at 6.62%. Erin is consistent, and consistently lowest in the representative group across her quarterly corpora. This is generally true of Mona and Harv except that they are positioned perhaps 3% higher. Carl displays the greatest movement in amplitude starting at 7.5%. falling to 3.98%, rising slightly to 4.17% and finally rising sharply across the last quarter to almost 8%. Harv varies with this movement but less dramatically. Paul varies independently in the centre of the cluster.

The Flesch-Kincaid Readability Index (Figure AB-9) is the United States Department of Defense standard. The US government requires its use by contractors producing manuals for the armed services. The readability index is equivalent to the Overall Reading Grade Level for the document A good range is 6-10 (RightWriter, 1990, pp. 7:5-7:7) At the level of the entire corpus, Paul approaches the higher grade level extreme at 9.0 while Carl’s 6.0 is located at the lower extreme. Over time, Erin varies not at all. All of the student readability scores decline, the most noteworthy being Paul who starts at 9.9 and declines to 8.0 and Carl who starts at only 6.5 and declines to 5.2.

With the exception of Harv whose style on the four dimensions under consideration tends to be informal, Erin and the other three students all demonstrate a rather eclectic dialogical style.
The values for Mona, Harv and Erin exhibit less variation -- especially the latter two -- than Paul or Carl whose variation can be quite erratic.

* Figure AB-6. Percentage of passive sentences in the individual dialogical corpora of the representative group and quartered sequentially by volume.

* Figure AB-7. Descriptive index -- use of adjectives and adverbs -- in the individual corpora of the representative group and quartered sequentially by volume.
Figure AB-8. Percentage of subjective words in the individual dialogical corpora of the representative group and quartered sequentially by volume.

Figure AB-9. Flesch-Kincaid Readability Index in the individual dialogical corpora of the representative group and quartered sequentially by volume.

C. Vocabulory Measures

Figure AB-10 represents the Yule-Williams measure of vocabulary richness. Yule’s Characteristic (k) represents a measure of the chance that any randomly selected pair of words will be identical. The lower the chance of being paired, hence the lower the value of k, the greater the diversity. Yule’s formula is sensitive to sample size but Lancashire (1996, p. 109) suggests that Yule’s formula is more reliable when samples are small. Williams (1970) criticizes Yule’s statistic as unintuitive: k decreases as diversity increases. It is therefore a better measure of uniformity or concentration than diversity or richness. Williams proposed an amendment:
multiply k by its inverse, then the greater the diversity, the greater the number. For the sake of clarity, I have expressed vocabulary diversity in terms not of Yule’s Characteristic but of that measure which Williams suggests based on Yule. For simplicity I termed this measurement the Yule-Williams Measure of Diversity, or, shortened, Yule-Williams Diversity (YMD).

In considering Yule-Williams measure of vocabulary richness which is based in the type-token ratio, I remind the reader of Lancashire’s caveat (1996, p.109) that, “In a brief text new words occur often, but the longer the text, the more words repeat themselves. For this reason you should compare texts (or text samples) or comparable sizes.” Since a preliminary decision was made to use the entire corpus of dialogical messages of each individual rather than samples, the graphs which reflect the phenomenon in the entire corpus should be seen as representative in some respects. However, for each participant, the variation from quarter to quarter reflects truly the statistical condition across virtually equal sample sizes. The sample sizes for Carl and Paul compare closely (~1145 to 1173 respectively) with Mona at 2404 and Harv at 2944. The repeat rate, is likewise affected by sample size. The two domain-specific vocabulary measures reflect absolute values in the corpus hence are not affected by these sampling considerations.

Carl has marginally the richest vocabulary while Harv, Mona, Paul and Erin cluster together. Erin’s measure is marginally lower than the other three. Once again, this is likely a function of the sample size rather than a genuine statistical condition.

Of greater interest is the instability which occurs from Q2 to Q3, and the return to normal between Q3 and Q4. While Erin’s performance is stable across all quarters, as is Harv’s, Carl, Mona and Paul all vary strongly from the values of Q2, either positively or negatively to Q3. Carl’s vocabulary becomes noticeably richer through a rise in values of 31.8%, while Paul’s vocabulary becomes noticeably concentrated as a result of a drop in values of 18.1%. Mona’s vocabulary richness swings widely in amplitude across all quarters falling 13.2% from Q1 to Q2, rising 18.3% from Q2 to Q3 along with Carl, and falling again 10.7% to Q4. Carl’s value falls 28.4% in its return to the class cluster, while Paul’s rises 15.6% to achieve the same end.

Figure AB-11 represents the repeat rate or the number of tokens divided by the frequency of the most frequent word. Hence, the higher the repeat rate, the richer or more diverse the vocabulary. Carl enjoys the most diverse vocabulary, followed by Mona and Harv in a cluster, followed by Erin and Paul clustered at the concentrated extreme. It is worthy of note that on the two measures of vocabulary richness — the Yule-Williams Diversity (richness) measure and the
repeat rate -- Carl demonstrated undoubtedly the richest vocabulary. Harv and Mona appear in a middle cluster on both measures, followed by Paul and Erin.

Over time the general tendency is to slightly lower repeat rates in Q2, with a rise in Q3 to the highest repeat rates across the quarters. Paul moves in absolutely contrary motion to this pattern with a dramatic drop in repeat rate in Q3, to the lowest of the values clustered at Q4.

The measures for appropriation of domain-specific vocabulary and utilization of domain-specific vocabulary are of my own devising (Figure AB-12). The appropriation of domain-specific vocabulary is based on a selection of 70 field-centred (qualitative research) concepts derived from Erin’s corpus. The concept-words themselves along with their inflections represent 100% of the types in the target vocabulary. The quantity of this target vocabulary found in the corpus of the students is expressed as a percentage and represents this vocabulary’s appropriation.

On the other hand, the utilization of domain-specific vocabulary represents the total number of domain-specific tokens expressed as a percentage of the total tokens.

Student appropriation values range from Paul’s 71.4% down to Carl’s 54.3%. Domain-specific vocabulary represents only 4.3% of Erin’s total vocabulary. Paul’s 5.4% of utilization is the highest and Carl’s 3.1% the lowest. Erin’s utilization is second highest among the five, the marginal top value of the central three values. On both measures Mona and Harv range in the middle. Paul, then, is the most DSV-intense of the students while Carl is the least intense.

Figure AB-13 compares characters per word. For the sake of an historical instance, John Stewart Mill’s mean is 4.775 characters per word, while Charles Dickens’ mean is 4.312 (Kenny, 1982). The means for the small group individuals ranged from Mona’s 4.33 characters per word to Paul’s 4.62. With the exception of Paul, the general tendency was to write increasingly shorter words over time. While Paul’s initial value was the highest for the group and he varied with the group from Q1 to Q2, his trend moved in increasingly contrary motion to the group through Q3 and Q4.
Figure AB-10. Yule-Williams measure of vocabulary diversity in dialogical messages of the representative group by total individual corpus and quartered sequentially by volume.

Figure AB-11. Repeat rate in dialogical messages of the representative group by total individual corpus and quartered sequentially by volume.
Figure AB-12. Appropriation and utilization of domain-specific vocabulary in dialogical messages of the representative group by total individual corpus.

Figure AB-13. Characters per word in dialogical messages of the representative group by total individual corpus and quartered sequentially by volume.

D. Aspects of Sentence Complexity — The Use of Grammatical Connectors

By definition, simple sentences (one principal clause only) abide no relative conjunctions, only prepositions, if grammatical connectors are used at all. The presence of relative conjunctions signals the joining of two or more well-formed thought units into one sentence. Conjunctions, then become the markers for grammatical complexity — the creation of compound (at least two principal clauses), complex (at least one principal clause and one subordinate clause) and compound-complex sentences — a union of compound and complex sentence forms. Gagne (1985) indicates that grammatical complexity itself is an analogue or marker of cognitive ability. I make no attempt to explain the numbers based on that notion.
Figure AB-14, conjunctions as a percentage of tokens ranks Erin, Harv, Mona Paul and Carl, in that order. The general tendency for all but Carl was to rise from Q1 to Q2, fall to Q3, and rise again in Q4. Carl exhibited a steady, almost linear decline to close at a low which represents an outlier from the cluster.

Figure AB-15 represents the number of prepositions as a percentage of tokens. The order sees Paul as the highest, followed closely by Erin. Harv and Mona cluster in the middle, followed by Carl. The general tendency was to use fewer prepositions Q2, and increase across Q3, and fall again in Q4. This is true of all but Carl: the number of his prepositions rose in the last quarter to close just below his opening value. The tendency for the values of prepositions to vary in contrary motion to those of conjunctions can be distinguished here.

Figure AB-16 represents all connectors as a percentage of tokens. This measurement represents the simple addition of prepositions with conjunctions. The rank order is Erin, Paul Harv, Mona and Carl. The trend chart discriminates clearly that Erin is foremost in her use of connectives hence the most stylistically complex. Paul, Harv and Mona cluster below Erin, in that order, followed by Carl, the noticeable outlier in the least stylistically complex position. Carl begins low and falls even further.

Conjunction utilization is depicted in Figure AB-17 -- the total number of conjunction tokens as a percentage of total tokens. Conjunctions in each corpus were identified by being matched against a pool of the 50 most common conjunctions in contemporary English drawn from a dictionary of grammar (Opdycke, 1965). The rank order from high to low is Erin, Harv, Mona Paul and Carl -- the same pattern as in Figure AB-14 above.

In Figure AB-18 we see preposition-conjunction interactions for all five members of the representative group. Noteworthy is the fact that each of the five trend charts indicates an exchange between prepositions and conjunctions: as one connector increases the other decreases. For all members of the representative group, the number of prepositions as a percentage of tokens slightly dominates the number of conjunctions. Erin’s use of prepositions is clearly dominant, as is Mona’s and Carl’s. Paul’s use is strongly dominant and his movement especially from Q2 to Q3 emphasizes the strength of the exchange phenomenon. Harv’s style too demonstrates the exchange phenomenon where the values are close together.

Not only does Erin have the highest percentage of conjunctions in her corpus, she uses more unique conjunctions than do the students. Carl’s style moves toward the less complex,
registering the lowest on both forms of connectors: Carl uses fewer conjunctions than his colleagues and his vocabulary pool of conjunctions is the lowest.

*Figure AB-14.* Conjunctions as percentage of tokens in dialogical messages of the representative group by total individual corpus and quartered sequentially by volume.

*Figure AB-15.* Prepositions as percentage of tokens in dialogical messages of the representative group by total individual corpus and quartered sequentially by volume.
All Connectors as % Tokens

Quartered Trend in
All Connectors (P+C) as Percentage of Tokens

**Figure AB-16.** All connectors — prepositions and conjunctions — as percentage of tokens in dialogical messages of the representative group by total individual corpus and quartered sequentially by volume.

Conjunction Utilization

**Figure AB-17.** Utilization of conjunctions in dialogical messages of the representative group by total individual corpus.
Preposition / Conjunction Interaction: Erin

Preposition / Conjunction Interaction: Carl

Preposition / Conjunction Interaction: Harv

Preposition / Conjunction Interaction: Mona

Preposition / Conjunction Interaction: Paul

Figure AB-18. Trends in the interaction of prepositions and conjunctions for all five individuals in the representative group.
Appendix C

Processes and Phases of Heuristic Research

A. Concepts and Processes Characterizing the Heuristic Research Paradigm

The following elements represent a synthesis of Moustakas, 1990 pp. 15-23 and Beckstrom, 1993.

i. Self-Diálogue allows the phenomenon to speak directly to one’s own experience.

ii. Tacit Knowing starts with the observation that we can know more than we can tell. Tacit knowing is the capacity to sense unity or wholeness from an understanding of individual qualities or parts.

iii. Inverted Perspective asks the researcher to move attention from the phenomenon to the meaning of the phenomenon; the researcher is asked to become “. . . one with what one is seeking to know,” or “. . . attend from a thing to its meaning” (Beckstrom, 1993, p.55). In short, under the notion of inverted perspective the researcher is invited to identify with the focus of inquiry (see Moustakas, 1990, pp. 15-16 for an elaborated discussion of the notion).

iv. Intuition is the means through which an individual moves from observable factors to arrive at a knowledge of the whole. Intuition enables one to draw clues, sense patterns, imagine relationships and to arrive at knowledge which is unattainable through direct observation.

v. Indwelling is the process whereby the researcher seeks a deeper, more extended understanding of a quality or theme in the phenomenon. The researcher returns constantly to the internal frame of reference: one’s own experiences, perceptions, thoughts, feelings and senses in order to grasp the fullness. I personally characterize this notion as achieving a meta-level understanding of the phenomenon. The notion of achieving gestalt suggests itself here.

vi. Focusing is an inner process of staying with the experience. The researcher systematically contacts the more central meanings of an experience. It is a clearing of an inward space to attend the thoughts and feelings surrounding the question.

B. Phases of the Heuristic Research Design

i. Initial engagement. During this first phase the researcher discovers an intense interest in a theme or topic, . . . “that holds important social meanings and personal, compelling implications” (Moustakas, 1990, p. 27). It is at this phase that self-dialogue occurs. Out of this inner dialogue is fashioned a question whose terms become defined and clarified:
The question lingers within the researcher and awaits the disciplined commitment that will reveal its underlying meanings. The engagement or encountering of a question that holds personal power is a process that requires inner receptiveness, a willingness to enter fully into the theme, and to discover from within the spectrum of life experiences that which will clarify and expand knowledge of the topic and illuminate the terms of the question. (p. 27)

ii. Immersion. The researcher immerses the self -- “lives” -- intimately with the question, in private life and public vocation, growing in knowledge and understanding of it and being alert to all its possibilities: “Virtually anything connected with the question becomes raw material for immersion, for staying with, and for maintaining a sustained focus and concentration. People, places, meetings, readings and nature -- all offer possibilities for understanding the phenomenon” (p.28).

iii. Incubation. During this period the researcher distances or disengages the self from the intense activity of immersion. However, even though the researcher is no longer directly absorbed, . . . “on another level expansion of knowledge is taking place. . . . The period of incubation enables the inner tacit dimension to reach its full possibilities” (pp. 28-29).

iv. Illumination. “The illumination as such is a break-through into conscious awareness of qualities and a clustering of qualities into themes inherent in the question” (p. 29). Three constituents can be a part of the illumination experience: (a) awakening to new constituents of the experience hence adding new knowledge; (b) correction of distorted understandings; (c) disclosure of previously hidden meanings; (d) a synthesis of fragmented knowledge (pp. 29-30).

v. Explication. “The purpose of the explication phase is to fully examine what has awakened in consciousness, in order to understand its various layers of meaning” (p. 31.) For Moustakas, explication never devolves to isolating the positivistically objective (Kant’s ‘blind percepts’): “The entire process of explication requires that researchers’ attend to their own awareness, feelings, thoughts, beliefs and judgments as a prelude to the understanding that is derived from conversations and dialogues with others” (p. 31). Here is the detailed explanation of meanings and relationships among major components of the phenomenon.

vi. Creative synthesis. As would be true with most other research paradigms, the process does not end with explication. In the creative synthesis phase, “. . . the researcher is challenged to express the components and the core themes in, “. . . the form of a narrative depiction utilizing verbatim material and examples, but it may be expressed as a poem, story, drawing, painting, or
by some other creative form” (pp. 31-32). For the purposes of this dissertation, a Shakespearean sonnet will conclude Chapter 7.
Appendix D

Dramatis Personae

Alan and his family live in a rural residential community about two-hours drive from the university. Alan is in his late 40s and works as a program director at a well-known adult education training establishment. In his field, he has a rich international experience. He began the course as a computer neophyte and has overcome many technical obstacles in order to achieve. Alan is the class median score in terms of the volume of his prose. As a personality, Alan is always “out there in front,” often emotionally naked, but unashamedly so. The following comment in his introduction of himself is characteristic of his personal style: “I'm ECSTATIC about not having to beat the early morning highways in snowstorms to get to classes. Imagine me sitting in my study, with snowdrifts piled high outside, wood smoke drifting from the chimney, in a dark house except for a faint blue glow coming from the study window, and the sound of tap, plink, plunk, DAMN!”

Alma: “Oh dear, Oh dear, oh dear, my dears!! Am I ever @$#**&%@ing up here! This time I DID do it, but the backend came out first, if you'll forgive the expression so you will find it totally impossible to follow. Not to mention still having problems with the lines being a touch too long. I'll try to reform (I will NOT get discouraged) but please forebear.” In her early 50s, Alma is the empathic Earth Grandmother and course-community maker. She displays the group’s richest sense of humour. She is a community-college official working in the field of new faculty development. She is a very experienced computer user, but, as the quotation suggests, she begins this course with no CMC experience. While Alma lives in the immediate area of the institution, she is enrolled at an American university but is able to take advantage of courses offered locally. Her academic interest is in life transitions, in which field she gives public lectures.

Beth produced more prose than any other student in the course. A professor of nursing at a major Manitoba university, Beth is now in her fourth course using computer conferencing. She displays a genuinely academic perspective on the work. Her messages are generally cheerful but studious.
Bev is a social justice advocate with strong opinions. Her work as a consultant takes her away during the week to various projects which she has underway in First Nations communities or with First Nations organizations. In her late 30s, she lives in a suburban region about 35 minutes away from the institution. "The area I would like to explore is the perceived need for higher education by Aboriginal Elders. In addition, what kind of higher education do the Elders consider important, vital, etc. for their people." This disposition will bring her into direct contact with Harv whose professional interest is also the development of aboriginal people.

Bob is a training and development manager with 12 years of varied experience in the field. He is 37 years old and lives close to the university. Bob has a droll sense of humour and is among the genuinely supportive individuals in the course. He has very recently become a new father.

Carl too is the father of a 10-month old and his wife will give birth again during this course. Another of the class' humorists, Carl lives in a town which is about a two-hour commute from the university. He is a teacher who works as an instructor in English as a Second Language, labour adjustment and adult basic education. He also runs his own theatre school and company in his town. Indeed theatre and acting are at the centre of his life, and his research interests lie in those areas. This is Carl's fourth course by CMC. Carl's dialogical messages were chosen for stylometric analysis along with Erin and three other students.

Dick is a computer neophyte who also had to overcome many technical difficulties to succeed. He is a professor of nursing at a major university at a long distance from the institution. Dick is committed teacher, supportive to the colleagues in the course, and a coach on the side. He is a summarizer, and a philosopher, yet he presents himself with gentle candor. It will fall to Dick to articulate a key metaphor about the meaning of this course to himself and the other members of the class.

Etta lives in northwestern Ontario, an extreme distance from the university. Etta too is a computer novice and experienced a great deal of technical trouble connecting with the course. Her print materials arrived more than a week after the course had begun. A wife and mom, Etta is head of the Business Department in a special education high school which is undergoing the throes of mainstreaming. She is also in the process of attempting to get on the short list for a vice-principalship in her system. A reclusive, even fragile personality, she asks for, and takes help. While Etta did not participate heavily in open class discussions, she was a very active
contributor in her small group where, sensitive to the rules for participation, she assumed moral responsibility by editing and posting materials to the large group. Etta was visited during the course first on a purely social basis by Erin, and then on a research basis by me. Her general output around the time she was visited by Erin was noticeably higher. Etta will have a special place in the minds of us all for an exceptionally candid and poignant message regarding the suicide of a young native person.

At age 28, Ezra is the youngest participant in the course. Ezra is the class’ editorialist, culture critic and, often, provocateur. Ezra lives in the immediate area of the institution and in his role in educational communications has been as a professional facilitator of CMC endeavours. An English-French bilingual, he has achieved a variety of degrees in liberal arts including graduate degrees. He also works as a freelance consultant to various provincial government ministries. At times mysterious and enigmatic in his prose, he, along with Carl, produced only 61 messages, the lowest number in the class, and only 11,292 standard words placing him third from the bottom, just above Paul and Carl.

Bonjour Steve and Rick, I’ve been reading your conversation for the last couple of days (I feel like I am at a party, hearing a few words from a variety of conversations going on at the same time!). I could not help but be reminded of a discussion I once had in a course in epistemology. Socrates versus Plato. I won’t bore you with the details, but as it turns out Socrates believed in the close interaction between student and teacher. He was not "learner centered" per se but he was more attentive to student needs than other contemporaries. (Socrates was also against the idea of "publish or perish". He believed knowledge was surpassed once it was on paper. Knowledge is a dialectic, it dies when it is not in movement...). All to say that the debate on knowledge, truth and teaching/learning styles has been going on for a long time.

Fran, among her CMC colleagues, is very quiet and unassuming. She has taken one course by CMC before, and has some computer experience. She is a sales and marketing trainer for a major crown corporation: “I Just started a new job this past week and the first major project is a skills assessment of all our sales staff including their management. An interesting challenge.”

Harv also is part of the small group of participants whose prose was selected for stylistic analysis. He is a supervisor of schools for a board of education in Canada’s high Arctic, the mandate of which is to provide bilingual Inuktitut and English education. Harv is very much an
interpreter, philosopher, thinker and critic, whose concern for the quality of life of native people in the north is continually a theme of his reflections.

Ivan is an instructional designer and adult educator at a western Canadian university working in the field of distance education. He too is a commentator on the class' activities and, like Alma, a community-maker, as well as a provocateur:

As an aside: While there is much evidence to indicate relatively significant sex differences in brain structure/networking/architectures, the leaps of interpretation taken from this point on, are truly amazing (read: scary); males are characterized as linear, left-brained, and analytic while females are described as more capable of holistic, right-brained, and synthetic thinking. Where would this then take us? To the logical, yet dangerous conclusion that men are more suited to some forms of research (archaic) while women are more suited to others (progressive)? Certainly food for thought.

It was Ivan who introduced the class to a gallery of emoticons (see Appendix F) and changed dramatically the way participants expressed themselves.

In many respects, Jack is like a patient undergoing existential psychotherapy in a group setting: “While I have a fair background in quantitative methods, I am a neophyte at qualitative methods. I am looking forward to learning a lot in this course. I hope that I bring a healthy skepticism.” And a skepticism he has! As a quantitative research specialist by training and conviction, Jack is a health studies research project director at a major Canadian university working on addictions. But his commitment to the quantitative paradigm is so strong that a move to qualitative methodologies causes Jack palpable angst. Jack’s own drama is the working out of this dilemma.

Mona too is part of the small group whose prose was chosen for stylistic analysis. In her late 40s, she, like Alma, is an empathic mother-figure, but unlike Alma, not as voluminous. During the period of the course she will be completing her doctoral residency requirement. This is Mona’s second course by CMC. She is on sabbatical leave from a community college where she is an academic director, but does most of her CMC work from home which is about 200 kilometers away.

In deciding to spend more time with the people in my life who matter I asked my husband (of 27 years, 28 next month if he's lucky) to try transcribing one of interviews. Just one!!!!!!! My "MAIN MAN" typed three sentences, laughed, said: “You've got to be nuts!” and left to buy groceries. The kids are coming for lunch and he's downstairs right now making it. I don't think the family that stays together works on research together.
Paul is the fourth student whose prose was collected for stylistic analysis. Paul is very much the analyst, detached, somewhat cynical, and by his own admission, not especially relational, as can be identified in the following thinking-aloud excerpt:

And we've got Bev here in class. So this is all sort of niceness stuff which I'm ignoring a large part of now. Some people are still out finding very heavily relationship building, even at this late date. I expect that's sort of who they are generally. Because of my schedule . . . part of my focus is in reading through notes . . . to finish off the course, so I'm being very selective about what I'm reading in entirety and what I'm going to respond to . . . I could give you a rundown on who I think the relationship people are . . . I think Beth, Alma, Mona certainly. Carl to some extent. Harv on and off. Bob's in there a fair bit. The people that I think are less so . . . Dick, Ivan . . . Carl, although he's a relationship kind of guy and sort of an artsy guy . . . Jack I see as being less that way, very nice but less relationship-based in the course. Etta is the same way. Etta I don't really have a sense of anyway. She's sort of been in and out and I think she's spent a lot of time with her small group . . . I don't consider myself to be highly relationship based in the course. And I think part of my reasoning for that was just too many people to do it with. I saw this as just having to have to get through it [the course]. . . . Alan's pretty relationship oriented. I forgot about Alan. He pops in and out. He and I have had conversations often on major things, too. I like him. I like the joke 'from what I understood...MAC means never having to have to use a manual.'

Paul lives in the area of the university and works for a consulting company that specializes in social issues in the workplace. This course is his last, and simultaneously he is working at getting a thesis proposal finished and his committee formed. Paul's output of text is the lowest in the class, and his message count is second lowest.

A qualitative researcher of long standing, Erin, the instructor, is deeply involved as a teacher and researcher of English as a Second Language for adult immigrants, language issues regarding Aboriginal peoples and adult basic education. In addition to work in Japan, Erin has done work across Canada in Saskatchewan, Alberta, and Ontario, as well as across Canada's north. This was Erin's first delivery of a course through CMC.
Appendix E
Turntaking-Related Tables

Table AE-1
**Total Clumps and Total Messages by Participant in the Conferences PARADIGM\(^a\) and ACCESS\(^b\)**

<table>
<thead>
<tr>
<th>Participant</th>
<th>PARADIGM</th>
<th>ACCESS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Clumps</td>
<td>Messages</td>
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<td>6</td>
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<td>Harv</td>
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<td>Bob</td>
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<td>4</td>
</tr>
<tr>
<td>Carl</td>
<td>1</td>
<td>2</td>
</tr>
</tbody>
</table>

| N       | 60 | 116 | 34  | 46  |

\(^a\) For Messages, \(N = 116\) where Raw Messages = 118, with 2 messages removed; Student Messages, \(M = 6\); Student Clumps \(M = 4\)

\(^b\) Means not calculated.
Table AE-2
*Turntaking Represented as Ten Rounds of Clumps* \(^c\) *in the Conference PARADIGM Keying*

| 1. | Erin Paul Mona Ezra Fran Beth |
| 2. | Erin Bob Fran Alan Beth Paul Alma |
| 3. | Erin Bev Dick Carl |
| 4. | Erin Alma Etta Mona |
| 5. | Erin Bob Ezra Alan Jack Dick |
| 6. | Erin Beth Harv |
| 7. | Erin Beth Alma Jack Etta Harv Dick Harv Paul Alan Ezra Beth Fran Ivan |
| 8. | Erin Jack |
| 9. | Erin Mona |
| 10. | Erin Fran Mona Bev Ivan Harv Ivan Bev Beth Dick Jack Ezra |

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*on the 10 Clumps Posted by Erin Placed as the Initial Clump in a String of Clumps*

\(^c\)Clumps \(N=60\); total messages in clumps \(N=116\)

Table AE-3
*Turntaking Represented as Seven Rounds of Clumps* \(^d\) *in the Conference ACCESS Keying*

| 1. | Erin Fran Harv Carl |
| 2. | Erin Beth Fran Jack Etta Harv Ezra Alma Bob Beth Alma Mona Alan Ivan Jack Beth Bob |
| 3. | Erin |
| 4. | Erin Alan |
| 5. | Erin Beth Fran |
| 6. | Erin Bev Alan Ivan Harv |
| 7. | Erin Fran |

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\(^d\)Clumps \(N=34\); total messages in clumps \(N=46\)
Appendix F
Emoticons or "Smilies"

The mid-February blues call for a little humour. Have you ever wondered what some of those funny punctuation marks are that appear in the middle of messages. Here is a pictorial glossary that you may find useful. It came to me via the Problem Based Learning list out of Australia. / Ivan, message to COFFEE

:-o  Wow!
:-c  Real unhappy
:-|  Grim
:-C  Just totally unbelieving
:= |  Baboon
:-B  Drooling
:-v  Speaking
:-.  Smirk
:-V  Shout
:-|  Anger
:-w  Speak with forked tongue
:-)  Smiling
:-r  Sticking tongue out
:-(  Frowning
:-*  Oops!
:-)  Wink
:-T  Keeping a straight face
;:-)  Sardonic Incredulity
:-D  Said with a smile
%<|-I>  Drunk with laughter
:-x  Kiss kiss
:-"  Pursing lips
:-[  Pouting
:-#  My lips are sealed
:-X  A big wet kiss!
:-P  Tongue hanging out in anticipation
:-Y  A quiet aside
8-|  Eyes wide with surprise
>&<  Absolutely livid!!
&|-  Tearful
"Good Grief!" (Charlie Brown?)
"This wine tasted pretty good"
"wow, maaan"
"Omigod!!" (done after "rm -rf*" ?)
"Hmmm.
"Someone just busted my nose".
"Great! I like it!"
"Serves you right, dummy!!"

The Unofficial Smiley Dictionary

:-) Your basic smiley. This smilie is used to inflect a sarcastic or joking statement since we can't hear voice inflection over Unix.

:-) Winky smiley. User just made a flirtatious and/or sarcastic remark. More of a "don't hit me for what I just said" smiley.

:-| Frowning smiley. User did not like that last statement or is upset or depressed about something.

:-| Indifferent smiley. Better than a Frowning smilie but not quite as good as a happy smiley

:-| User just made a really biting sarcastic remark. Worse than a :-).

>:-| User just made a really devilish remark.

>;-| Winky and devil combined. A very lewd remark was just made.

Those are the basic ones...Here are some somewhat less common ones:

(- User is left handed

%(- User has been staring at a green screen for 15 hours straight

:*) User is drunk

[.] User is a robot

8-) User is wearing sunglasses

B:-) Sunglasses on head

::-) User wears normal glasses
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The horizontal (x) axis represents namings by the cited individual; the vertical (y) axis represents being named by other participants. Names on this axis are in shortened form. Square brackets around a name, e.g. [IVN], indicate a reciprocated naming event. *Cnmrs represents namings in CLASS all indicated in upper case within the matrix. Rnms represents namings in PARADIGM all indicated in upper case within the matrix. *Tnms represents the aggregated namings. Cnrm represents being named in CLASS all indicated in lower case within the matrix. *Tnrm represents being named in PARADIGM all indicated in upper case within the matrix. Tnrm represents the aggregated being named. *Ting represents the aggregated naming events.

Appendix G: Matrix of Naming Events

198
Appendix H
Annotated Transcript
Gladys, Raoul, ‘Arv, Étienne and Annie

1. BETH (in Bob 2 of 30) Feb. 23 at 20:54
   Hi Bob! I really enjoyed the ride on the concord! The free drinks were wundrefl! I had to laugh when I read your lessons learned. You were very frank, especially with respect to repeating uhhuh 3 million times. I liked your suggestion about creating a pseudonym. This is something I was thinking about doing for my project too . . .

2. CARL (in Bob 4 of 30) Feb. 24, at 17:55
   Bob, I enjoyed the flight—though the one [drink] in the air equals 3 on the ground made landing somewhat difficult. . . . Do we have to tell the participants to disguise themselves if we plan to code the interview? I might feel nervous disguising myself.

3. MONA (in Bob 10 of 30) Feb. 25 at 10:08
   I really liked your lessons learned. I, too struggled with what to call the interviewees during the taping. I ended up calling them by name because it was the second time I had met them. I think I needed to use their "real" names because I was establishing rapport. They will be changed during the transcribing. With you, I think the situation is different. You have worked with these folks closely and already have an established relationship. Using a pseudonym probably wouldn't affect the conversational flow.

4. MONA (in Bob 11 of 30) Feb. 25 at 11:59
   One other comment. If you would like me to interview you, can I call you Gladys and you can tell the rest of us how it feels to be addressed by a pseudonym!!!! Cheers, Mona

In Bob’s first message of this on-line presentation of his work-in-progress, he made it clear that the company involved in his study and his respondents would remain anonymous. Bob presented some of his interview material and simply created a pseudonym for the respondents he included at that time. Beth picks up the thread.

Carl’s response is humorous, picking up on a flight metaphor with which Bob had introduced his presentation and pointing out the absurdity in self-disguise.

This message represents the seed for the hilarity that follows. Not only does Mona assign a name, but she switches the gender.
BOB (in Bob, 14 of 30) Feb. 26 at 23:04
Mona: Thank you for reading and rereading my presentation. You're not splitting hairs about my purpose. I think you've parted the confusion for me. The task force was a planning body not an implementing team. I appreciate the offer to interview me. Don Robertson has agreed to do it March 4. I will follow your advice and use a disguised name - but Gladys? I might interview other stakeholders, such as the Vice-President . . . . This is Gladys grateful for your gifts. Bob

5. ERIN (in Bob, 16 of 30) Feb. 27, 1993 at 23:20
Hi Bob. Very nice work in your presentation. I liked your ideas about using the pseudonym right from the start. I enjoy asking participants to choose their own. Like Fran, I was wondering why some people . . . .

6. ALMA (in Bob 18 of 30) Feb. 28 at 12:02
Dear Gladys, I have read your study with great interest . . . . Good luck with what should prove to be some VERY interesting interviews, fondly, Raoul

Alma addresses Bob directly as Gladys and takes on a French, male pseudonym herself. This message represents a turning point in that the intensity around the pseudo-naming has moved up an order such that the principals are using only pseudonyms.

8. BOB (in Bob 19 of 30) Feb. 28 at 13:12
Dear Raoul, thanks for your in-depth feedback when I know you are aching to share your presentation with us this week! . . . Fondly, Gladys
P.S. We'll always have Paris (or 1/9/93 at FIET, same thing, play it again VAX)

The date refers to the class’ one and only face-to-face meeting at the institution. Reference to Paris sets up a French sub-theme with smoky romantic caché.

9. ERIN (in Bob 20 of 30) Feb. 28 at 13:48
Dear Gladys and Raoul. On the subject of getting people to reflect that . . . . but that's no reason not to try it. Cheers, Ann Landers

Erin joins the game, and takes a name -- note the authority aspect of her pseudonym.
10. ALMA (in Alma 1 of 31) Feb. 28 at 15:49

(H)okay, ChZries (Chereeze?) ere is a prZcis of le report de MOI, Raoul. Zo jusÔ rÔmembre what your mother never told . . . . It is recognized that the researcher (Raoul herself) will constitute a ÔtreatmentÔ variable, both in her role as the . . . . Zo, maintenant, chereeze, I await your tender mercy, thatÔs merciÉRaoul (kiss de hand) . . . . reactions in percentages. Quel domage!!! CÔst la vie, and all other frenchified expressions. A demain. Alm.....oops almost forgot my code name....Raoul.

11. ALMA (in Bob 21 of 30) Feb. 28 at 16:12

Dear Annie, I see your point (and thanks for making it) about the . . . . But either way, it will be interesting to see what Gladys and I uncover. Adieu for now, Raoul

12. Ezra (in Bob 22 of 30) Feb. 28 at 16:45

Bob, Thank you for your presentation. I really enjoyed it! You surely have a way with words. I especially admire the way you successfully integrate your sense of humour in this CAC. [read, CMC]

13. JACK (in Bob 23 of 30) Feb. 28 at 21:05

Re: pseudonym. My concern is to make the interviewee comfortable. You seem to have done this from the excerpt you shared. However, I have a concern about the artificiality/ distraction of using unfamiliar pseudonyms. Perhaps a compromise would be to ask the participants if they would feel more comfortable using pseudonyms. Jack

14. BOB (in Alma 2 of 31) Feb. 28 at 21:28

Raoul, Zo, mon amie we meet again! And Ezra said I had a sense of humour! Your presentation looks ready for committee (just don't upload it).
15. **BOB** (in Bob 25 of 30) Feb. 28 at 22:41
   
   Jack, Thanks for sharing your comments. . . . Re: pseudonym. I like your suggestion about asking for a comfort level about using pseudonyms. It was a non-issue in my experience, perhaps because I knew the four people.

16. **JACK** (in Alma 7 of 31) Mar. 4 at 19:08
   
   Ah, mon ami *Raoul*. Je te donne mes congratulations. Une bonne performance. Mais so much a faire!! Les research questions. I am concerned with two things here. First, to what extent . . . Oh, but I do ramble when I think I know something (mes amies say I ramble all the time). . . . La derniere question a *Raoul*. What is in the research . . . for your participants? Bonsoir, *Jack / Etienne*

17. **BETH** (in Alma 8 of 31) Mar. 5 at 0:07
   
   Alma, I really enjoyed reading your presentation and I hope your interview went well on Wednesday. Your sense of humor was great! . . . I found the ideas easy to follow. . . . Well, that's it for me. *Merci beaucoup* for sharing your work, *Raoul*. I thought it was very *magnifique!* *A bientot!*

18. **HARV** (in Alma 9 of 31) Mar. 5 at 18:11
   

19. **ALMA** (in Alma 10 of 31) Mar. 6, at 12:35
   
   Hi Bob. Thanks for your quick response and getting me started on my feedback. I was at the David Hunt panel too (Just think, we saw each other there and did not even recognize each other. If I had known, I would have yelled HI, GLADYS across the room and left you with some fancy explaining to do...Oh. missed opportunities!! Thanks for getting me started, Bob. Alraoulma.

---

Note that Bob is being straight here with Jack who thus far has not demonstrated that he wanted into the game, but rather has responded with his feedback in a straight, traditional manner.

Jack finally decides to have fun! Is it that he can have fun now that the serious business of the course is over with?

The intensity of Alma’s humour is waning, but the vestiges remain.
20. ALMA (in Alma 14 of 31) Mar. 6, at 12:43

Étienne, mon brave . . . . But thanks for making me think. *A bientot, Étienne.*
Alma

21. ALMA (in Alma 16 of 31) Mar. 6, at 12:45

Hi, Harv. I speak all languages, but French da best. Good to know that someone else does too!!! Your response to my . . . . Thanks again for your help. Cheers, Alma

ALAN (in Alma 24 of 31) Mar. 10, at 11:39

Hi Alma! Here I am . . . . I've tripped over in transcribing my interviews.

22. Well, Roual... Rouille ... Raouelle... Alma, that was fun. Lotsa work ahead. More power to you!


Alma: It took me a couple of viewings, but I now understand your signature, alRAOULma. Another victory for getting immersed in the data before understanding it.


Erin, you suggested that Alraouim should be telling her participants they were selected because they couldn't adapt well. (etc.)

25. JACK (in Alma 30 of 31) Mar. 11, at 9:40

Alan & Raoul in Alma #24. I liked the notion that there are many paradigms to consider teaching in. It is useful for me to . . . .reality. Should we be trying to change it?


Bob, . . . than like a Fran or a Mona .......or (good grief) like a RAOUL????
The mind boggles.......(actually, of all the thinfs [sic] I've lost, I miss my mind the most.....)
Cheers, Alma

The pseudo-naming phenomenon is all but over but Alma's good humour remains irrepressible.
27. **ALMA (in Harv 21 of 28) Mar. 29, at 10:14**
   Ohmygosh, Harv, they never told me you were psychic. You've got me pegged down to a "T". Celebrity carries a high price...clearly I can never go anywhere anymore without being recognized....yours anonymously [sic],
   Raoul.

   No no no, Jackraoul, not the WORST!!!
   The pseudonymic activity ends with this message -- but not the good humour.
   
   the most UNIQUE, the most INTRIGUING, the most MYSTERIOUS (am I making amends yet??? Maybe I'd better change my nom de plume to Herkimer......or Monogehela?? Now c'mon, gang. Does anybody have one of those as a middle name? Fess up!.....Alma (such a nice, non-controversial name!)
Appendix I
Dialectic In Action
Controversy Over Dealing with a Native Elder

For the sake of brevity, the messages following have been edited and material synopsized.

Message 1 written on Monday January 25 at 4:22pm was the last message Bev wrote before leaving to go north “that evening.” Harv’s message (message 2) was put up at 6:49pm that same evening. Whether or not Bev came back on-line to actually read Harv’s feedback before leaving on her journey is moot. Certainly Beth’s and Mona’s feedback comes after she was on her way. Message 5 is the first message Bev wrote on her return and after her interview of the native elder. This message she addresses to Beth, presumably having read Beth, Mona and Harv at this time.

Message 1 of 19: Jan. 25, 1993 / Bev

... I'm ready and eager to conduct the 20 min interview this week. My question to an Ojibway Elder is going to be "How could the training program be more culturally relevant?" I was retained to develop and deliver a three year training program for Native child welfare workers and one of the areas that a few people are concerned about is the extent to which the program is culturally relevant. I have developed the program in close consultation with an all-Native working group and I believe the program is as relevant as it can be within the boundaries that were predetermined by the client. . . .

The majority of people participating in the program as learners believe the program balances traditional and contemporary cultural issues very well. However, there are a few Elders who are not so sure. Although I have asked the question dozens of times in as many years, I would like to pose the question to an Elder that I do not know well who has spoken out on this matter. Such an opportunity presents itself this week. Any suggestions/thoughts before I head up this evening?

Having set out the situation and basic information, Bev invites colleagues to submit feedback. As in other invitations of this kind, the invitation may be pro forma or rhetorical — certainly a gambit used by most of her colleagues in presenting positions, whether feedback is genuinely wanted or not. Her key question involves a central notion: ‘cultural relevance.’ Bev’s definition of the notion is “balances traditional and cultural issues.”

Message 2 of 19: Jan. 25, 1993 / Harv

Bev: In regards to your question of culturally relevant, it's one I've grappled with for a long time, and still do. When you consider "loaded phrases," I think culturally relevant is one. I suppose I'm reflecting on my own experiences, but I find the "trappings" of culture (dress, tools, and other material indicators) sometimes get labeled as cultural relevance. I'm not suggesting this is where you're headed, or putting a value on it, but it would be interesting to explore issues like location of the program, and that influence of cultural relevance. (A teacher in the north once told me he could envision "school" and "inuit

205
education**, but couldn't really picture an "inuit school." I wonder about the issue of native child welfare, and its cultural relevance, as well as the issue of training for native child welfare workers. I guess I see an assumption that the program is relevant, and the training is being questioned. Maybe I'm misinterpreting, or off base?

In response to Bev's request for feedback, Harv identifies and challenges her assumption that she and her native elder respondent share the same meaning of the notion 'cultural relevance.'

Harv responds with oblique, cautionary, negative feedback which suggests that (a) there is much ambiguity around the notion of cultural relevance, (b) she might be pursuing a non-meaningful understanding of that notion and (c) she may be begging the question by assuming that the program she has devised is indeed culturally relevant -- which is what her interview is intended to find out -- and all that is at issue with the elders is the training. He softens his remarks through a final genuine (non-rhetorical) question which is an invitation to dialogue on the issues.

In message 3, Beth's feedback is positive in that she is generally supportive as evidenced by her desire to keep the dialogue going. Beth's question "What cultural issues do you think need to be included in the training program?" is more neutral than negative and would represent, if answered, an extension of Bev's original definition of cultural relevance.

In message 4, Mona, like Harv, attacks the issue of the interpretation of the notion of cultural relevance by the elder. Mona suggests that Bev ask a question which opens up the possibility that the elder will have new material to share with her which might not have been shared by a question closed around a notion of cultural relevance. In her characteristic way, Mona is quite apologetic at having to poke a hole or suggest a flaw in Bev's approach. Mona is generally upset by controversy.

In message 5 to Beth, written after her return from the interview, Bev maintains that from her point of view, the program is genuinely culturally relevant. Up to this point in the dialogue she really has not addressed or integrated the negative feedback of Harv or Mona. It is perhaps significant that she addresses this message -- her first after returning from her interview -- to Beth, whose feedback in message 3 can only extend the notion of relevance, not imperil it as Harv's or Mona's submissions do.

However, in message 6 written immediately subsequent to message # 5 to Beth, Bev begins to question her assumption that she and the elder share a core of meanings, when some evidence suggests to her that the elder does not understand all of her words. Further, she recognizes that she cannot grasp all of the affect which her native speaker conveys, since translation fails to account for much of it. At this point we see the first suggestion from Bev that she recognizes that the translation system is not adequate to her need.

Message 7 of 19: Jan. 31 / Bev -- Report on her 20-minute interview

My 20 minute interview was incredibly revealing. I rephrased my question from "How could the training program be more culturally relevant" to "How can we bring more culture in to the training program?" I interviewed an Ojibway Elder whom I did not know well but with whom I was acquainted. I
realized prior to the interview that 'culturally relevant' may not be understood due to language barriers. However, I went ahead with this question initially because I have used the term 'cultural relevance' in numerous settings in which this Elder has been in attendance. My initial question produced silence, a head shake, a smile, then a verbal response "I don't know". I then proceeded to ask "Do you have concerns about the cultural aspects/components of the program?" When the Elder heard the word "concerns" he shook his head no and stated "no", "Oh no" and smiled. I noted that he really didn't hear beyond the word "concern". A similar response was evoked when I inserted the word "problem". My final question "How can we bring more culture into the program?" evoked a response that I explored in greater detail with the Elder. However, the response consisted of very few but specific words.

When I wrote up the interview I realized that very few words had been spoken by the Elder; specific words of mine had triggered a response however, I was left with a sense that the Elder did not understand the context within which I asked my question due to language difficulties. I often suspect that some of the people with whom I work closely are not as proficient in English as they would like to be and that they would like me to think they are (am I making sense) - of equal importance is my own need for them to be more proficient than they are! It is so very easy for me to assume that I have interpreted correctly the verbal responses that I get but I am left wondering (as a result of this interview) if my interpretations are correct? fair? Perhaps I attribute the meanings that I want the responses to have rather than what is really intended. I have much food for thought. Any other thoughts out there?

In her report, Bev synoptically presents a more detailed description of her process with the Ojibway-speaking elder. Bev recognized, she says, before the interview, through personal insight or integrated feedback, that the concept of cultural relevance is not shared between her respondent and herself. She chooses to proceed nevertheless with a variant of her original question which implies the same conceptual substance. She reiterates the point that she made in her message to Mona that the elder misunderstood her. She expresses a frustration with the circumstances when she admits that she believes some of her native-language speaking respondents do not understand English and she has a need that they would be able to speak it. She recognizes her inability to glean accurately what native-language speakers say to her, and that she is capable of misrepresenting their messages by hearing what she wants to hear rather than what is intended for her by a native-language speaker.

Indirectly she has addressed the concerns that Harv articulated in message 2, but she has not addressed Harv or the issues directly. To this point in the course of the dialogue, she has conceded that her assumption of a shared core of meaning between herself and her native-language-speaking respondent, especially around notions of culture, is seriously flawed by a lack of mutual understandings around key concepts and her own projection. Her original position (thesis) assuming a high degree of shared meaning between her and her respondent is changing toward the antithetical position being articulated in the feedback and the evidence -- the assumption that meanings are not always shared.
Message 8 of 19: Feb. 1, 1993 / Harv

Bev: From your description of the interview, and the comments of the "elder" (what is your, or the tribe's definition of an elder?), I wonder what this person thought you meant, or what meaning the term "cultural relevance" had for him? It's a pretty complex term. Maybe the "I don't know" was the answer. Even if you and your participant/elder had the same ideas about cultural relevance, or you both could understand each other's ideas of the term, then maybe the participant just didn't have anything to offer at the interview. Is the culture of Ojibway a difficult term to define? (I find that for "my culture" or "Inuit culture" it is a pretty fluid definition, and certainly open to values and individual differences and interpretations.) As a suggestion, it would be interesting for you to write down some of the characteristics of a culturally relevant Ojibway training program, and see what characteristics are materialistic, and what ones are spiritual, or attitudinal. It's interesting about your thoughts on language. I wonder if the elder had similar thoughts. That might describe something about Ojibway culture. I think your assumption about your needs would be interesting in terms of the elder's needs.

I've had experiences with Inuktitut where I've been at meetings, and asked a question to unilingual inuit, and had a very long answer, in Inuktitut. (My Inuktitut is pretty poor-I know enough to guess context, but forget thought processes, etc.) When the translators gives me their version, they would say, "he agrees." It's like all the reasons and thoughts as to why he agrees either weren't important, too long to restate, or just that the translator felt I wanted the "reader's digest" version. It's a real inadequacy on my part not to speak fluent inuktitut. Do you ever feel the same?

Harv is one of a very few virtuoso message maker in this class -- everyone reads and seriously attends Harv when he writes. Colleagues also know that he has long experience as an educator/administrator with the Inuit people and writes thoughtfully about these interracial interactions. His encounter with Bev in this thread is that of an insider -- a peer in the business -- and thus not to be taken lightly.

He feels certain that his earlier message -- # 2 -- identified a serious flaw in her approach which she has now admitted -- perhaps because of his negative feedback -- piece by piece. Harv's major agenda in this message appears to be to offer a corrective to Bev, in a very therapeutic and teacherly way, which will allow her to tease meanings out of the interaction with the elder and thus correct or enlarge her notion of this communication process. A key sentence closes the first paragraph where he reiterates that the elder too has needs. However, there is only some forgiveness here.

Certainly the language is quasi-imperative enough to put Bev into a pupil-teacher relationship with Harv. Perhaps it is this latter imbalance that compels Harv to write a shorter, softer last paragraph wherein he attempts to recover a peer relationship by suggesting that she and he share an inadequacy: their inability to speak the tongue of the native communities they serve. His final question of the piece, however rhetorical it may be, appears destined to serve the same purpose. 

208
Harv: I enjoyed your feedback re my interview with the Elder. Your question about definition is one I am often asked. There is no hard fast definition of an Elder amongst First Nation populations; indeed, it varies often drastically from community to community. For example, most non-Natives tend to believe that any old Native is an Elder e.g. white-haired, bent, and crinkled. At the other extreme are those Natives who believe that an infant may be an Elder if the Creator so desires it: it is up to the parents, the community's spiritual leaders, and the community as a whole to look for signs from the moment of birth. I have met Elders in their thirties and in their seventies. The one commonality they all share is that they are greatly respected by their people. Both young and old can carry pipes, be keepers of water drums, and carry an eagle feather - any or all of which are bestowed with honour. I've come to believe that the ancient principle of 'respect all that is living' (a fundamental law among First Nations) within and between First Nations) is in part intended to prevent anyone from inadvertently offending a 'would-be' 'might-be' Elder. I say this with humor but also with deep respect!

In her response to Harv in message 9, Bev answers directly only Harv's secondary (throw-away) question about the definition of an elder in the Ojibway context. Indeed, this very carefully articulated answer consumes most of her message but is not central to the issues that Harv and Mona have raised. This lack of capitulation suggests that Bev is having a psychological problem accommodating the original challenge, but since she must respond to Harv, she does so with safe, strong content which she might feel reinstates her professionalism, and likely will not be itself challenged.

She offers an explanation for the phenomenon of the very short utterance of a translator to a very long speech which serves to confirm their own shared experience:

"I too have wondered how a very long dialogue in Ojibway can be translated down to a few words in English. I joke about it when it happens e.g. 'So that's how you say "no" in Ojibway.' but I also an cognizant that my translators don't feel the context is important for me. It is of course! I understand bits and pieces of Ojibway and OjibCree and I am taking Ojibway lessons - but that's another story."

With this injection of humour near the end of her message she signals that she has weathered well the negative feedback storm, and there is no apparent animosity for attacking her position. Her assertion that she is taking Ojibway lessons in some small ways confirms the latter proposition and confirms that she is doggedly pursuing her learning in an area in which she knows she needs more knowledge.

Alan adds a new voice to this thread. In message 10 we find out that he, too, has had experience in the area of inter-cultural communications. He provides another perspective on how Bev might have approached the elder to get him to talk about her concerns: Alan really suggests the respondent be the centre of attention as opposed to the issue being the centre of attention.
This perspective is not so different from Harv's except that it focuses on the process of the interview using a very simple question and does not venture into the complexity of navigating the issue of understandings only marginally shared. His advice, even if it comes after the fact of Bev's interview, is non-threatening and only mildly imperative, being gently poetic in its metaphor: "I wonder if you had simply asked him to talk about the training program, or an even wider context, and then tried to travel down HIS thought-road with little trips down side-roads when and if you could prompt him to join you on them, whether he would have responded more fully?"

Bev concedes the point totally -- to Alan, not Harv -- in message 11 and indicates that she has learned from the experience and, presumably, from the collegial feedback. At this point in the dialectic process Bev has moved to an antithetical position.

A reaction from Alma in message 12 represents a confirmation of personal learning. By analogy with Bev's situation, Alma was able to make sense out of an experience with her college vice-president where a very similar kind of dialogical event occurred. While this feedback is largely neutral, it can be considered positive in the sense that it also confirms the learning value being derived by exploring the incident.


Harv and Bev: I was very interested in your discussions around language usage and the difficulties that it can create in this and other contexts. It is significant to note that this problem of "fixing the variables" in the communication process is a universal one anywhere humans are attempting to meaningfully communicate. There can be as much or as many barriers to effective and clear communication between generations within the same cultural group as there are between cultural groups. Fixing the variable, the terms and what they mean is often a difficult and tedious task at first but is worth it in the long run. It takes a certain type of communication tenacity to constantly be insisting on clarifying terms, words, meanings but...hey! What other choice is there? Very interesting stuff for all of us to ponder.

Ivan extracts a communications lesson from the entire incident and elevates the particular situation to a universal. His feedback is quite neutral except to confirm what Alma stated as her lesson from the incident. His slightly whimsical conclusion conveys a philosophical sense of: "We're all in this together and we've all learned something from this and maybe we'll all do it better next time, so lets all get on with it."

Message 14 of 19: Feb. 3, 1993 / Harv

Alma: I think your comments about communication difficulties within your own culture (culture is a really difficult term for me) are very appropriate. It sometimes takes a dramatic communication experience (different languages) to make you appreciate something that happens quite often (you and the Vice President Dan Quali??). I've got a real bias towards communication being a major issue, regardless of culture. I've also felt, many times, confused or unclear of a person's statements, and been uncomfortable about asking for clarification for the reason you stated (busy person) or just because I thought it was me, rather than
the information that was unclear. It always surprises me how asking is not seen as a "waste of time" (depending on how I ask), and often is something other people also wanted to do, but assumed they were also the only one who didn't understand.

By now the issue focussed by the first two messages in this thread has moved away from the specific to the universal, and whatever learnings can be taken from it have been personalized and extended. Mona was the first in message 14 and now Harv, who clearly is sensitive to certain kinds of communications issues, glosses on Alma’s concerns about unshared meanings. It might be safe to say that a new equilibrium or closure has been established in the group and for Bev around this issue. However, Harv indicates that he is, rather obsessively, not yet quite comfortable letting the issue go.

But the coda to the main theme is written by Ezra in message 15:

Bev: I don't know if this is relevant, but reading your comment reminded me of an article I once read in an anthropology class. It was called "The 13 meanings of silence". The article was written by an anthropologist who discovered that silence conveyed much meaning (and different kinds of meanings!) which he initially had not perceived. Could it be that your elder was telling you something through his silence?

Ezra is also a virtuoso. While he contributes less than others, his words are always refreshing and read by everybody. Here Ezra cites literature in order to emphasize or extend one aspect of the results of Bev’s interview -- respondent silence. While the actual meanings of silence are not set out, yet the possibility for insight based on interpreting silence is immediately grasped by all the readers. Ezra writes for the group; his insight is striking. This feedback is mildly negative and corrective meant to inform, not dismantle. Note Ezra’s use of rhetorical devices: his self-effacing opening question must clearly be answered in the affirmative -- certainly what is to follow is relevant, Ezra knows it, and so we read on; Similarly, his rhetorical final question must be answered in the affirmative. All that Bev, or any of us, needs to do is figure out what the Elder’s silence meant! Intuition suggests that it implied negative feedback. (By Ezra’s own confession, the design of his messages including the final question is a stock response pattern as noted earlier.)

In message 16 Beth’s shares information relating to the technique of using translation / back-translation to overcome the problems occasioned by lack of shared understandings. This gloss on the issue will be acknowledged and personalized by Bev in a good-natured response in message 18. This message represents the last of the substantive interchange.

Message 18 of 19: Feb. 6, 1993 / Bev

Good Morning Beth! Is the air filled with the earliest aromas of spring as it is here? I like your idea of using a back translator. The difficulty is that I feel like much of the meaning in what I say gets lost. When I have sensed that my meaning has been 'neutralized' I have asked that my meaning be translated too e.g. please tell them that I am speaking from my heart.' You gave me an idea and that is to consider (a future exercise) tape recording an interview in which I use a translator.
Then, have a second, independent translator listen to the original translation and provide supplementary translation - not just for meanings that get lost; in addition, but in addition for the content that gets lost as well. When I have depended on translators in my professional work, I know that much is not translated to me because it's ruled out as not significant for me by the translator. I wouldn't want to do this as a matter of practice but it would be an interesting exercise.

Bev's responses in 17 to Ezra and in 18 to Beth suggest that Bev is working out (synthesizing) a method whereby she can at least increase the amount of the meaning she shares with her First Nation clients and thus move toward a fuller communication with them. This message represents a dramatic climax to the thread as Bev's learning transformation is complete. We might also suggest that each of the seven other participants in this dialogue will have transformed in their measure from this experience.

Ezra's response to Bev in message 19 agreeing to hunt for the paper he cited in message 17 provides a fitting dénouement to the action of this thread.