

1-1-1999

On-line mentoring for first-year teachers.

Eileen M. Cyr
University of Massachusetts Amherst

Follow this and additional works at: https://scholarworks.umass.edu/dissertations_1

Recommended Citation

Cyr, Eileen M., "On-line mentoring for first-year teachers." (1999). *Doctoral Dissertations 1896 - February 2014*. 5355.

https://scholarworks.umass.edu/dissertations_1/5355

This Open Access Dissertation is brought to you for free and open access by ScholarWorks@UMass Amherst. It has been accepted for inclusion in Doctoral Dissertations 1896 - February 2014 by an authorized administrator of ScholarWorks@UMass Amherst. For more information, please contact scholarworks@library.umass.edu.

UMASS/AMHERST



312066 0264 8571 3

ON-LINE MENTORING FOR FIRST-YEAR TEACHERS

A Dissertation Presented

By

EILEEN M. CYR

Submitted to the Graduate School of the
University of Massachusetts Amherst in partial fulfillment
of the requirements for the degree of

DOCTOR OF EDUCATION

SEPTEMBER 1999

School of Education

© Copyright by Eileen M. Cyr 1999

All Rights Reserved

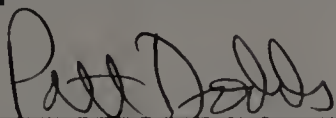
ON-LINE MENTORING FOR FIRST-YEAR TEACHERS

A Dissertation Presented

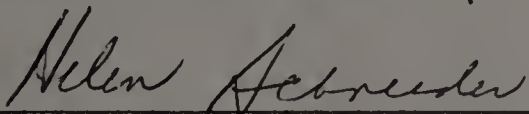
By

EILEEN M. CYR

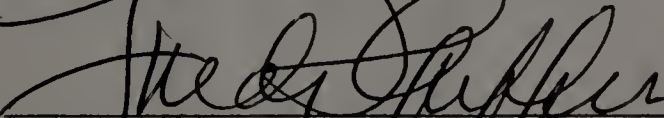
Approved as to style and content by:



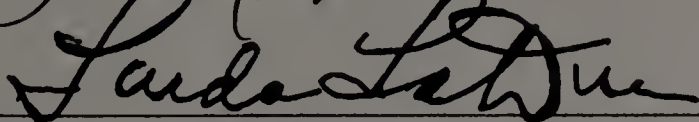
Patt Dodds, Chair



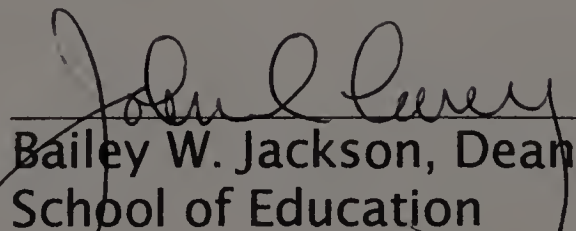
Helen Schneider, Member



Linda Griffin, Member



Linda LaDuc, Member


Bailey W. Jackson, Dean
School of Education

DEDICATION

I dedicate this work to five individuals:

To my incredible husband, Bryon Cyr. For a marriage to endure the challenges of this process is impressive, for it to continue to blossom throughout the process is nothing short of a miracle. You are my very best friend and I love and respect you more than you can ever know. Thank you for being both my anchor and my life preserver.

To our son Brenden and our daughter Maura. Until this point in time, all you have ever known is mommy as both full-time teacher and full-time student. I hope that the sacrifices which our family has made for "our" doctorate have instilled in you a quest for knowledge. Reach for the stars. I love you.

To my mother, Mary Lynch. My greatest hope in life is that my children could possibly love me as much as I love you. You are "the greatest mother in the world".

To the memory of my father, Robert R. Lynch. Dad you set the bar high for each of your seven children and all of us have risen to your challenge. I felt your support throughout the process. Your unconditional love, your belief in my potential, and a few of your curse words helped me through the process. If I could have completed the process in six years instead of ten, then you might have been here for "the big moment".

ACKNOWLEDGMENTS

From the beginning this work has been very much a team effort. I will forever be grateful to my dissertation committee for their respective expertise and mentorship throughout my course of study. Dr. Helen Schneider introduced me to the idea of conducting research about mentoring and supported me through pilot programs and early field-based research. Helen modeled the mentoring which I have come to write about in this dissertation. I am fortunate to have her as a friend. Dr. Linda Griffin's Socratic comments helped me to become a more reflective researcher. Dr. Linda LaDuc graciously joined my committee in the final edit stage. Her questions about my key findings were instrumental in helping me realize the impact of my study. Dr. George Spiro's excitement about my topic gave me a badly needed jump start. His untimely death in no way diminishes his contribution to this dissertation.

Dr. Patt Dodds served as my committee chair. Patt's wisdom, guidance and high standards helped me to view on-line mentoring through the eyes of a scholar. I am forever in her debt for her willingness to both drive and lead me.

This work would never have been initiated without the encouragement of Dr. Jan Eldridge whose faith in me allowed me to serve on the faculty of Springfield College while simultaneously pursuing my doctorate.

ABSTRACT

ON-LINE MENTORING FOR FIRST-YEAR TEACHERS

SEPTEMBER 1999

EILEEN CYR, B.S., BRIDGEWATER STATE COLLEGE

M.B.A., AMERICAN INTERNATIONAL COLLEGE

Ed.D., UNIVERSITY OF MASSACHUSETTS AMHERST

Directed by: Professor Patt Dodds

The purpose of this study was to determine how continuous on-line communication could help meet the needs of beginning teachers, foster reflection of both the mentor and the protégé, and serve as a medium for open dialogue. Two problems that this study directly addressed were (a) current mentoring programs not offering support which is systematic and ongoing; (b) the lack of training provided for mentor teachers.

The significant findings from this study can be grouped into three categories: (a) how on-line communication influenced discussions, (b) how on-line communication influenced group cohesion, and (c) how on-line communication paralleled and differed from traditional mentoring parameters.

TABLE OF CONTENTS

	Page
ACKNOWLEDGEMENTS.....	v
ABSTRACT.....	vi
CHAPTER	
I. INTRODUCTION.....	1
Statement of Problem.....	1
Lack of Systematic and Ongoing Support.....	2
Lack of Mentor Training.....	3
Definition of Terms.....	3
Protégé.....	3
Mentor.....	3
Mentoring.....	4
On-line Communication.....	4
Virtual Meetings.....	4
Discussion Database.....	5
Real Time.....	5
Reflection.....	5
Purpose and Rationale for the Study.....	5
Significance of the Study.....	6
Research Questions.....	7
Limitations.....	8
II. REVIEW OF THE LITERATURE.....	9
Introduction.....	9
Mentoring.....	10
Beginning Teacher Needs.....	10
Mentor Roles.....	14

Mentor as Anthropologist.....	15
Mentor as Pedagogist.....	16
Mentor as Psychologist.....	18
Mentor and Protégé Matching.....	20
Mentor and Protégé Should Have Parallel Teaching Assignments.....	21
Mentor and Protégé Should Have Compatible Teaching Ideologies.....	22
Gender and Age Should Be Considered.....	23
Physical Proximity Should Be Considered.....	24
Mentor Training.....	25
On-line Communication.....	28
Historical Perspective.....	28
Beginnings in Education.....	28
Businesses Began to Realize Benefits.....	29
E-mail on Personal Home Computers.....	30
Higher Education Changes.....	31
Public Education's Connection to the Changes in Higher Education.....	32
Manifestation of the Change.....	34
Implications for the Future.....	35
Reasons to Move Forward.....	35
Reasons to Proceed with Caution.....	36
Appropriate Format.....	37
Two-way Communication.....	39
Community.....	40
Privacy and Security/Confidentiality.....	43
Conclusion.....	43
III. METHODOLOGY.....	45
Introduction.....	45

Initial Arrangements for On-line Access.....	45
Selection of Participants.....	49
Research Design.....	51
Initial Interviews.....	52
Workshop Training.....	53
Workshop 1: Group E-mail.....	53
Workshop 2: Word Processing Skills.....	55
Workshop 3: Classroom Management.....	56
Workshop 4: Assessment.....	56
Workshop 5: Lesson Planning.....	57
On-line Communication.....	57
Culminating Interviews.....	58
Data Analysis.....	59
Data Sources.....	59
Transcribed Interviews.....	59
Workshop Data.....	60
The Hard Copy of the Group E-mails.....	60
Research Questions as Addressed by the Data.....	61
IV. DATA.....	62
Initial Interviews.....	62
Views on Mentoring.....	62
Interviewees' Comments Regarding On-line Discussions.....	67
Excitement.....	67
Apprehension About Technology.....	68
Apprehension About the Effectiveness of On-line Mentoring.....	69
Participant Roles During On-line Discussions.....	70
Topics for On-line Discussion.....	70

Workshop Sessions.....	72
Workshop 1.....	72
Workshop 2.....	73
Initial Postings.....	74
Posting 1: Physical Layout.....	74
Posting 2: From Layout to Philosophy.....	75
Posting 3: Motivation and Questions from Participants.....	76
Posting 4: Classroom Management.....	81
Two Unedited (except spell-check) Sample Responses.....	82
Response from (IL).....	82
Response from (WM).....	83
Workshop 3.....	84
Posting 5 & 6: Classroom Management.....	87
Need for Management.....	89
Management Styles.....	89
Rules.....	92
Consequences.....	93
Strategies.....	94
Relationship Building and Safety.....	95
Workshop 4.....	98
Posting 7: Assessment.....	102
Workshop 5.....	107
Concluding Commentary.....	108
Concluding Interviews.....	110
Computers as a Communication Medium.....	110
"I Liked It".....	110
"I Liked It After I Got To Know the Participants".....	113

On-line Component of Mentoring Experience.....	114
Reflection and Communication.....	116
V. DISCUSSION OF FINDINGS.....	120
Research Questions.....	120
Significant Findings.....	120
How On-line Communication Influenced Discussion.....	121
Participation.....	121
Opportunity to Reflect.....	121
Convenience.....	122
Systematic and Ongoing Support.....	123
How On-line Communication Influenced Group Cohesion.....	124
How On-line Communication Paralleled and Differed from Traditional Mentoring Parameters.....	125
Identification of Needs.....	126
Mentor-Protégé Matching.....	127
Power Struggle.....	128
Original Research Design Versus Actual Outcomes.....	128
Lack of Technological Background.....	129
The Differences Among Content Areas and Grade Levels.....	129
Language and Cultural Differences Between the Mentors and the Protégés.....	130
The Protégés' Non-voluntary Participation.....	130
Conclusions Regarding Research Design Parameters.....	131

Implications for Future Researchers.....	132
Limitations of this Study.....	132
Lack of Technological Background of the Participants.....	132
Language and Cultural Differences Between the Mentors and the Protégés.....	132
Protégés' Non-voluntary Participation.....	133
Related Questions for Future Research.....	133
How Can an On-line Mentoring Network Be Established Which Is Not Facilitator Dependent?.....	133
How Can an On-line Mentoring Network Be Created to Support Cultural Differences of Teachers Who Were Not Schooled in the United States?.....	134
What Would the Conversations Look Like if the Mentors and Protégés Were Matched by Grade Level and Content Area?.....	135
Implications for Inservice Teacher Development.....	135
Impact on Me as a Researcher and as a Person.....	136

APPENDICES

A. PARTICIPANT CONSENT FORM: ON-LINE MENTORING FOR FIRST-YEAR TEACHERS.....	138
B. TIMELINE.....	139
C. UNEDITED RESPONSES.....	140
D. INTERNET REFERENCES.....	141
E. CASE STUDY.....	142
BIBLIOGRAPHY.....	143

CHAPTER I

INTRODUCTION

Statement of Problem

The concept of mentoring has its roots in Greek mythology. In 1978 Daniel Levinson borrowed the term "mentor" from Greek mythology and applied it to his work, on male adult development, in the business field. Others in the business field expanded on Levinson's work and described mentors as sponsors (Clawson, 1985) and as friends and counselors (Dodgson, 1986; Shelton, Bishop and Pool, 1991). The process of mentoring was viewed as "adult socialization to develop organizational leaders" (McNeer, 1983, p.12).

When individuals in the field of education began to embrace the concept of mentoring, the role of the mentor changed from one which built an organizational leader to one who was involved in a personal relationship for the purpose of professional instruction (Daresh & Playko, 1990). The roles of the mentor, as described in the literature, require that the mentor provide ongoing systematic support for the protégé.

The teaching profession has demonstrated significant progress in the induction of new teachers. What was once an isolated, "sink or

swim" initiation process, now has spatterings of support programs. In many school districts across the country mentoring has evolved from the beginning teacher receiving sporadic assistance from the friendly teacher in the adjacent classroom offering "getting started tips", to established formal mentoring programs which may encompass prescriptive methods of support, and be reliant upon mentor-protégé pairs or a team of mentors supporting one or more protégés or a single mentor supporting a team of protégés (mentoring mosaics).

Two problems that this study will directly address are (a) current mentoring programs not offering support which is systematic and ongoing; (b) the lack of training provided for mentor teachers.

Lack of Systematic and Ongoing Support

In many mentoring programs the mentor and the protégé do not have the opportunity to maintain the level of support necessary for the process of mentoring to germinate. Mentor teachers with whom I have worked have identified the lack of flexibility in the teachers' schedules as one of the major obstacles to the success of mentoring programs. Mentor and protégé often can not coordinate their schedules to afford them simultaneous free blocks of time to communicate on a regular basis. This research study will address the problem of schedule conflict through offering meetings which do not need to take place in real-time.

Lack of Mentor Training

“Although our cave dwelling predecessors are believed to have learned about fire by accident, subsequent generations most likely learned how to nurture it and cook with it through some form of training.” (Goad, 1982)

The teaching profession has recognized a need to offer its inductees a more gradual initiation to the profession through mentor support, yet in many instances the mentors are peer teachers who may have been recognized as excellent classroom teachers, but who often have had no formal training in mentoring or even in teaching adults; therefore the mentors approach their mentoring responsibilities with a foundation of trial by fire. Mentors who choose to participate in this study will have completed the mentor training program established by Lynchfield Public Schools' (LPS) Professional Development Center.

Definition of Terms

Protégé

For the purpose of this study, the protégé will be defined as the uncertified teacher.

Mentor

The teacher who has completed the mentor training program.

Mentoring

Mentoring is both a process and a relationship. The process represents a comprehensive effort to help the protégé realize growth as a professional. The relationship component helps the protégé find a comfortable place within the teaching profession. The mentor and the protégé in the relationship must recognize the reciprocity of both the process and the relationship.

On-line Communication

For the purpose of this study, on-line communication will encompass the discussions which take place through the group e-mails and individual e-mail correspondences related to the study.

Virtual Meetings

Discussions that take place regardless of the time the participants log on to their computers accounts. Participants can think of a virtual meeting as an informal meeting place, where the members of a work group can share questions, ideas, and comments. Like a physical meeting, each member of the work group listens (reads) to what others have to say and can write his/her own response. Unlike a physical meeting, it is not necessary for all participants to "attend the meeting" at the same point in time and the participants do not have to be in the same room at the same time in order to share information. Within the parameters of the time

commitment structure, participants can participate when it is convenient for them to do so.

Discussion Database

Database which stores the running record of entries contributed by the members of the database. Each entry has a label which includes the source of the entry (author), time and date of the entry, and a heading of the entry, which determines if it is a reply to an entry or an initial comment or inquiry.

Real Time

Real time represents actual clock hours. A meeting which occurs at 3:00 p.m. in real time requires that all meeting participants be available for the meeting at 3:00 p.m..

Reflection

Thinking about experiences in order to extract meaning and internalize understanding.

Purpose and Rationale for the Study

The purpose of this study is to determine how continuous on-line communication can help to meet the needs of the beginning teacher, foster reflection of both the mentor and the protégé, and serve as a medium for open dialogue. Research on staff development continually reminds us of the importance of placing the teacher/learner in an active role. This active role emphasizes the use

of demonstrations, supervised trials, mutual assistance, and self-directed training activities (Caldwell, 1989; Joyce & Showers, 1988; Lawrence, 1988; Orlich, 1989; Speak & Hirsh, 1988; Wood & Thompson, 1993). The on-line communication component of this study will allow for the mentors' and protégés' continued reflection on skill development and classroom follow-up called for by Joyce and Showers (1995), as well as providing assistance for classroom transfer and long range development (Orlich, 1989; Loucks-Horsley, 1987) called for in a variety of other studies.

Significance of the Study

This study is significant because it offers a new medium, on-line communication, for communication between mentors and protégés, protégés and protégés, and mentors and mentors. Limited research to date has examined this medium as a potentially fruitful part of the mentoring experience.

New technologies have contributed to the globalization of society. Teachers are altering their teaching methodologies to take advantage of what is available through the Internet and specifically through electronic mail. Many teachers already participate in list servs, chat rooms, and other database discussion groups. This study is designed to integrate the induction process and the electronic age and

to afford new teachers the opportunity to communicate globally with other teachers in similar situations and also with master teachers.

Participants in the discussion can share information using this forum without having to travel to an agreed upon location at an agreed upon time to discuss a limited agenda. Members do not have to wait for the next group meeting to raise, discuss, and resolve important issues.

The study is also significant because the mentoring mosaic which is created through the group e-mail process allows participants to seek assistance from people who are not active members in the participant's school community and therefore are completely removed from the inevitable evaluation of the participant's classroom teaching. This creates a level of safety which has yet to be introduced in a mentoring program.

Research Questions

Through this dissertation, I will explore a model of mentor training which encompasses mentor training workshops and continuous on-line communication. I will examine behavior in context and attempt to understand

- How does continuous on-line support/communication affect the mentoring process?
- How do protégés and mentors feel about on-line support as a component of the mentoring experience?
- How does participation in an on-line communication network influence protégé and mentor reflection about teaching?

- How does an on-line communication network facilitate conversation about teaching?

Limitations

The number of participants in the study is limited to ten protégés and five mentors. The primary reason for the number of participants is the uniqueness of their role in the study. Each participant is required to review all of the data collected through the on-line communication network.

The data were affected by each participant's individual level of comfort with the use of technology and with written communication. Of the ten protégés selected for the study only five had experience with e-mail and seven needed assistance with word processing in general. I had hoped to intentionally exclude severe technophobes but it was clear that varying levels of discomfort with technology existed.

Written communication has undergone a significant decline since the invention of the telephone. Some individuals are uncomfortable communicating in a written format and are even less in touch with "conversing" in a written format. Six of the ten protégés had English as their second language. I tried to offset this discomfort by immersing the participants in the writing process from the onset.

CHAPTER II

REVIEW OF THE LITERATURE

Introduction

The first component of the literature review will focus on mentoring. Four bodies of literature will be reviewed to form the mentoring framework for the study: (a) beginning teacher needs; (b) mentor roles; (c) matching of mentor-protégé pairs and/or mentoring mosaics; and (d) mentor training programs. The second component of the literature review will focus on on-line communication. The review format will weave the literature regarding on-line communication with the respective topics from the mentoring literature.

This review explores how traditional mentoring can be infused with newer communication mediums which are currently available in our technological society. In this dissertation, on-line mentoring serves as the newer medium under study. This review will serve as the foundation for creating a research study about a mentoring framework from which I can set the parameters of the interview questions, workshop design, and on-line discussion group topics posted to facilitate discussion.

Mentoring

Beginning Teacher Needs

Recent research on the needs of beginning teachers has uncovered a plethora of need categories. One such category deals with issues surrounding the survival of beginning teachers in their role as teacher (Pigge & Marso, 1991; Bey & Holmes, 1992; Spuhler & Zetler, 1995). Often beginning teachers at this stage of their lives are dealing with issues related to their personal and professional identity as well as how close or distant they want their relationship with other colleagues to be (Kram, 1985). Resolution of these issues will affect the beginning teacher's future personal and career development.

Adjustment to teaching as a profession can be difficult for a new teacher if the new teacher is feeling isolated. "Frequently beginning teachers are young people who have relocated to unfamiliar communities and have not yet found social support systems to help them endure the emotional hardships of their first tentative years of teaching" (Moran, 1990, p.211). The feeling of isolation is compounded by the difference in experience and sometimes age of veteran and beginning teacher. Beginning teachers find it difficult to make the transition from student to teacher when they have less in common with their "peers" than with their students. Beginning teachers may in fact have a limited peer group in the current context of teacher supply and demand. Newly hired teachers do not have

access to the peer support group which used to grow naturally from the infusion of vast numbers of new teachers (Dunifon, 1985).

Research studies have repeatedly determined that a mentor teacher can offer support to a new teacher who may feel very isolated (Bird, 1985; Newcombe, 1988; Pigge & Marso, 1991; Theis-Sprinthall, 1987). Perceived benefits of that support were determined to be in direct relation to availability and continuity of support offered by the mentors. Several studies indicated that time necessary for collaboration and support between mentor and protégé was at a premium and lack of time was often cited as a detriment to the mentoring process (Bennet, 1995; Little, 1990; Newcombe, 1988).

Questions regarding how to deal with finding time for support and collaboration within the parameters of long-standing school organizational patterns remain unanswered in the mentoring literature. It seems appropriate to explore the possibility that on-line communication, a communication medium with no limits on its availability, other than the time needed to access it, could offer an extension of the support which traditional mentoring has repeatedly given to beginning teachers.

A second category of beginning teacher needs which appeared with significant regularity within the literature was the beginning teacher's needs for assistance with the actual practice of teaching. Beginning teachers expressed concerns regarding the actual act of

teaching: the how to's of preparation, time management, student evaluation, and classroom management (Ganser, 1994; Gibbons & Jones, 1994; Spuhler & Zetler, 1995). These problems are constant challenges for all educators as they represent some of the strains of constant daily interaction faced by both beginning and veteran teachers (Little, 1990; Odell, 1988; Varah, 1986; Veenman, 1984).

The literature suggests that if mentors engage the beginning teacher in discussions about physical setup of the classroom, structure and sequence of the learning activities, lesson transition, consequences to students for misbehavior, and general WHAT IF discussions, these actions will do a great deal to alleviate future problems (Galvez-Hjornevik, 1985; Kauchak, 1985; Newcombe, 1988). Current literature suggests that discussions take place between mentor and protégé which are similar to those advocated for surrounding the category one issues previously described. The unanswered question remains, "When will these discussions occur?".

On-line communication can offer a non-time-dependent medium for these conversations as well as a way to broaden significantly the number of people involved in the conversation. Technology and the World Wide Web can direct new teachers to information-rich web sites which might offer some specific strategies and techniques for finding resolutions for their classroom challenges. Several teachers with whom I have worked have generated lists of web sites which help

teachers examine their classroom management and assessment techniques.

Many other issues appeared with some regularity within the beginning teacher literature: physical & emotional stress (Ganser, 1994; Hutto, 1991; Shouse, 1992; Wildman, 1992), when to use special services, union issues (Charnock & Kiley, 1995), informational issues, personal issues, consequences, collaboration and the refocusing/redirecting of student attention (Arroyo & Sugawara, 1993; Smaby, 1994), making teaching interesting (Koskela & Cramer, 1994; Shealy, 1994) special education, mainstreaming and consultations (Billingsley & Tomchin, 1992; Thomas & Kiley 1994), parents (Johns, 1992), and student attitudes, violence and aggression (Carter, 1988). This spectrum of beginning teacher needs is vast, yet still not all inclusive of every single beginning teacher need.

The global issues identified by today's beginning teachers (How do I fit in as a professional? How can I plan and manage my classroom? and How can I find time to get help with my needs?) are not that dissimilar to those identified by early stage teachers over the past 20 years. Research findings illustrate how mentoring has had an impact on meeting the needs of beginning teachers. The questions remain, "How can we take the known advantages of traditional mentoring with respect to helping beginning teachers and maximize

their potential as we enter into the next millennium?", and "What role can on-line mentoring play in the support of beginning teachers?".

While the literature on beginning teachers addresses broad categories of beginning teacher needs, research also directly points to what the beginning teachers do not need. They do not need to feel that their actions are being judged by their peers or that they are in a power struggle with their peers (Goldman, Chaiklin, & McDermott, 1992).

The mentor is not one of the people charged institutionally with the job of sorting and documenting them into piles of successful and unsuccessful teachers. Nor does she know all of the answers. Together they wrestle, from their different vantage points, with the specifics of what makes them, in varying ways, part of the same culture (Goldman, Chaiklin, & McDermott, 1992, p.252).

Through the e-mail communication system protégés are able to converse with mentor teachers without fear that the mentor will be part of the protégé's evaluation team. This dynamic may lead to the playing down of the power relationship between protégé and mentor. The protégé has no reason to expect that the mentor is going to report their conversation.

Mentor Roles

Research on the roles of mentors reveals a lack of absolute unanimity regarding role definition and is evident in the titles associated with mentors: support teacher, sponsor, patron, guide, counselor, advisor, protector, encourager, coach, supervisor, buddy

and advisor (Bey, 1990; Neal, 1990; Reiman, Head & Theis-Sprinthall, 1992). The variety of roles was addressed by Bey (1990) when she explained:

The variation in mentor roles range from protecting and opening doors, to guiding, teaching, and coaching, to consulting, advising and counseling. Apparently it is within the mentor role either to accomplish something for the protégé, or to teach the protégé how to do something, or to advise the protégé about what to do (p. 6).

While the titles associated with a mentor's role often have some degree of variability, the actions designated by the roles appear to fall into three general categories: (a) helping the beginning teacher become familiar with the culture of the school; (b) helping the beginning teacher with their teaching and classroom responsibilities; and (c) offering psychological and emotional support to the beginning teacher (Reiman, Head & Theis-Sprinthall, 1992). The following section of this literature review will be organized in accordance with those three roles entitled Anthropologist, Pedagogist and Psychologist respectively.

Mentor as Anthropologist

Literature on traditional mentoring suggests that through the role of anthropologist, the mentor assists the protégé with the acculturation process by helping the protégé decipher the complex culture of the educational setting in which they both work (Reiman, Head & Theis-Sprinthall, 1992). The norms of the school are

identified and the protégé is introduced to the players and procedures specific to his/her setting (Galvez-Hjornevik, 1985; Gehrke, 1988; Hill, 1989).

The traditional acculturation process is specific to a school - What is it like here? While an on-line mentor may not be familiar with the specific culture of a protégé's school, she/he can still use electronic communication as one of the strategies to facilitate the goal of enhanced community (Posner, 1993). The mentor may need to ask probing questions to get a sense of the school climate and be able to direct the protégé to good sources of support within the protégé's building or school system.

An e-mail experiment by Nydahl (1992) led to the conclusion that users could achieve close and friendly relationships along with lively and well-informed discussion. Through the role of anthropologist, the on-line mentor can help the protégé find his/her place within the organization and its social networks.

Mentor as Pedagogist

A second major role of the mentor is to assist the protégé with pedagogical concepts. The mentor must be available to discuss the art and the science of the profession. This is an important role because, left on their own to develop expertise, beginning teachers often resort to learning by trial and error (Lortie, 1975).

Experienced teachers can often offer strategies for addressing pedagogical problems presented by protégés, but rarely specific solutions. In one study protégés preferred collaborative problem-solving, where the protégé described a classroom experience and the mentor and protégé dialogued about the experience and alternatives to solution giving (Ackley & Gall, 1992), as suggested in the following quote:

“When the mentor is assisting his/her protégé with the reflection process the mentor needs to encourage the protégé to engage in self-analysis of technical, affective, and critical dimensions of teaching. In balancing support and challenge, the mentor starts where the protégé is and gradually challenges the protégé to enlarge his/her frame of reference” (Reiman, Head, & Thies-Sprinthall, 1992, p.10).

The opportunities for collaborative problem-solving can be significantly enhanced by the use of on-line discussion. Protégés can post a question to the on-line discussion group and receive an answer within the same day. Often with traditional mentoring the protégé must wait until the scheduled meeting time, usually once a week, to bring his/her issues and concerns to his/her mentor.

The mentor's role of pedagogical advisor encompasses many processes ranging from serving as a sounding board for specific methodologies to being a resource for materials. The mentor can answer clarifying questions about the curriculum and steer the protégé towards available support materials. If the mentor and protégé take advantage of new electronic technologies, then available

curriculum resources can be expanded to include on-line lesson plans and active web site addresses which can help the protégé build an exciting and interactive lesson around a specific topic.

Mentor as Psychologist

The third role of the mentor is psychological support. The mentor's role of pedagogist overlaps considerably with their role of psychologist. Protégés will function at a higher level if they are in a supportive and nurturing environment which allows them to make mistakes (Acheson & Gall, 1987; Bird, 1985; Little, 1990; Stroble & Cooper, 1988).

A comprehensive program of psychological support proposed by Gold (1987) focused on three specific areas of a protégé's need: (a) emotional-physical, (b) psycho-social, and (c) personal-intellectual. The emotional-physical component addresses issues related to stress reduction. Gold proposed that mentor assistance can be useful in helping beginning teachers become aware of professional areas that might contribute to increased stress (Ackley & Gall, 1992), and that mentors might help beginning teachers identify some coping skills useful in dealing with job-related stress.

The second part of psychological support potentially offered by mentors focuses on psycho-social needs. This aspect concentrates on meeting the beginning teacher's need to interact by giving and receiving support from the mentor teacher.

Traditional mediums of communication require that both parties are simultaneously available in order for supportive interaction to occur. On-line communication allows the beginning teacher to "voice" his/her concerns at the time they occur. If voicing the concerns can help the beginning teacher to alleviate the concern, then on-line communication can significantly increase the availability of this interaction.

The third part of psychological support addresses the personal-intellectual needs of the beginning teacher. Gold (1987) suggested that mentors need to provide a level of intellectual stimulation for the beginning teacher. Beginning teachers need to be able to communicate with other adults.

These three comprehensive roles require the mentor teacher to be multidimensional in her/his approach to the mentoring relationship (Odell, 1990). Mentors who address all three role categories have been described as "significant mentors" (Hardcastle, 1988). The level of significance is determined by measuring the "comprehensiveness and mutuality" of the relationship (Clawson, 1985). The comprehensiveness refers to how many of the roles are addressed and the degree to which they are addressed. The mutuality refers to the reciprocity felt within the relationship and how freely each person is participating. Although practical considerations often require that mentors are assigned, this practice can somewhat inhibit the

mutuality of the relationship. The mutuality of the relationship is often in direct proportion to the compatibility of the mentor and protégé.

Mentor and Protégé Matching

The ways in which mentors are selected and the ways the mentor-protégé relationship is structured vary significantly. The most typical structure involves a single mentor paired with a single protégé where the new teacher is assigned a mentor by an administrator (Newcombe, 1988). Other structures include a team of teachers supporting one or more protégés or a single mentor supporting a team of protégés.

The need for fluid teams and innovative structures has been identified in mentoring research (Anderson & Shannon, 1988; D'Souza, 1992). On-line communication presents the mentor and protégé with multiple possibilities for building the structure of their team. One-to-one correspondences can be easily expanded to represent mosaic communications simply by expanding the address line of the communication. By its nature, the on-line communication system supports the concept of a fluid team.

By understanding the variety of existing definitions, roles, and characteristics of mentors we can explore different options for structuring the mentor-protégé relationship (Gray & Gray, 1985). Results from research studies suggest several guidelines for how the

matching of mentors and protégés should be conducted

(Galvez-Hjornevik, 1985; Gray & Gray, 1985; Huling-Austin, 1986),

and the key considerations appear to be these:

- a) parallel teaching assignments
- b) compatible teaching ideologies
- c) gender and age similarity
- d) physical proximity.

Mentor and Protégé Should Have Parallel Teaching Assignments.

The mentor and protégé relationship seems to be highly successful when mentor and protégé are matched as closely as possible for grade and/or content areas (Enz, 1990; Galvez-Hjornevik, 1986; Huling-Austin, 1988; Odell, 1990). Matching maximizes the potential for the mentor teacher to serve as "pedagogue" for the protégé and to offer in-depth knowledge about the curriculum (Huffman & Leak, 1986) and types of students the protégé is likely to encounter.

In the traditional mentoring environment the mentor and the protégé work in the same building. Within that building there is a finite number of mentors to draw upon for the "match". On-line mentoring offers the potential for exponentially increasing the mentor candidate pool. A fifth grade music teacher who is the only individual in a school with that job title could still find another fifth grade music teacher to serve as a mentor if the mentoring pool were expanded to include all teachers on the Internet.

Mentor and Protégé Should Have Compatible Teaching

Ideologies. Some researchers have found that the mentoring relationship stands the best chance of success when the mentor's style and ideology are a match with that of the protégé (Parkay, 1988). The matching process is extremely complicated because compatible ideologies are not limited to identical ideologies; in fact when the beliefs of the mentor teacher and the protégé are completely congruent there is little opportunity to confront and/or modify those beliefs. The mentor teacher must still seek to challenge the protégé's professional growth (Odell, 1990). The like-mindedness of mentors and protégés can sometimes stagnate growth and serve only to validate the participants' current ideas and practices, rather than to challenge each other to explore new possibilities.

On the other hand, the mentor can challenge the protégé to examine and restructure his/her beliefs by creating situations of cognitive dissonance. The environment needs to be safe so the protégé is encouraged to experiment with new ideologies. One study conducted to examine prior beliefs and cognitive change in learning to teach revealed that cognitive change and restructured beliefs could emerge in mentor/protégé relationships in which mentor and protégé espoused different ideologies if these led the protégé to establish balanced routines which drew upon concepts from the beliefs of the mentor and the protégé (Hollingsworth, 1989).

Gender and Age Should Be Considered. Some debate exists over the significance for mentoring of the gender and age of the participants. Several studies indicate fewer conflicts when the relationship is matched by gender male-male or female-female (Huling-Austin, 1988; Kram, 1985; Odell, 1990). Nonetheless, Grover (1994) found gender to be an insignificant variable. Participants in Grover's study believed that personality characteristics, teaching experience, and willingness to mentor were the significant variables and gender and age were insignificant variables.

At least some protégés preferred mentors who were 10 to 15 years their senior (Huling-Austin, 1988; Levinson et al., 1978). This age differential seemed to work best because protégés believed the experienced mentor had more to offer and often saw age as correlating to experience and wisdom.

On-line relationships potentially lessen the influence of factors related to the power associated with issues of gender and age, but there is insufficient research evidence to support a conclusion. The significance of variables such as gender and age is difficult to ascertain in a communication in which participants may not know each other's gender or age. Goldman, Chaiklin, & McDermott (1992) determined that "physical size, strength, age, and institutional settings differences are neither immediately apparent or intimidating" (p. 279).

Physical Proximity Should Be Considered. Conventional wisdom dictates that the mentor's classroom and/or workspace needs to be in close physical proximity to the protégé's space. This supposedly helps to maximize communication while minimizing the effort necessary to maintain the lines of communication. Unfortunately, there is often not enough time in the school day for the protégé to search out his/her mentor to elicit help or feedback on immediate needs or concerns (Enz, 1992; Odell, 1988).

The on-line mentoring discussion group provides a medium which allows mentors and protégés to transcend the communication constraints associated with traditional mentoring and allows for continuous networking amongst the participants. Goldman, Chaiklin, and McDermott's (1992) study of mentoring via e-mail concluded that both "geographic and cultural borders" can be crossed electronically through on-line communication.

Even when the previous four factors are arranged to deliberately enhance mentors and protégés working together, a protégé may find that his or her most significant one-on-one mentoring relationships happen by chance. This sometimes occurs through mutual selection where two people have high regard for one another and their potential contributions to each other's teaching are significant. These relationships often are extremely beneficial, but can sometimes leave the protégé feeling uncertain about requesting help. When a mentor is

selected from a pool and assigned to a protégé, the beginning teacher feels that s/he has permission to ask questions and seek help. When this avenue is clearly defined then the protégé feels that seeking assistance is a *sanctioned* activity (Huling-Austin, 1990).

If a beginning teacher is able to create a support network in addition to his/her formal mentor then the "significance" of the mentor need not be diminished as a result of broadening the mentor-protégé relationship to include other school personnel. Mentoring cannot occur in a vacuum. The relationship should be enhanced by embracing the skills which other support staff have to offer the protégé and the mentor needs to recognize the parameters of his/her role.

The concept of the mentoring mosaic suggests that beginning teachers cultivate a network of mentors (Darling, 1989). This network can help prevent excessive dependence upon one person as the mentor and offer alternative perspectives which can be useful as the protégé reflects on how his/her own teaching style is developing.

Mentor Training

Formal mentoring programs recognize a need for structured support. Friendly assistance from volunteers in a school system has not proven to be the best way to acclimate teachers to a school system. Initial attempts at formalized mentoring programs assigned

"master" teachers to new teachers (Hersh, 1996). The "master" teachers were rarely given any additional training to help them assist the new teachers. It was assumed that the skills necessary to be a good teacher would easily transfer to good mentor skills (Wilder, 1992).

The concept of mentor training programs is growing in popularity and in practice (Cardin, 1990). Over sixty percent of the states have enacted legislation to create formal mentoring programs (Wilder, 1992). The training for the mentors in these programs ranges from nonexistent to certification programs for mentors. The popularity of mentor training handbooks, workshops and seminars is growing.

Absent from the current research is any study pertaining directly to on-line training of mentor teachers. Several studies conducted outside of education offer contrasting views of the possibility of conducting training on-line. Two studies of on-line mentoring show that the delivery of training should be achieved through the telecommunications mode (Braun, 1991; Posner, 1993). The findings from three other studies contrast the concept that all training can be achieved on-line (Brett, 1992; Phenix, 1992; Raish, 1993). For example, Raish (1993) conducted a workshop for electronic neophytes entitled "Stuff You Need to Know in Order to Navigate the Electronic Village", the conclusion of which was that technophobes need continuous guidance with a facilitator present in the room in

order to overcome the anxiety related to new technologies. This anxiety prevents neophytes from being able to capitalize on excellent on-line tutorials and support materials.

Whichever approach is taken, Brown (1993) suggests that continuous application of the learning immediately follow training, that training sessions be kept brief with an introduction of limited topics at each session, and that great care be taken in choosing the trainer. There is risk involved in mentoring adults (Gordon & Moles, 1994). In order to minimize the risk of collegial confrontation and even in extreme circumstances professional failure, mentors must be trained in coaching techniques (Burke & Schmidt, 1984).

Some of the topics for training seminars for mentors include setting goals and professional development plans, recognizing indicators of growth, structured and informal communication, logistics, establishing trust, reducing stress, networking and giving advice (Spuhler & Zetler, 1995). These skills do not necessarily transfer easily from the requisite set of skills for a traditional classroom teacher.

The focus of mentor training must relate back to the roles of the mentor and the skills necessary to carry out those roles. Excellent classroom teachers who have been identified as potential mentors often recognize the role of psychologist as presenting the predominant area of concern but many veteran teachers are not trained to offer

psychological support in a way that is appropriate for the adult recipient of that support.

On-line Communication

Historical Perspective

Beginnings in Education. Computers have been in use in education for decades. At their inception computers were primarily used for scientific research and then they gradually became an administrative tool for processing and analyzing bulk data. Using computers to facilitate communication is a more recent application.

One of the pioneering research studies into the use of computers as a communication medium in higher education was conducted over a two year period by Posner. The study was implemented in 1988 with a great deal of corporate support. Posner designed the BIZNET (business network) system, an electronic communication network for MBA students. The primary goal of the project was to link nonresident students with one another and with the institution's faculty.

Electronic mailboxes were set up and initial passwords were assigned to all MBA students and faculty at the university. Pacific Bell's staff provided extensive and visible support. They demonstrated the system at various program events and held biweekly training office hours (Posner, 1993, p.9).

At the conclusion of the first year of the study the consensus of the faculty and students was that the project had not proved successful. The usage was light for several reasons: students saw no

reason to use the system, students lacked access to personal computers and modems, students felt that additional training and improved documentation were necessary, students did not constitute a critical mass of users and the software and documentation were insensitive to varying levels of user competence.

A significant development in the history of BIZNET occurred in the spring semester of 1990 with a marketing professor's decision to require students to use BIZNET in her three MBA courses (Posner, 1993, p.14).

BIZNET usage increased when the requirement for on-line communication was added to a marketing course. With the increase in volume of students accessing the BIZNET, several other problems surfaced. Glitches in the system began to appear and students lost data, intercepted misdirected e-mails, and experienced frustration with the slow response time from the technology (Posner, 1993). Although I have found no direct explanations in the literature, I believe that the expense of networking an educational institution, paired with the apparent glitches, may have been the reason that no more studies regarding attempts to institutionalize networks were reported for several years. The corporate world, however, did expand on the initiatives taken at Santa Clara University.

Businesses Began to Realize Benefits. By 1993 many businesses were attempting to implement inhouse e-mail systems. Businesses could realize significant savings in postal costs while obtaining more

efficient communication. "The problem: global electronic mail doesn't always work ... People don't get messages, so they don't use it; therefore, they don't send messages " (Harrison, 1992). The prediction was "It will probably catch on much more slowly than you anticipate" (Harrison, 1992, p.1).

The slow growth rate did not manifest itself. Commercial e-mail vendors reported a growth rate of 30% from 1992 to 1993 (Morentsen, 1993). In that same year Raish (1993) reported specific measurements of data traffic across 52 nations.

E-mail on Personal Home Computers. Electronic mail entered the communication environment as a revolution rather than an evolution. A five to six year period has moved e-mail from a relatively unknown entity to a household term. A communication paradigm shift of the magnitude introduced by electronic communication will often be accompanied by nay sayers who can predict the potential disasters related to such a change. Several researchers voiced concerns about the electronic traffic jams which might be created having the potential to put a clog in the system (Brown, 1992; McCusker, 1993; Strehlo, 1992). Other researchers recognized the relative quickness of the adaptation process of electronic communication. Many comparisons were made to the complete lifestyle changes brought about by the introduction of the telephone and television. Predictions were flying about how many millions of people would be on-line within a

relatively short period of time due to the software for electronic communication constantly becoming more competitive (Blum & Rowe, 1993; Coursey, 1993; Gerber, 1993).

Higher Education Changes. Colleges and universities quickly saw the advantages of networking their schools. Courses and workshops developed about the electronic medium and the Internet and then course were offered via the medium. For example, Christopher Newport University (CNU) has been fully functional to deliver on-line courses since the fall of 1994. Institutions like CNU, whose population is a diverse group of primarily nontraditional students, find this new form of distance learning to be an excellent match with their student population (Ridley, 1995). On-line courses are of particular interest to some constituencies within universities because they offer the opportunity for increasing enrollment and expanded outreach to remote populations.

Entire virtual universities, such as the Western Governors' Virtual University and Kentucky's new Commonwealth Virtual University are springing up across the country (Carlson, 1997). Other institutions, such as The University of Colorado in Denver have created electronic student unions in order for on-line students to be able to take advantage of the conveniences available to traditional students on campus [Chronicle of Higher Education, 1997].

Research is being conducted into means of reformulating existing curricula for electronic delivery (Fulkerth, 1997), and ways of determining how course objectives are being met by on-line participants (Carlson, 1997). Further, evidence suggests that on-line learning is an effective delivery mode for higher education. Gregory (1997) found that a statistics course taught on-line outperformed the same class taught in a traditional classroom and that in the absence of the professor, students formed study groups and felt a sense of community.

In addition, researchers are beginning to examine the dynamics of the virtual classroom (Carlson, 1997; Fulkerth, 1997; Teeter, 1997). As more electronic communications techniques are used within college classrooms there is a movement along a continuum, with traditional classrooms at one end, and "classrooms without walls" on the other. In today's technological society some scholars note that the traditional classroom should not exist without a technology component, and a pure technological classroom will become disconnected and unreachable without traditional classrooms.

Public Education's Connection to the Changes in Higher Education. As colleges and universities began to offer on-line courses, teachers in public schools began to enroll in these courses as part of their professional development. Institutions of higher education then began to look at the technological medium as a way of connecting

schools of education with the public schools where preservice teachers are placed for student teaching.

In the summer of 1994, the University of Kentucky began a telecommunications connection between their school of education and several of their student teacher placement schools (Bliss & Mazur, 1996). They attempted to create learning communities comprised of preservice and veteran teachers. Video-conferencing was used (CUSEE) to initiate subject-matter conversation around CD-ROM case studies.

All six student teachers involved in the project described the value of the project and in particular the value of being able to converse with individuals who were not connected with their immediate school situation. The student teachers identified *safety*, *frankness*, and *privacy* as descriptors. The following responses were typical:

After your first day of teaching, wouldn't it be great to have someone experienced to talk to and not worry that you might say something wrong? (p. 187)

It's pretty risk-free talking to someone who has nothing to do with our evaluation; it leads to much richer discussion. (p. 187)

A similar study in Massachusetts (Boone, 1996) used telecommunications to link a school of education with its Professional Development School (PDS). The two-way television programs were shown to update teacher content knowledge, provide access for

advanced level science classes, and link teachers to share experiences between and among individual school districts.

As researchers begin to build electronic bridges between teacher education and teaching, they are finding ways to reduce teacher isolation. Electronic media can help students become full participants with teachers, university personnel, and peers in critical conversations about the internship experience. "By enabling reflective conversations to occur telecommunications technology may lead to more inquiry-oriented teacher education" (Schlagal, 1996, p.176).

This historical perspective represents a very short timeline. There have been significant changes in how technology has been used over the past decade. Many of our preservice teachers were educated in grade school without the benefit of technology and now must move into classrooms of the future where technology will be everywhere. As we plan ways to support and mentor these future teachers, it makes sense to use technology as a training tool. On-line mentoring may be one possible route for teacher mentoring.

Manifestation of the Change. The majority of the predictions of the early nineties related to the speed of implementation were in place by the mid-nineties. Businesses, campuses and homes across the country were hooked up to the Internet. The introduction of the World Wide Web and the corresponding software which became a household name with Windows 95 have exponentially increased the

usage of on-line communication. The implications for education are just beginning to be explored.

Implications for the Future

Reason to Move Forward. E-mail enables groups of persons, dispersed throughout a wide geographic range to work together in a timely fashion. E-mail also allows the sender to communicate regardless of whether the receiver is present (Kasavana, 1992). E-mail allows for virtual networks to be created. As such, e-mail has great potential for teachers. Teachers can be more actively involved in their professional organizations, they can join content specific and grade level specific chat rooms and listservs. Teachers can begin to mentor other teachers. The on-line communication network allows geographically separate groups of people to come together to share ideas and resources.

Another advantage of electronic mail is that this enlarged circle of communication need not be a paper generating endeavor. E-mail is easy to respond to, to edit, and it can be easily indexed and stored. E-mail can be saved to a hard drive, to a disk, or it can be printed for filing. The sender can create a transaction record by requesting a return delivery receipt upon the receiver's access of the message. These paperless transactions can prove quite appealing to teachers who often find themselves drowning in paperwork. Teachers who want

to get quick answers from other teachers can often write a quick e-mail and get a single sentence reply.

Reasons to Proceed with Caution. A related disadvantage of e-mail is that it often arrives unnoticed. The sender may believe that s/he has sent a message but no communication has actually taken place because the message was not received. E-mail users must train themselves to periodically check for new messages. A second disadvantage is that the sender can not predict when the receiver will read the e-mail and therefore can not predict how the receiver's mood might affect his or her receptiveness to the e-mail. In traditional communication we recognize that there is not only a correct way to make a point, but also an appropriate time to make a point.

Teachers who use e-mail as a means of communicating and accessing teacher support must be aware of the limitations of the medium. The inability to read the mood and receptiveness of the receiver of the message makes it difficult to communicate sensitive material.

A final concern is that the reading of e-mail can prove to be time consuming as the level of junk mail begins to accumulate. Sometimes e-mail users include multiple audiences in the address line or the "cc" line of a document. The level of relevance of the document to the recipient of the document might be quite minimal and yet the person may spend a lot time reading insignificant mail.

Appropriate Format

The rules of grammar surrounding the written format for communication are clearly structured and readily available. The rules for oral communication are differently structured; conversation differs from both interviewing and speech giving. The rules of oral communication are dictated by situation and by culture. Oral faux pas are generally met with immediate feedback regarding the breach of acceptability. On-line conversations are risky because the telecommunications dialect has not yet been established and the medium has a mixed character. On-line conversations have both a written and oral character, they are typed, that is, written, but are interactive:

It is not enough to write in the reader's language; we must also write in the proper register. In this context the word "register" is a linguistic term. If dialect is the vocabulary and grammar I use most comfortably, register is the way I use my dialect in different circumstances ... I do not speak the same way about the same topics at a neighborhood barbecue as I do at a neighbor's funeral (Doucette, 1992, p.13).

Telecommunicating lies somewhere between the two primary formats for communication (speech and writing) and the rules for that communication have not yet been established and therefore the use of the format is risky. In telecommunicating we are actually trying to

emulate speech, which is a significantly more free flowing form of communication, lending to a more informal style. In contrast, written communication is expected to be well thought out and organized.

With these thoughts in mind, if on-line communication is to be used as a component of a mentoring program for teachers, then training for the mentoring network needs to address the parameters for conversation. Further, mentoring literature clearly indicates that evaluation is detrimental to the process of mentoring. If teachers are communicating on-line then the system of communication needs to insulate the teachers from the fears surrounding the assessment of their writing.

A few researchers argue that on-line conversations should be held to a less rule-governed structure where participants are free from the bounds of syntax, grammar, and style so that the depth of the exchanges can increase without fear of ridicule or judgment (Hui, 1997). Others feel there is comfort in structure, and that potential on-line communicators will be threatened by the medium until proper guidelines exist for its use (Blum & Rowe, 1993; Doucette, 1992; Gerber, 1993). I believe that the need for clearly defined rules of on-line communication is inversely proportional to the level of trust between the communicating parties. For example, if you know me and you know my writing and I trust you then I can relax in my communication with you without fearing that you will think me

incapable of constructing a sentence. In contrast, "netiquette" becomes essential for me when I am communicating with someone with whom I do not have an established relationship and I try to talk to them on-line without any verbal or nonverbal responses indicating whether or not I am hitting the mark.

Because on-line mentoring for beginning teachers will encompass communication between individuals who may not have had an opportunity to build any level of trust, it becomes essential to address the rules of grammar which will govern the exchanges. The rules may relax once relationships have been established, but in the initial phases of the mentoring program the parameters for writing must be set by the participants.

Two-way Communication. On-line communication takes place through a written medium (or speaking if one has the equipment) and written communication is traditionally thought of as one-way communication. On-line writing, however, is no longer a detached activity. The writer can be reached and challenged while his/her work is in the developmental stage.

E-mail can closely simulate two-way communication in terms of response time. Since computer technology connects the writer and the reader at a speed almost comparable to sound, it shortens the distance between them (Hui, 1997). If two participants decide to simultaneously log-on to their computers then they can begin a

virtual conversation. The significant difference in the nature of the responding pattern is that one participant can not interrupt the other's communication. Two people can actually "talk" simultaneously but each will "hear" at a different time. In database communication this same pattern extends to more than two-party communication, somewhat like a multiple-party conference call.

Doucette (1992) identifies problems with individuals dominating on-line conversation and with discussion turning to abuse. Such behaviors do not seem to be unique to on-line communication. If a discussion has a facilitator, then the role of the facilitator will be to control abuse and to encourage participation. The on-line format has the potential to significantly benefit individuals who might be less likely to participate in a live conversation. These individuals do not need to interrupt or gain the floor in order to speak, they can take as much time as they wish to formulate their thoughts, and they can control the speed of the intake of the conversation.

Community. In this paper I use the term "community" to define a group that shares common interests and goals in a mutually supporting collection, where norms such as respect for one another and explicit communication are paramount (Hill, 1989). The participants in the group are a community of teachers. There are at least two subcultures within the community, the new teachers and the mentor teachers.

In traditional communities, we are accustomed to meeting people, then getting to know them. In virtual communities, you can get to know people, and then choose whether or not to meet them. If an on-line discussion database stems from a face-to-face meeting then you are not far from the traditional community building pattern. If, however, participants begin on-line discussion without ever having had face-to-face communication then the group process is significantly different.

On-line communities need their own definition in the same way that on-line conversations need to be viewed differently from either written or oral communications. New categories of interactions are being introduced through cyberspace. A virtual community will not have all of the characteristics of a traditional community. On-line communication requires a communication paradigm shift. We can not continue to view communication through traditional lenses when this new form of communication can not be assimilated. Our usual definitions of community are based on norms all of which do not necessarily exist in virtual communities. Norms are being created. The way in which virtual conversations attempt to soundlessly associate the living experience to the word requires a change in writing consciousness (Hui, 1997, p. 7).

Our communities and perceptions of those individuals within our communities are based on our perceptions of participants as

individuals. We form these perceptions from what they tell us and from what we observe. Through on-line communities it may be possible to know certain aspects of an individual very deeply without ever gaining a sense of the whole individual. These communities may be free of bias in many of the traditional categories. Research on electronically crossing borders (Goldman, Chaiklin & McDermott, 1994) supports the idea that on-line mentoring enables otherwise unlikely relationships to develop. Although some clues about participants are evident through their writing styles, unless individuals choose to share (the truth) about their gender, looks, ethnicity, etc., we will not be able to prejudge them in these areas.

Teeter (1997) suggests several ways for on-line discussants to begin to form a sense of community: (a) offer short autobiographical sketches, (b) identify a teacher who has been most effective and made a difference in their lives and explain why they were so special, and (c) examine the new standards for teacher licensure and describe one of the principles and explain how it is parallel to their teaching philosophy. These suggested activities can serve as "ice breakers" in forming the community of learners who will be participating in the on-line discussion.

Privacy and Security/Confidentiality. Electronic bulletin board systems (BBSs) are far from private. The individual running the BBS has the power to get into every mailbox and monitor every exchange of information (Doucette, 1992). In contrast, e-mail and closed discussion databases are relatively protected environments. One form of risk is that participants can forward messages to individuals who are not part of the discussion database. A second risk is the permanence of the conversation and the inability to retrieve a message once it is sent:

Then there's electronic mail's version of "Life's Most Embarrassing Moments". I've seen scathing memos from a supervisor to an employee — the supervisor inadvertently pressed the wrong button and broadcast the message to the entire organization. If you think that the gossip mill is fast, wait until you see people start sending this stuff over electronic mail (Harrison, 1992, p.16).

Conclusion. Mentoring is a concept which dates back to Greek mythology but on-line communication was barely heard of by the general public as recently as five years ago. This review of the literature attempts to weave a tapestry between the two bodies of literature on these subjects. Research on on-line mentoring is in its infancy. Within the time that it currently takes to conduct a research study on any of today's technology, much of the technology itself becomes obsolete. Within one decade e-mail has grown from a relatively unknown phenomenon to a household term which appears

on commercial television and is referenced with the casualness of a lifelong medium. In many circles not knowing your e-mail address is the equivalent of not knowing your phone number.

This review of the literature has examined a) acceptance of electronic communication as a media, b) substitution of e-mail for other forms of communication, and c) the social impact of electronic communication (Posner, 1993).

On-line mentoring represents an innovation in both mentoring and communication. Research indicates that innovations which are easy to use, compatible with needs, values and beliefs, and offer benefits to the user are more likely to be adopted (Posner, 1993). Research which is more specific to computer-based systems suggests that individuals are most likely to use systems which are accessible, reliable, convenient, and easy to use both in terms of physical terminal accessibility and user system interface.

CHAPTER III

METHODOLOGY

Introduction

The purpose of this chapter is to describe the methodology used to conduct this research study of on-line mentoring for first year teachers. An overview of the research design and the specific components of the process are presented, including the initial arrangements for participants to gain on-line access, a description of the process used for selection of participants, the research design, data analysis procedures, and trustworthiness checks used.

The research questions addressed by this study include

- How does continuous on-line support/communication affect the mentoring process?
- How do protégés and mentors feel about on-line support as a component of the mentoring experience?
- How does participation in on-line communication influence protégé and mentor reflections about teaching?
- How does on-line communication facilitate conversation about teaching?

Initial Arrangements for On-line Access

When I initially decided to pursue on-line communication as a component of the mentoring process, I was completely naive about its feasibility. My personal experience with on-line communication was

limited to my recent e-mail interactions. By most standards I was a novice at electronic communication.

The possibilities of creating a chatroom or a listserv for beginning teachers were the initial routes which I investigated for the on-line component of this study. Neither of these options seemed to be ideal. Both seemed to present some security issues and the chatroom concept required that participants converse in real time. The concept of a discussion database as a third possibility was presented to me by a guest lecturer in one of my courses. Further investigation made clear the possible advantages of using this format for my project.

In order to understand more about how a discussion database works, for several weeks I monitored the activity of three discussion databases to which I have access as a Springfield College faculty member, after which my adrenaline was pumping at the prospect of being able to conduct a study through this medium. The next step was to approach our technology coordinator to see if it was feasible to create a discussion database for the purpose of this study. He confirmed the feasibility of creating a discussion database for the purpose of on-line mentoring, but when he explained the logistics of off-campus participant access, it was evident that this was a roadblock for the following reasons.

Discussion databases need to be supported by a server or host site. In order for participants to have access to the server at my institution they would need to be affiliated with the college through employment or registration. Participants would need access to the database through the site license registered at the college.

Participants would also need to have compatible software (Lotus Notes) and access to on-line computers. At this juncture it seemed that the best path to pursue would be one that would allow for some form of financial support for the project.

Springfield College (SC) co-authored a "508 Mentoring Grant" with Lynchfield Public Schools (LPS) which allowed me, as a Springfield College representative, to work in collaboration with the Lynchfield Public Schools to pilot an on-line mentoring project. The funding for the purchase of five laptop computers, the hook up for participants, the training of participants, and access through the college's site license was secured through this grant. The template for the database and the means of restricting access to include only the participants in the study was prepared for implementation.

Springfield College agreed to support this effort by providing space on our server for the discussion database and to allow affiliated teachers access to the database for the duration of the project. The participants in the project would be given access to the discussion database via a password and this database would not be open to any

other network subscribers, thus allowing a private exchange among participants.

The database would remain open to participants for fifteen weeks (corresponding to the Fall academic schedule) and the value would be assessed at the end of the period to determine continued support by the college. Value to the participants would be assessed as part of the data collection procedures.

Unfortunately my initial elation with being awarded the grant money was short lived. LPS determined the intention of the grant could be supported without the purchase of the laptop computers, and they took a long time in conveying this information to me. I was frequently informed of different delays in the purchasing of the computers, but was assured that it was "in the works". In January, some five months after the research was scheduled to begin, I was informed that LPS had resubmitted a grant budget allocation sheet which did not include the purchase of laptops.

The people active on the LPS side of the grant still wanted to see the project completed and expressed a willingness to assist me in whatever way they could. They assured me that they could get participants for the program who were on-line from home and that the non-purchase of the computers would not negatively influence the project. This twist required a rethinking of the format of the on-line communication, as it would be impossible for all participants to gain

access to Lotus Notes. Although I still believe that the discussion database is the best format for this type of discussion, I designed an on-line system which was not reliant upon participants having access to compatible software. The new design required each person to send group e-mails. Each participant agreed that all correspondences would be sent to the entire group, even when a response was intended for only one participant. Participants agreed that if they wished to communicate with only one other participant on a particular issue then they would "CC" me on the correspondence.

Selection of Participants

The selection of participants occurred through a job posting requirement mandated by the city of Lynchfield. I anticipated five first year teachers as protégés with five additional experienced teachers as mentors. The job posting for the mentors and protégés was prepared by the Lynchfield Public Schools' Professional Development Staff (LPSPDS). Once it was clear that the laptops were unavailable, and the details of the e-mail system were worked out, the posting closed in January and five people responded with an interest in the mentor role. The names of the five individuals were forwarded to me by the LPSPDS and these are the five mentors in this study. All five mentors had participated in the LPSPDS mentor training program.

At the time when the posting closed no potential protégés had expressed an interest. Several individuals with whom I had run a pilot project in the Fall expressed an interest in continuing with the project but they did not want to be identified with the job posting. Internal politics within the school system made them feel uneasy about a mentoring project which was orchestrated by the LPS personnel department.

The mentors suggested that I attend one of their mentor/protégé workshops and solicit potential protégés from that established group. I attended a workshop and offered the opportunity to several individuals whose names had been suggested to me by the mentors. There were sparks of interest but no commitment.

The following week the Assistant Director of Personnel for LPS forwarded to me a list of ten names of potential protégés. This list of names came as a result of the Massachusetts Department of Education issuing a memo stating that they would need to pull grant funding for two grants (On-line Mentoring and District Based Certification) if they did not have documentation of progress. The Assistant Director of Personnel had strongly suggested that these ten individuals participate in the on-line mentoring program. The ten individuals were uncertified first-year teachers who were currently working in the LPS and who were slated for participation in a District

Based Certification Program. I called an initial meeting of the ten individuals to try to ascertain their individual levels of commitment.

This initial meeting revealed that all ten individuals had received letters from the Assistant Director of Personnel encouraging them to participate in the on-line mentoring project as a component of a District Based Certification Program. Each potential protégé expressed a sense of coercion, but also a sense of reward. They saw the project as a way of moving them closer to meeting their certification requirements. LPS would use grant money to pay their tuition to Springfield College as a result of their participation in this on-line project.

We also used our initial meeting to get to know each other. We engaged in an icebreaker activity in which each person introduced him/herself to a partner and then the partner introduced that person to the group. I gave a brief overview of the project and participants expressed interested in getting started. I explained and distributed the Participant Consent Form (Appendix A) and all participants willingly signed the form. We set up meeting times for individual interviews and a date for Workshop 1: On-line Training.

Research Design

The study was conducted in four phases: (a) initial interviews, (b) workshop training, (c) on-line communication, and (d) culminating

interviews. See Appendix B for the flowchart representing the sequence of actions.

Initial Interviews

Each mentor and protégé participated in an initial individual interview. The interview questions probed the experiences of the participants as they related to mentoring and participation in on-line communication through group e-mail. Questions included the following:

- What does mentoring mean to you?
- Please describe a specific time when you felt mentored? (Who? How? What circumstances? Key learnings?)
- What can you tell me about the mentoring program at your school? (Expectations of mentors? Protégés?)
- How do you think on-line discussion may help you as a mentor? Protégé?
- What do you see as your role as a participant in on-line discussions?
- What do you see as your mentor/protégé's role as a participant in on-line discussions?
- What do you see as my role as a participant in on-line discussions?
- What topics would you like to see covered in the mentor-protégé workshops?
- What kinds of questions would you like to see as initial questions for discussion?
- Do you have any questions for me?

The interviews were transcribed and stored for data analysis in both hard copy and computer file.

Workshop Training

Two workshops were conducted as technology training interventions. The first workshop was designed to familiarize the participants with each other through community building activities, and to familiarize the participants with the technology involved in the process of on-line mentoring. Three additional workshops were scheduled. The topics were determined by the participants - classroom management, assessment, and lesson planning.

Workshop 1: Group E-mail

The primary component of this workshop was training the participants to use group e-mail as a means of on-line communication. The idea was to introduce participants to the concept of "virtual meetings". This format was chosen over the chatroom concept due to the fact that chatrooms require conversation in "real time" (i.e., every one logs on at 8:00 PM) and that removes some of the flexibility afforded by distance learning/mentoring.

The intentions of the first workshop were to simulate the interactions which would occur during on-line discussions once the participants completed the workshop and to allow for maximum transfer of learning. The training laboratory at Springfield College has all of the computers in one room. The simulation can replicate the process but it deviates from real on-line communication in that each

participant receives an immediate response, because the simulation is actually in real time.

The stated objectives of the workshop were that as a result of the workshop each participant would be able to

- access the e-mail system
- send a group e-mail
- receive and read an e-mail message
- reply to an e-mail message
- reply with history (make editorial comments on original document) to an e-mail message
- delete e-mail messages
- navigate through other house keeping functions of the e-mail system.

In order to meet the objectives of the workshop the participants engaged in a variety of activities which served as both icebreaker activities and on-line learning experiences. Individuals e-mailed each other about their favorite television shows, their personal histories, and their concerns about participation in the project. They replied with and without history to each other's e-mails and they learned other related functions such as message forwarding and using colored pens to accentuate edited documents on-line (an option available through Lotus Notes).

I explained how we would progress after the workshop. I would provide initial discussion topics (e.g., physical setup of their classroom, philosophy of teaching, classroom management, assessment) about which the mentors and protégés could exchange

ideas. The mentors and protégés would also have the opportunity to open the floor for discussions among the group. Questions could be posted to the group along with favorite lessons and teaching strategies or other items.

During the first workshop it became apparent that many of the participants did not possess the word processing skills necessary to converse on-line. A second workshop was then scheduled to review editing and word processing skills.

Workshop 2: Word Processing Skills

The second workshop was designed to familiarize participants with the word processing skills necessary to communicate via e-mail. Only individuals who needed assistance with word processing skills were required to attend. Five of the ten participants attended the workshop.

The participants who attended the workshop expressed a need for review of basic terminology prior to the actual activities. I reviewed the hardware components and introduced terms such as Cursor, Title Bar, Tool Bar, Window, Icon, Cut and Paste, and Menu. I then used a poetry editing activity to introduce the skills of insert, delete, move, copy, find/replace, center, underline, and spell check. By the end of the workshop all participants were able to retrieve a file, edit the file and save the file.

Workshop 3: Classroom Management

The topic for this workshop was determined by the participants. The selection of classroom management as a workshop topic came from our on-line discussions. Several postings regarding classroom management and several participant generated questions about classroom management led to the selection of this topic.

We used a case study approach to the workshop in which we reviewed several case studies from Discipline in the secondary classroom: A problem solving approach, by Randall S. Sprick, and used several of the management issues that had been posted to the e-mail group.

Workshop 4: Assessment

The topic for the fourth workshop was assessment. Results of the newly implemented Massachusetts Teacher's Test were a topic of heated discussions in the media and among public school teachers. The participants wanted to discuss the teacher test and its implications for future teachers. They asked that we discuss assessment at our fourth workshop and discuss ways that we could assess readiness for standardized tests such as the Teacher Test , the IOWA test, and the MCAS.

Participants were asked to be prepared to discuss their grading strategies and to be ready to present a variety of assessment tools.

Specifically they were asked to bring a sample test/quiz, project directions, and a write up of some form of authentic assessment which they could share with the group. They were also asked to prepare a working definition of assessment. Activities for the workshop were designed around these assignments.

Workshop 5: Lesson Planning

The final workshop topic was lesson planning. The participants were feeling anxious about the opening of the 1998-1999 academic year and they wanted to work together to ensure that their lesson plans reflected the depth of their teaching.

Each participant was required to e-mail a sample lesson plan to all of the participants and to print the lesson plans which s/he received. Participants were then asked to make comments on the lesson plans and be prepared to share those comments in the final workshop.

On-line Communication

The on-line communication took place via an established e-mail discussion group. This component was ongoing throughout the duration of the study. Protégés responded to questions which I posted to the group and then they reviewed each other's postings and responded. Mentors were not active respondents until the third

posting. They had been asked to monitor the discussion while the protégés got a feel for the format. The first two postings were primarily used to get the protégés used to the technology. The actual mentoring became active in the third posting.

Initially we agreed that questions would be posted weekly on Tuesday and all participants' initial responses would be logged by the following Tuesday. Responses to responses needed to be posted within one week of the original posting. I learned quickly that I had to be very specific about the response requirements. My initial posting asked the participants to describe the physical layout of their classroom. The most in-depth responses was two paragraphs and the most brief was one word - "rows"!

By the fourth posting the directions had become very specific. The question was posted, answers and examples were called for, numbers required responses was stated, and questions were called for from each participant.

Culminating Interviews

The culminating interviews were reflective in nature and were conducted one month after the final workshop. The final workshop was conducted just a few days prior to the start of the 1998-1999 academic year and the participants' schedules did not have room for a

reflective interview until they felt established in their new teaching positions.

Both mentors and protégés were asked to reflect on the workshops and the training and support they received from the on-line component. The culminating interviews were designed around the study's research questions:

- How did on-line communication facilitate conversation about teaching?
- How did participation in on-line communication influence your reflection about teaching?
- How did you feel about on-line support as a component of the mentoring process?

Data Analysis

Data Sources

The sources of data for this study were (a) the transcribed initial and culminating interviews, (b) the electronic journal of observations and reflections from the workshops, and (c) the hard copy of the discussions from the discussion database. This study relied on multiple data sources, cross referencing the data gleaned from the three data sources. The data were analyzed for thematic concepts and subcategorizes on meaning within those.

Transcribed Interviews. The analysis of the initial interviews is critical to the functioning of the study. The study was grounded in the principles of adult development and staff development which speak to

adults' need to be self-directing active learners who need to solve real-life problems. The data from these initial interviews drove the framework of the e-mail and workshop discussions.

The culminating interviews served as individual accounts of the group dynamics and assessment of the process. Feedback about the process was requested on a regular basis throughout the study; however, individuals with separate issues were more likely to present them in a one-on-one probing interview format.

Workshop Data. Some of the data from the workshop were easily analyzed. The completion of the exercises to acquaint the participants with the form and function of group e-mail was evidence of the objectives of the workshop having been met. The individual responses to e-mail entries alerted me to potential problems with my interpretation of the data which I collected during the workshops.

I kept a journal of my observations during the workshops. The data in this journal were cross referenced with the original interviews and database discussion to check for consistency.

The Hard Copy of the Group E-mails. A hard copy of the discussions occurring via the group e-mail was printed weekly. The participants were asked to spend a minimum of one hour a week engaging with the on-line responses. Each participant was asked to respond to the general question/topic and to respond to a minimum of two

participants' contributions. Of course they could interact more if they so chose. This constituted the group e-mail dialogue.

This study required the simultaneous collection and analysis of the data. On a regular basis the participants determined if the format was meeting their needs and readjustments of the parameters were made in accordance with the best fit of their current needs. The final analysis of the data was the exclusive responsibility of the researcher.

Research Questions as Addressed by the Data

The participants' level and depth of engagement with the database provided a window for addressing the research questions. The participants' engagement with and shaping of the discussion of the data provided the researcher with substantive feedback for analyzing the data to answer the research questions.

CHAPTER IV

DATA

Initial Interviews

The purpose of the initial interviews was to gain a sense of what mentoring meant to the participants and also to determine their expectations regarding the project. Each participant was asked a series of predetermined questions. Most interviews slipped into a conversational mode and the questions were slightly more free flowing than originally planned.

Views on Mentoring

All protégés had a positive view of mentoring. They saw mentoring as a way of getting help from someone whose job it was to help them. Several of the protégés spoke to the concept of the mentor helping them by giving them direction and clarifying their questions. In some instances they used almost exactly the same phrases to convey their view:

...mentoring means giving direction - helping a person clarify a point of view (CA)

...mentors clarify my questions and give me good directions (MR)

...she can show me which way to go, how to do things and be there for my questions (OS).

A few of the protégés expanded on the notion of direction giving and included that they expected comments of a corrective nature from mentors. There was no sense of evaluation or reprimand in

their descriptions of the kinds of problem identification which mentors might engage in, but there were clear references to the mentors finding out what was wrong with the protégés' teaching.

...the mentor can correct the problems with my teaching (CA)
...she can identify my mistakes and show me where my weaknesses are (YV)

The protégés' views of mentoring seemed to reflect a teacher-student type of relationship. They were looking to the mentor to help them fix their teaching in much the same way they would hope that a teacher might fix their papers. I did not have an overwhelming sense of empowerment from the protégés. They did not view mentoring as a reciprocal relationship or a collegial one.

In their identification of what mentoring meant to them, each of the protégés spoke about the kind of mentor who would best serve their needs. They were unanimous in their identification of an experienced teacher as the best candidate.

...mentor is the voice of experience to guide the inexperienced person through the transition (JP)

...they need to have a lot of experience in both teaching and helping others (YV)

...a knowledgeable mentor must be willing to share - be a good role model and an excellent teacher. All of the other teachers in the school must think that she is really good, that would give her some credibility with me and I would know that she could help me. (AA)

Eight of the ten protégés identified a mentor/friend at their school. No one identified a formal mentor within his/her school, even though they had been assigned formal mentors by the

LPSPDS. I received a list of the protégés and their assigned mentors. During the interviews, when I shared the name of each individual's mentor with him/her, each protégé stated that s/he had never been told that this person was his/her mentor. In two cases the protégés did not even know who the individual was who had been identified as their mentor. Two individuals later shared with me that they thought that the mentor list did not exist until I requested it from the LPS.

The protégés differed in their experiences with finding a mentor. Some of them were approached by a teacher in their schools, others sought out some assistance and still others were steered in the direction of a mentor by programs within their school system.

... In my school I can count on the teacher who is in charge of inclusion students. His advice is very valuable to me (YV).

... I have been receiving support from my colleagues and the bilingual staff. The first days of school when I needed more support they were there to help me. In order to find out how the school works I sometimes had to find out by myself (MV).

... The first time that I felt mentored was after my first week on the job and a teacher who has been at Putnam for 15 years asked me how it was going. I told her that it was a rough start. After that she would meet with me almost every day and we would talk about my experiences. She called them debriefing sessions. I guess that I would call them mentoring sessions (AA).

While all participants spoke about mentors in education, one participant chose education outside of public school as his source of

mentoring. This individual seemed to have an extensive mentoring experience in his prior career and found it lacking in public school.

...When I first joined the military, I had a mentor helping me to pass my weapons training exam. Sgt. Jones helped me during class and after class. He was always there for me. He helped me with all the new things that I had to master and he kept supporting me until he was sure that I was good enough on my own.... No one at my school has done that for me and I haven't heard any stories from any one who feels like that they have gotten great support (CA).

Although four individuals understood that there was some formal mentoring program within their school, they clearly had not found it accessible.

...They told us at the orientation that each school has a mentoring system and that we would be given a mentor. I never knew who my mentor was until you just told me (laughter) (JP).

...I know that they have some kind of a system but no one has ever really told me about it. No one has ever come up to me and introduced themselves as my mentor (MR).

...At lunch one day one of the teachers told me that she was a mentor to another new teacher. I told her that I didn't have a mentor and that might be because there weren't enough bilingual mentors. She offered to be my mentor but we never really talked about it again. I guess I could have investigated it more (IL).

...They say they have one, so then they are meeting the requirements of the law but there isn't one. No one has the time (YV).

Two of the participants noted that there was a formal structure in place for beginning teacher support within their systems. Some took advantage of the school system's professional development

and mentoring program by visiting the Development Center while others considered the professional development days at the beginning of the school year to be the extent of their mentoring and support.

...I went to a workshop before school started and learned about educative philosophy, teacher and student characteristics and school rules. I did not see him, my mentor, again until January when the professional development workshops started. (OS)

...I have received help from different teachers, but not in my school. I go to the professional development center to talk with the teachers and experts there. (IL)

Introductory data indicated that I needed to further understand the connections that the participants made between SPSPDC and mentoring. Excerpts from our on-line conversations which followed the initial interviews to demonstrate the connection which participants made between the SPSPDC and mentoring. Comments were made that indicated that help with teaching was available through the center and that help did constitute mentoring.

...I guess that I never thought about the professional development center as mentoring. I thought of it like school. Kind of mini courses. The help we received there could be considered mentoring (IL).

...I think of mentoring as help from an individual. The help center is all group stuff. They do show you how to improve your teaching and teach you some of the stuff from Research for Better Teaching. That could be mentoring (CL).

...I hear good things. The staff development people have a good reputation but I have never been able to go even though I think it could be helpful (MR).

Interviewees' Comments Regarding On-line Discussions

Introductory data regarding on-line discussions fell into three general categories: (a) excitement, (b) apprehension about using the technology, and (c) apprehension about the effectiveness of on-line mentoring. Many responses overlapped between the categories, and those who felt apprehension were gracious in their attempts to make me feel like on-line mentoring could still be effective.

Excitement. All of the participants expressed some form of excitement about the prospect of communicating on-line with their peers. They were eager to try something new and they seemed eager to please me and demonstrate their willingness to join the project.

...I think that by using the computers and Internet I will be able to have faster and better communication. On-line discussion saves time from traveling and I will be able to stay at home and concentrate on my assignments (OS).

...I am excited. It is really nice because I communicate with all the other teachers and the mentors directly from my house. I can answer the questions at any time of the day. Even on Saturdays or Sundays. On-line discussion gives me the time and space to think about my answers and express them in a better way. This is very effective because I will receive answers to all of the e-mails that I send (MR).

...I am ready and you have promised to make it fun. It is interesting to me but I am a little nervous (IL).

These responses and others indicated that participants were aware of some benefits of on-line mentoring. Several participants spoke to the issues of accessibility and convenience as well as having time to reflect about and reword their responses. These were critical topics addressed in the literature, and these responses were used in the workshops to initiate discussions about the benefits of on-line discussions.

Apprehension About Technology. Several participants were anxious about trying to communicate via the computer. They had limited computer experience and had not found the computer to be a "learner friendly" device.

...oh boy, I am not good at using the computer. I have so many problems with my teaching and I think that the computer will just give me one more thing to try and learn. Everybody says that I have to learn the computer anyway and that you will help me but I am pretty scared (IL).

...I think that I am going to spend all of my time learning just about the computer and not really learn much more. That is really good learning but I am not sure if that is what I need right now (JP).

Comments related to individuals' apprehension about the technology served as a good preview of the workshops. I discovered that I needed to address the issues of computer phobias even before engaging participants in discussions about teaching. Substantial play time on the computers was necessary. I used friendly e-mails as introductory tools so that individuals could send

a message about a television show or a comment about the weather and concentrate on the process of sending the message rather than the content of the message.

Apprehension About the Effectiveness of On-line Mentoring. One individual felt that technology was not an appropriate medium for mentoring. He felt that the structure imposed by the medium distanced participants.

...on-line discussions would be helpful but a face to face approach would be much more meaningful. It feels like school when you have to write everything down and send it off and wait for a response. When someone asks for something in writing it loses the personal/casual touch... It will nevertheless be a learning tool (AA).

Computers are often perceived as an impersonal medium. In order for participants to feel connected to one another through the on-line process it was necessary to personalize the medium. The play time in the initial workshops was intended to break down the tensions surrounding the medium. I attempted to create the right feel for the conversations by talking about the advantages of being able to complete a sentence without being interrupted and by being able to really think about what someone said before responding. In the workshop we used the advantages of on-line mentoring which individuals identified in the interviews to demonstrate the power of the medium.

Participant Roles During On-line Discussion

All participants came to the same conclusions about the roles of people involved in the on-line discussion. They saw themselves as simultaneously serving as mentor and protégé, teacher and learner, and reader and writer.

...My role is to share my ideas and my questions. My role is to actively participate in the process and to respond to the comments and questions of all of the other participants (OS).

...Your role is to make it work. To guide us through learning how to do this and helping us do it. Also you need to give us some advice along with the other mentors because you have been a real teacher before, too (WM).

Topics for On-line Discussion

In general the responses from the interviews could be said to span the content of a teaching methods course, such as, lesson planning, classroom management, teaching strategies, learning outcomes, and Massachusetts Curriculum Frameworks. We were able to use many of these topics as either workshop topics or posting topics but time constraints did not allow us to highlight the Curriculum Frameworks or some of the other minor topics. The two most frequently mentioned topics were lesson planning, mentioned by six participants, and classroom management, mentioned by eight participants.

...I could use a workshop on lesson planning. We need to have our plans a specific way for the principal and I am not familiar with the formats. I could also use some workshops on discipline.

I don't know what to do with all the different kids and their different problems (CA).

...I could use some different teaching plans. Something beside the lecture (IL).

...I would like to find new ways to integrate the principles of effective teaching into my planning so that I can have exciting classes and keep the kids engaged (MV).

A few students indicated no topic preferences, either taking a "wait and see" attitude or a "nothing comes to mind attitude".

...I will see how the first workshop goes and that will help to determine what might be good for the group in the other workshops. I am signed up for several professional development workshops so I am not sure what my remaining needs might be (AA).

...I am sure that whatever you will plan will be fine. We can always improve and learn new things (WM).

A few participants repeated their concerns about using computers and recognized that the topic wouldn't really matter if they were continuing to struggle with the on-line process.

...I am not sure that I will be able to learn anything in the workshops besides how to use the computer. I will struggle so much with keys that I don't know if I will be able to concentrate. I do have faith that you will help me but I do not have any extra topics that I think would be good for the workshops (IL).

...When we come together for more workshops you may discover that you still need to help us with the computers. When I get away from the group then I might not be able to do the computer and so you might think that I don't know about the topics but it's really just the machine (OS).

It seemed that most protégés were suspending their disbelief about an on-line mentoring program and were willing to take a

chance by the end of the initial interview. I felt that an initial level of trust between myself and the protégés had been established through the interviews.

...I am ready to get started and to see if I can really do it (IL).

...You have convinced me that I will be okay but I am still here. Lots of times I have tried to learn computers and they make sense when I am in the learning but when I get away from the teacher then nothing works the way it did before. Even when I write down directions step by step they still don't work. It's like how your car always works when the mechanic looks at it but when you get it home it clunks again (laughter). But I can tell that I can trust you, but you don't know how bad I am (OS).

Workshop Sessions

Workshop 1

The primary component of this workshop was training the participants to use group e-mail as a means of on-line communication. The goal of the first workshop was to simulate the interactions which would occur during on-line discussions once the participants completed the workshop and allow for maximum transfer of learning.

The stated objectives of the workshop were that as a result of the workshop each participant would be able to

- access the e-mail system
- send a group e-mail
- receive and read an e-mail message
- reply to an e-mail message
- reply with history (make editorial comments on original document) to an e-mail message

- delete e-mail messages
- navigate through other house keeping functions of the e-mail system.

During the first workshop it became apparent that many of the participants did not possess the word processing skills necessary to converse on-line. A second workshop was then scheduled to review editing and word processing skills. In order to be exempt from the second workshop, participants needed to send a group e-mail which simply said "I'm in - talk to you after the next workshop!". Those participants who were unable to respond via e-mail were asked to attend the second workshop.

Workshop 2

The second workshop was designed to familiarize participants with the word processing skills necessary to communicate via e-mail. Only individuals who needed assistance with word processing skills were required to attend. Five of the ten participants attended the workshop.

The participants who attended the workshop expressed a need for review of basic terminology prior to the actual activities. I reviewed the hardware components and introduced terms such as Cursor, Title Bar, Tool Bar, Window, Icon, Cut and Paste, and Menu. I then used a poetry editing activity to introduce the skills of insert, delete, move, copy, find/replace, center, underline, and

spell check. By the end of the workshop all participants were able to retrieve a file, edit the file, and save the file.

Initial Postings

Posting 1: Physical Layout. In my initial posting to the database I asked the participants to describe the physical layout and appearance of their classrooms. I asked them to complete this introductory exercise as practice for the use of the on-line communication system. I wanted to ensure that all of the participants could send the e-mail to everyone else in the group and to make sure that individuals understood the time parameters for on-line communication. The mentors were not actively participating as responders at this point since there were no questions posted by the protégés.

Most of the responses were one or two sentences and spoke only to the positioning of the chairs in the classroom. The briefest response came from CL who described the physical layout of his room as "rows". Three of the ten teachers reported that they do not have their own classrooms but are "floating" teachers. MR gave a little more detail about the room and YV described her ideal classroom.

...There are about 12 charts around showing math themes and properties of numbers, a big bookcase at the back and a sink, four glass windows at the right and a long counter containing geometric models (made by the students). At the left is the

entrance door and a TV set with a VCR. At the front is my desk, two big boards, a set of maps and a bulletin board. There are six lines of 4 student desks each, all of them facing the center of the board (MR).

....I do not have a classroom, because I am a floating teacher. But the ideal classroom has to be decorated with pastel colors, must have good ventilation and illumination, and be attractive for the students and the teacher. It is important to have posters and other resources related to the subject, but not to recharged, because a lot of material will distract the students without any positive result (YV).

These initial responses were used to set the parameters for future postings. All participants agreed to try and elaborate on their responses and they agreed that if the question did not fit their particular situation then they would try and make a different connection to the topic either through commenting on another participant's response or by describing how the topic might be relevant to their future classroom situation.

Responses to the first posting were e-mailed from each participant to the entire group. Participants were not asked to comment on other participant's responses, only to read them. Each participant gained a sense of the process through the initial posting and through my comments they received direction regarding future postings.

Posting 2: From Layout to Philosophy. As a result of the comments made through the initial posting, I asked the

participants to reflect on how an individual's choice of physical set up for a classroom may reflect his/her philosophy of teaching. I asked the participants to comment on a minimum of two different set ups. All participants chose to comment on exactly two set ups.

...People in my school like the rows because there is more control. The kids can't talk to each other so easily and so the teacher can better present his lecture (JP).

...the way that CA has his class set up in groups allows him to give his attention to each child individually because while he is helping one child then the kids in the other groups are helping each other, so everyone is getting attention. The kids have more individual responsibility for their learning and they develop better communication skills and they are more likely to remember the curriculum that they participate in through group activities (AA).

Some of the participants were still unclear about how to respond to other participants in the e-mail discussion group. They either made very general comments or brief congratulatory comments, such as the following:

...It sounds like you are a very good teacher (IL).

...Thank you. I got some very good ideas (WM).

Posting 3: Motivation and Questions from Participants. Many of the responses from the second posting included comments about things that kids liked which seemed an appropriate segue to discussing student motivation. I asked the participants to share their techniques for motivating students and to ask a question about motivation to the group.

Responses regarding individual student motivation techniques fell into three general categories: prizes, demonstrating that you value students, and teaching methodologies. There was considerable overlap in the responses and some near duplication of responses. Some responses continued to be relatively cryptic and others began to show a little more in-depth thought.

With respect to prizes and other forms of extrinsic motivation, suggestions were made by most participants about giving out candy bars and movie passes. A few teachers gave out stickers and others allowed their students to earn points to purchase pencils, pencil sharpeners, and other school supplies.

...candies, movies, working in groups with rulers, field trips
(MR)

...candies and prizes (OS)

...rewards like stickers, special pencils for holidays like Valentine's Day with hearts, parties in class and contest with points (JP).

Half the participants addressed issues of intrinsic motivation. They spoke to "showing that you care every day" and "being enthusiastic as a teacher". CL hit upon the concept of developing a sense of ability and attainability in terms of classwork when he wrote:

...Starting the students off with small projects that I know they can complete and then moving on to larger ones that are more

complex because after they see that they can do something small then they are more confident to try something harder (CL).

Several participants wrote about creating interesting classes and using a variety of teaching techniques. In general the techniques which they referred to were movies and filmstrips, field trips, and group activities. YV brought the discussion to a personal and practical level by sharing some of her techniques and tying them to specific interactions which she had with her students.

...I have to prepare interesting and varied classes. Not always use the same technique. If it is available, the computer is an excellent resource for teaching; an educative movie or cultural trip are good as well. My experience has shown me that students feel good when the teacher gets in touch with them. When I follow up and inform them about their progress, or positive comments as "you can do it", "good job", "try again", and happy faces on their tests. The teacher has to be honest. If the student fails, inform them why and what he/she can do to improve his/her grade. Periodically inform their parents (by phone or letter) about their child's improvement (YV).

The third posting was the first time that the participants were given an opportunity to "control the discussion". Each participant was asked to post a question about student motivation to the group. The mentors, who had only participated as readers to this point, were asked to respond to the questions. All participants were free to address any of the questions posted to the group. Five of the ten participants posted some form of the question "How do you motivate students?". Four students did not post a question and one student posted the following question:

...Where are we supposed to get all the money for these prizes?
(MV)

The mentors' responses to this practical question were very specific, as illustrated by this comment:

...Try and contact some of the local stores to see if they will donate prizes. Some of the local service organizations are also willing to pitch in. The Scouts will sometimes do fund raisers and if you petition your PTA then they will often try to get you the things that you need. Also you need to keep the prizes small. You can get a gross of stickers from the Oriental Trading Company for about \$2. If you don't have that catalogue then it is a must, I can make a few available if anyone needs one (NJ).

The responses from the mentors to the general motivation questions praised the methodologies used by the participants and suggested that they should try a variety of the techniques suggested by their peers.

...I have used many of the suggestions which were made by the teachers in your group. I like to always try and find different ways to get students excited about their school work (EM).

...Great ideas! I feel like I have picked up a few new ideas (MB).

Additional techniques which were suggested included creating individual contracts with the students, playing games in class, and earning "get out of homework free" cards.

...One of the best ways to do this is to get them involved in the planning and give them several choices. Some kids like to make up songs or posters which demonstrate their understanding and some kids opt for the test! Sometimes I have tried to get companies to donate prizes for the kids. Friendly's has given me free cone certificates and Big Y has donated bagged candy. If

you ask around your school someone may have access to some grant money so that you can build up a prize pool (EM).

One suggestion that I have is earned activities. We set a point total for an activity and the whole class works to reach that point total. They love to play "Math Baseball". When the class has earned 500 points they get to play Math Baseball. The class earns 1 point for each person who did his/her homework, 25 points if the class is well behaved, etc.. I keep a running total of points on the board and when we reach 500 the next day we play Math Baseball. I also subtract points when things aren't going so well. (MB)

The mentors chose to answer questions in a clustered format rather than respond to each individual question. They read all of the questions posted to the group and gave a single answer which encompassed common individual questions. One of the mentors asked if this was acceptable and when she was given approval all other mentors seemed to follow the same format.

...This question is for Eileen. Eileen, as I read the questions posted to the group and think about my intended response, I am unclear if you would like me to take each question individually or speak to the essence of the questions. Several of the motivation questions are virtual duplications of one another. How would you like me to proceed? (EM)

I responded:

...EM When the questions are similar it seems to make sense to post only one response. It would be helpful to let everyone know whose questions you are responding to in your subject line on your e-mail. For example I see your response as addressing questions posted by AA, CL, MV, YV, WM and JP.

A pattern emerged amongst some of the participants. Two participants who traditionally gave later responses appeared to repeat the questions and comments of earlier respondents. Here is

one example of OS's response which was posted five days after YV's response.

...I have to prepare interesting and varied classes. Not always use the same technique. If it is available, the computer is an excellent resource for teaching; an educative movie or cultural trip are good as well. My experience has shown me that students feel good when the teacher gets in touch with them. When I follow up and inform them about their progress, or positive comments as "you can do it", "good job", "try again", and happy faces on their tests. The teacher has to be honest. If the student fails, inform them why and what he/she can do to improve his/her grade. Periodically inform their parents (by phone or letter) about their child's improvement (YV).

I use variety. I use different techniques. I use the movies. I use nice comments. Sometimes I try and talk at the parents (OS).

At this point it appeared that OS and WM were waiting to read other participants' postings prior to posting their own. At this point I did not really know the participants well and I had a sense of "cheating". I struggled with addressing the issue on-line and decided to wait until we met at the workshop where I might get a better read of the situation. I was extremely grateful that I had not addressed the issue on-line since OS is an extremely shy individual who is working very hard to overcome her fear of groups and at the same time is trying to learn English!

Posting 4: Classroom Management. The parameters of each posting became more structured. Participants asked for clear instructions with each posting. They became concerned with what

my expectations were for the length of a response. The fourth posting had four components:

1. Describe your current classroom management style.
2. List 5 critical classroom rules.
3. Describe a classroom management situation which you have encountered and your resolution of that situation.
4. Write one classroom management question which you would like to see addressed by the group and the mentors.

Responses to the fourth posting were due two days before the third workshop. We agreed to answer the posting via e-mail but to address the questions and comment on the responses at the workshop. I have included two unedited responses to try and present the reader with a sense of the range of responses.

Appendix C contains unedited (previous entries were edited for grammar and spelling) responses from the other five respondents. AA, JP, and CA did not respond to the posting prior to the workshop.

In general the participants responded with the level of detail found in IL's response. They took each component of the posting and addressed it with a few numbered sentences or created a list. WM represented the minimalist response.

Two Unedited (except spell check) Sample Responses

Response from (IL)

1. Rules are set and enforced through the school year. Respect is stressed at all times. Discipline problems are addressed

promptly with no exceptions. Learning has to be challenging as well as fun. Students efforts are always recognized in class. Students know that I am available to help and that I care for them but they also know that I am the teacher.

2. Rules

- ◆students must arrive on time to class
- ◆students must have all the necessary equipment
- ◆respect for the teacher, themselves and others will always be present
- ◆chewing gum is not permitted in the classroom, eating is not permitted either
- ◆we come to class to learn, students are encouraged to try their very best

3. Situation/resolution

Problem students: In some cases I use these students to assist me in different activities in the classroom. I try to keep them busy so that they don't have time to create problems. I also have them seated very close to me, up front.

Tired or not participating: Stop the class for just a minute or two and have them stretch out. It works wonders.

4. How do you deal with student absenteeism and some student's low self esteem?

Response from (WM)

My classroom management style is firm. I do not allow people to act out in class. My rules are no talking when I am talking, no talking when the announcements are on, no talking when another student is talking, bring your materials and no getting out of your seat. I caught a boy cheating on a test and I gave him a zero. My question is how can I be the best classroom manager.

Mentors did not respond via e-mail to these postings. They were asked to hold their responses for the third workshop and to design

mini-case studies which reflected the concerns addressed by the protégés in their responses to Posting 4.

Workshop 3

The topic for this workshop was determined by the participants. The selection of classroom management as a workshop topic came from our on-line discussions about classroom management. Several postings regarding classroom management and several participant generated questions about classroom management led to this topic.

We used a case study approach to the workshop in which we reviewed several case studies from Discipline in the secondary classroom: A problem solving approach (Sprick, 1985) and used several of the management issues which had been posted to the e-mail group (See Appendix D).

When the participants came together for the third workshop, a different group dynamic existed. A sense of group cohesion was immediately evident. They had not been together as a complete group since the first workshop. At the first workshop they were strangers. At the third workshop I had a different sense. I commented that I felt a new dynamic and several participants agreed.

...I feel like we are kind of pen pals meeting for the first time (IL).

....This is so funny, the whole time that I was writing I was picturing IL as OS and now I am putting the correct face onto the writing (MV).

...This is fun but it's not anonymous anymore. I better watch how I write (laughter) (JP).

Another dimension which had changed was that the group was smaller. CL, AA, and WM had not continued their employment with the LPS and they discontinued participation in the program. Two of these individuals left the country and AA did not wish to have an exit interview. DM also discontinued as a mentor for reasons which were related to her relationship with SPSPDC.

We opened the workshop with a free writing exercise in which the participants described how they felt about their participation in the process. Participants then paired up and shared their experiences. The general consensus was that they were learning a significant amount about the technology and that they were spending a lot of time analyzing their own teaching. Unfortunately I forgot to collect their comments and when I later asked them to mail them to me they were unable to retrieve them. I did not press the issue because I did not want to remind them that all of their thoughts were being recorded as part of a research project.

The primary activity for the workshop was processing case studies that addressed classroom management concerns which the participants had written about in their e-mail entries. The mentors had designed mini-case studies which addressed the protégés' concerns.

The group worked in three subgroups which consisted of a mentor and two or three participants. Each group was given a case study of the mentor's creation and asked to describe similar events from their teaching experience and discuss ways in which similar situations had been dealt with, and make suggestions for how these situations should be dealt with in the future. The groups then presented their cases to the class. I circulated amongst the groups while they processed their case studies. Groups then presented their case studies.

Each group was able to relate to their assigned case study. A significant amount of story telling and reliving of classroom events took place during the processing of the case studies. This period bonded the group. One example of a case study was Group 1's presentation:

CASE 1: Carlos is an excellent student. Whenever Carlos participates in class a small group of 4 students ridicule him. Sometimes the ridicule is confined to exchanged glances and snickers but at other times sarcastic remarks are made aloud. Accusations of teacher's pet and nerd are continually hurled at Carlos both inside and outside the classroom (Created by EM).

The group described what they felt were contributing factors and major areas of concern. They identified that any action taken on the teacher's part needed to protect Carlos from further embarrassment. A key point was made regarding how teachers often feed into the problem with a "why can't you be like Carlos" attitude.

IL shared a story which offered a different perspective. She explained how she had a similar situation in her class and when she went to address the issue the "target student" asked to be able to address her ridiculers. IL explained how she stood up and "put them in their place". IL described how "She did not offend them but she defended herself ... this is the type of kid who will run the class with you!" The student informed the other students that she was there to do her own work and that she was there to learn. IL explained how this really worked. When the victim stood up for herself the other people simply backed off. Stimulating dialogue ensued as a result of the sharing of this story.

Posting 5 & 6: Classroom Management. As a follow up to the classroom management workshop I asked that all participants locate ten references for classroom management on the Internet. I asked that they share their web sites with the group and that no web site could be repeated (the intent was to reward early responses). I also asked them to convey some of their learnings

about classroom management to the group. I did not specify any other parameters. Responses fell into several categories: need for management, management styles, additional information on rules and consequences, specific strategies, relationship building, and safety.

I also noted a change in writing style for many participants. The writing seemed more formal and the language patterns adhered more closely to accepted grammar and usage. For example in her response to Posting 3 YV gave a cryptic and unstructured response. In contrast, in her response to Posting 5 her sentence structure was much more clear.

From Posting 3

Not alway mi class are formol. I try tobe positive minded teach4r. I have good humor and bee a good modl for my students (YV).

From Posting 5

When you start a new year, it is not easy. There is not a classroom free of discipline problems. As an educator we have to be ready to begin the year with firm strategies for handling student misbehavior. (YV)

During a break in the fourth workshop JP helped me to understand this change in dynamic. He explained how once you know someone as a person it is more important what they think of you. He said how he was more cautious with how he wrote after meeting everyone again because it was important to him that they

recognize that he was intelligent. Several others added similar comments to a casual conversation on the subject.

Need for Management

In their on-line discussions many participants identified the need for good classroom management strategies. They spoke to the difficulty of teaching as a whole and ways that classroom disruption can overshadow intended learning outcomes.

Teachers work very hard! Anyone who has taught knows that teaching is often fraught with situations that place instruction on the back burners. Every teacher aims to accomplish the goal of taking care of all of those other tasks in order to allow real teaching to continue without interruption (OS).

People like my mother advised me to come off extremely authoritative my first few months. I can not remember how many times she said, "Whatever you do, do not smile until Christmas!". She was not alone in these sentiments, others advised the same course of action (JP).

Without proper management skills, what the teacher has in the class is a large group of kids with a free ticket to do as they please, and at any given moment it could be a volcano ready to erupt. Teachers that don't have control of their classes face many unwanted problems and situations; in addition, they are unable to or are hindered from complying with their ultimate duty, which is teaching (IL).

Management Styles

In our workshop we had addressed how classroom management issues can not all be solved by "recipes". A "custom fit" is necessary for each individual teacher to determine which specific strategies fit in with his or her teaching philosophy and patterns.

Several individuals elaborated on this concept in their responses to the fourth and fifth postings.

I needed to find a management program with which I felt confident. In retrospect maybe all first year teachers have a hard time because we are not sure of the effectiveness of discipline programs. I decided to speak to my peers and emulate a program with which I felt most comfortable (JP).

All kinds of techniques have been crafted for teachers to allow them to handle all kinds of situations in the most practical and efficient manner. Teachers should aim to use the methods that are workable for them and that creates an appropriate environment, which enhances learning. Like EC said we don't all want to be the same (IL).

After the readings about classroom management, I have seen that all the planned and spontaneous tricks used to deal with students' behavior and control become the management plan of action for the teacher. The wise teacher, using active listening and observation skills, helps the child begin the process of becoming an active member of the group (OS).

Mentor responses also addressed the idea that management is dependent on the situation unique to each class and the daily tolerance level of the teacher.

Classroom management is situational. The variables are in a constant state of change. Who are my students this year? What is the chemistry? What is my tolerance level at this point in time? How you deal with a given situation is dependent on the students, your style, and your mood. I can handle many problems in my first period class that I am too tired to deal with in my last period class (MB).

The mentors responded to the protégés' comments with support. They presented their own feelings about classroom management and shared some of their own struggles with management. The mentors' tone did not reflect one of expertise but rather one of

co-experiencers. The mentors responded to the protégés comments with support.

All of you have captured the essence of how I feel about classroom management. An example of what happened to me regarding MB's comments is that I had a student who kept tapping a pencil. I had asked him to stop. He didn't. I lost my temper and grabbed the pencil and broke it in half. A piece of it flew up and hit another student. I usually never lose my temper. What I learned from that experience was that MY BEHAVIOR was much more disruptive to the class than the student's. My loss of control ruined the learning environment (EM).

Management never gets much easier. We share many of the same concerns. Like MB said, all that you can hope for is to learn from each new experience (NJ).

I am grateful for a rotating schedule so that the students can see the different ME. I have made mistakes which I will NEVER make again. I learned from them. The hope is that we can learn from other people's mistakes (& strengths) so that we don't have to make them ourselves (MB).

The mentors' willingness to share some of their own stories made them seem more human and more like the protégés'. They offered their stories as a way of acknowledging the difficulties of the job but they also left the protégés with strategies for implementation and hope for the future.

Now when I feel myself about to explode, I count to ten and then I announce to the class in calm voice, "I just counted to ten and I still need to calm down. Please be aware that I am frustrated and that I need your help so I won't lose my temper". They usually respond really well and I feel much better because I didn't lose my temper (EM).

Even though there is no recipe for dealing with issues in the classroom, the reason it is good to discuss them is to build your repertoire of possible solutions/reactions to a given situation (MB).

Rules

The posting prior to the third workshop had dealt with classroom rules as part of the management system. Several participants went back to the issue of classroom rules and reflected on the purpose of rules in the management process.

It is important that students understand that through out our whole life we have to follow rules. As a brainstorming exercise, we can start mentioning some of those rules. If we don't follow them then we must face their consequences. As an example: we must follow natural laws, stop in the red signal, don't steal, etc. (YV).

If students take part in making their own rules, they may find it easier to follow them. Once you have your rules, students should receive a written copy of the rules and they have to be enforced. What is the use of making rules if you are not going to enforce them (IL)?

I took the first week of school to develop a set of rules that I wanted all of my students to abide by. I wanted the rules to be somewhat flexible so new rules could be added or changed according to the need. I was advised by my mother, who is also a teacher, to limit my rules to five basic ones. There is no need to reiterate a rule that the school already recognizes as an infraction (JP).

Protégés expressed confidence in their rule setting practices.

Each person spoke to the specific methodology which s/he experienced in setting his/her classroom rules.

Consequences. Participants recognized the need to address the concept of rule violations when addressing rule setting. Several participants recognized that consequences needed to be immediate, appropriate, and consistent. The first response to be posted to the group came from MR. He took a humorous approach:

Little Tommy was failing math as a result of poor behavior. His parents had tried everything: tutors, flash cards and special learning centers. As a last ditch effort they took Tommy and enrolled him a high discipline local Catholic School. After the first day Tommy came with a very serious look on his face and he went straight to his room and did his homework. This went on for some time and his mother tried to understand what made the difference. Finally Tommy brought his report card with an A in math. His mother asked "Son, what was it? Was it the nuns? The books or the discipline?". Little Tommy shook his head, "No!". "Well then," she asked, "WHAT was it"? Little Tommy looked at her and said, "Well, on the first day of school, when I saw that guy nailed to the plus sign, I knew they weren't fooling around!" (MR)

Rules would have no value if there was no consequence behind them. In my classroom when I tell my students that I am going to write them up, or that I am going to call their parents on a specific night, I always follow through with that. Lee Canter says that it is important that our students know that you are the kind of person that stands behind your word. Consistency is the key (JP).

Conflict in the classroom can be handled in a manner of ways. One of these ways would be to implement both positive and negative consequences in the classroom. Some of these could be; (1) be consistent, (2) make sure that students understand consequences, (3) be firm without anger, (4) don't embarrass a student in front of peers, (5) catch a student being good (Curwin & Mendler, 1988). In order for this technique to work, you must always follow through on the consequences. (IL)

Strategies

Specific strategies for designing a management system were offered by the participants. Some of the strategies were personal strategies and some of the strategies were direct citations from the information they had found on the Internet.

Several of the personal strategies dealt with ways that the teacher could get control of a student and keep his or her own behavior in check. The fall back onto the classroom rules was one of the most common strategies.

Teachers always try to be CALM, and with respect, but firmly remind them of the classroom rules (YV).

The first thing that I get is the students' attention, the first day of class. This is a good time to establish the home court advantage. I discuss the rules and my expectations of them. I would try to establish a good relationship with each student. I will try to ensure students' safety (CA).

The protégés began to use the computer to track information as well as participant communication. Participants began to cite readings and gave web site addresses where they had located helpful information.

Two great sources for ideas were "Positive Reinforcement - A Wonderful Tool For Classroom Management" and "Techniques for Better Classroom Discipline" from these sources I received eleven techniques for effective group management and control (YV).

I found these seven strategies on the net: Classroom rules posted, stop doing ineffective things, be fair and never treat everyone the same, Model what I expect, be consistent with the nature of the infraction and the consequences, always treat

students with dignity, encourage responsibility and obedience (OS).

Participants offered specific strategies which ranged from setting up a productive classroom environment to implementing consequences for disruptive actions.

The next thing that I will do is to keep the flow of events moving in smooth rapid transitions. I always have my materials well organized and ready to go. I try to get the most advantageous use of my classroom space (CA).

When it is required inform the students to stay after school hours and talk about the situation. If after call his/her attention, the misbehavior continues, it is better to refer the student to school guidance, who is profession to deal with these problems. (I got this information from one of my web sites - very helpful) (YV).

Relationship Building and Safety

Participants recognized anonymity as a barrier to effective classroom management. They spoke to the need to get to know your individual students and their individual needs. Their suggestions ranged from reaching out to students prior to the academic year through individualizing the curriculum.

Kevin Angulaski also stresses the importance of building relationships with students. Angulaski recommends contacting students before school begins to advise them that you are their teacher and that you look forward to meeting them. In my opinion, the main reason why an educator should establish a relationship with all of their students is because, in this way, the educator will be able to notice when a particular student is acting out of his/her norm. These things may be indicative of problems taking place outside of my classroom. (JP)

First and foremost we must be well grounded in our knowledge of the characteristics of our students. Then we can match our expectations to the abilities of our children and provide experiences that are destined to succeed. The antennae of children are fine tuned, and quickly pick up on the interests and intentions of the teachers. When the message is "I care about and respect you", children are more willing to join in the teacher's effort to maintain group norms (OS).

Creating a safe environment, both physically and emotionally was cited as important by several of the protégés.

Students like to feel and know that they are safe and that they will be respected in their classrooms. Contrary to what most people believe, students like teachers that are organized and that they have everything well under control. I can't think of a more unpleasant sight than going by a classroom, where student are doing what they please, and there happens to be a teacher there, who has given up, and simply surrendered to the whims of his or her students (IL).

In my opinion, an ideal classroom is, above all, a safe haven. Students have to feel comfortable or this will hinder their academic performance. I want to see students who do not feel pressure if they pronounce a concept wrong (JP).

Workshop discussions later revealed that many calls for classroom safety were rooted in overcoming negative experiences which many participants had faced as students. For many protégés, racial, ethnic and language barriers created environments in which they felt threatened by their peers and teachers. Many of them felt that these same barriers existed for them as teachers in the LPS. MR explained how we need to go beyond making students feel accepted and safe and make sure that they feel special.

The teacher must always be on the look out for sparkling moments. These kids are far more talented and gifted than they

The teacher must always be on the look out for sparkling moments. These kids are far more talented and gifted than they often seem. They are full of creativity, play, spontaneity and good cheer. They tend to be resilient, always bouncing back. They tend to be generous of spirit, and glad to help out. They usually have a "special something" that enhances whatever setting they're in. We must remember that there is melody inside that cacophony, a symphony yet to be written (MR).

Through her research on the Internet OS happened upon a quotation which she felt summed up the teacher's role in the classroom. She made a nice copy on her computer and presented each participant with this quotation:

I have come to the frightening conclusion that I am the decisive element in the classroom. It is my personal approach that creates the climate. It is my daily mood that makes the weather. As a teacher, I possess the tremendous power to make a child's life miserable or joyous. I can be a tool of torture or an instrument of inspiration. I can humiliate or humor, hurt or heal. In all situations, it is my response that decides whether a crisis will be escalated or de-escalated, and a child humanized or dehumanized. (Dr. Haim Ginott) (OS)

This posting concluded the formal discussion on classroom management. The group had made significant progress towards understanding their own classroom management style and understanding other strategies for classroom management. They were all able to locate web sites (Appendix E) and to cite language from their readings to include in their postings.

They were bonding as a group, and through their reflections they were able to peer into each other's classrooms. The presentations in class allowed participants to view individual

delivery style and to be part of history as OS gave her "first ever" presentation in English.

I was pleased with the depth of their reflection and with their willingness to share questions and successes about their teaching. The real sense of community was formed when they came together for the third workshop, and found that community could thrive and grow via on-line communication once it had been solidified through personal interaction.

Workshop 4

The topic for the fourth workshop was assessment. Results of the newly implemented Massachusetts Teacher's Test were a topic of heated discussions in the media and among public school teachers. The participants wanted to discuss the teacher test and its implications for future teachers. They asked that we discuss assessment at our fourth workshop and discuss ways that we can assess readiness for standardized tests such as the Teacher Test, the IOWA test, and the MCAS. They did not separate standardized tests which measure teacher readiness (MA Teacher Test) and tests which measured student achievement (IOWA and MCAS).

Participants were asked to be prepared to discuss their grading strategies and to be ready to present a variety of assessment tools. Specifically they were asked to bring a sample test/quiz, project directions, and a write up of some form of authentic assessment

which they could share with the group. They were also asked to jot down a working definition of assessment.

We began the workshop with the definition of assessment. Several protégés offered their definition. They recorded their definitions on chart paper and hung them up in the room. Some participants used their own words to define assessment and others used references from the readings and the Internet.

For me assessment is an essential part of my classroom. It is a way to gather information about what the students know and can do. Also it is a tool to provide feedback to teachers, students, and parents. Assessments target difficulties that students can have on a particular area, and it can help to plan instruction to meet those difficulties (MV).

"Classroom Assessment is a simple method faculty can use to collect feedback, early and often, on how well their students are learning what they are being taught. The purpose of classroom assessment is to provide faculty and students with information and insights needed to improve teaching effectiveness and learning quality. College instructors use feedback gleaned through classroom assessment to inform adjustments in their teaching. Faculty also share feedback with students, using it to help them improve their learning strategies and study habits in order to become more successful independent learners" (<http://www.siue.edu/~deder/assess/catmain.html>) (OS).

Once the group had a working understanding of assessment, I attempted a brainstorming activity to determine "Why do we assess?". IL was the first to volunteer, and she had researched the question prior to the workshop. She shared her information and was joined by YV who had also done research but not recorded the source.

There are four main reasons why teachers assess their students (Popham, 1994): (1) to diagnose students' strengths and weaknesses, (2) to monitor student progress, (3) to assign grades (4) to determine teacher's instruction effectiveness. Overall, it has been stated that teachers assess in order to make decisions regarding their students and regarding their teaching (IL)

1. Helps teacher develop a more complex relationship with students by providing concrete pieces of work for teachers and students to discuss.
2. Helps student answer the question "Am I getting it?".
3. Can help make connections clear.
4. Engage students directly in the evaluation of their own work.
5. Helps teachers plan the next step. (YV)

We had a lively discussion about how the purpose of assessment had transitioned from a system of differentiating among student abilities to a multipurpose system. Participants shared their grading rubrics and found them to be relatively similar.

Issues surfaced around individual student grades being used against teachers and school principal positions being tied to standardized test scores. Many teachers felt that when they gave grades which reflected student ability they were chastised for having too many students fail. In many cases the students' absenteeism contributed to their low grade and not the delivery mode of the teacher.

A mentor (MB) brought the discussion to a new level when she reminded the group of OS's e-mail posting regarding "be fair - don't treat everyone the same". MB said that she remembered a

quote that said, "There is nothing so unequal as the equal treatment of unequals". This stimulated a discussion around how we grade students of different abilities. Does an A for Max mean the same as an A for Yolanda? Participants shared and debated their views. The level of consideration which we give to effort is highly debatable. There was no resolution, only lively discussion.

The primary activity for the workshop was the individual grading of two sample answers from the MA Teacher's Test. The study guide provides sample answers (good and bad) to help individuals prepare for the test. Each question is graded 1-4 with 4 being the best answer. I asked the protégés to individually grade two sample essays, one of which had been scored a 4 and the other scored as a 1. All workshop participants were asked to grade the essay as if it were a twenty-five point essay. I used twenty-five points in the hope that there would be disparity in scores that would stimulate discussion.

There was a wide range of scores and a lively discussion ensued. From the discussion we were able to learn that some individuals set up scoring rubrics and others used a gut feeling for scoring. We strategized ways to ensure that validity and reliability could be attained. The question of inter-rater reliability really hit home with many of the participants who spoke to the problems in

their schools as a result of "easy" and "hard" teachers teaching the same courses.

The workshop ended nearly forty-five minutes late and the participants were still engaged in lively discussion as they descended the stairs. The participants were at a point where their active involvement in the workshops was no longer forced. They were intrinsically motivated. The personal benefits were evident in each of our discussions and their willingness to stay beyond the time limits indicated their thirst for personal growth through group involvement.

Posting 7: Assessment

They were asked to respond to this question, "What types of assessment tools do you use?" as the seventh posting via their e-mail discussion group. JP was the first to respond to the posting and he explained his justification for the percentages involved in his grading rubric. A second protégé responded to JP with an unweighted explanation of his rubric.

... My assessment techniques for all classes are as follows Tests 20%, notebooks 15%, homework 15%, class participation 15%, quizzes 10%, reports 10%, current events 10%, and preparation 5%. I want you all to know that I labored over this layout for a year now and this is the end product. (JP)

I evaluate each student on a total person concept. The first thing that I evaluate is the student attitude and how well the student gets along with others. The second thing that I evaluate is the student effort, for example: is the student trying. The third thing that I evaluate is discipline or how well he follows

the rules. The uniform wear is part of my assessment. The uniform must follow the requirement (CA).

One of the mentors (NJ) asked that everyone respond with his/her grading rubrics. Most individuals presented similar percentage-based rubrics where the ranges for categories were tests 20%-40%, quizzes 10%-20%, participation (effort) 10% -25%, discipline-attitude-behavior 15%-30%, homework 10%-25%, attendance 10%-15%, shop 30%, project-reports 10%-20% and neatness 5%.

Three of the protégés wrote about how they "begin with the end in mind". That is, they determine what it is that the students must know before they actually design the assessment tools and then design the lesson which would ensure that students learned the material well enough to be able to demonstrate their skill via the authentic assessment tool.

Assessing students' performance has always been a difficult task for me. The most difficult part is deciding what I want to place the most emphasis on. Several factors play into the decision, but ultimately it boils down to - what do I want my students to walk away with (JP)?

You should start with the test in mind. Create the test first and then teach to the test. People say that teaching to the test is bad but if you first determine what you want them to be able to do (your tests questions as objectives) and then you teach them so that they can do it, then I do not see how this is bad (MR).

We, as teachers, have to keep in mind that students have different levels of prior knowledge concerning the assessment process. For this reason we have to establish and explain to out

students at the beginning of the school year our assessment procedures and which will be the goals for the year (YV).

These responses demonstrated that the protégés understood outcomes based assessment and that they were able to design their lessons to facilitate the learning which they hoped to measure through their assessment tools. The assessment portion of our on-line discussion was one which allowed the protégés to speak to their strengths. They were clear about how they should assess students and about how they meet the individual needs and learning styles presented by their students.

I posed the added question: how do others feel about teaching to the test? Several people responded with ideas about teaching to the test.

Educational standards has to be a major factor to all kinds of educators. In this day and age, where standardized tests are indeed a reality, no educator should ignore their importance! The race for governor has opened many educators eyes to the use of standardized tests as a political tool (JP).

Who chooses the test that we are teaching to? If I determine what is best for my class and design a test to measure what I think is best and then I teach for successful completion of the test ... then teaching to the test is good. If I am teaching to some standardized test and I don't agree that that is even what the kids should know then that is bad. But necessary! (IL)

The protégés expressed frustration with the standardized tests but willingness to accept the need for some general standards. IL explained that teaching to the test in general has no meaning. If she is teaching to the test which she determined as the best

outcome assessment then it is an authentic instrument and teaching to the test is simply another way of teaching to the expected outcome. The mentors responded to several of the comments made by the protégés:

I love what IL said! They really are two different ways of looking at teaching to the test. I think that we should always have our outcome assessment tool in mind as we design our lessons and that form of teaching to the test makes sense. While I don't necessarily agree that all of the standardized tests are authentic assessment tools, they are a reality and we do our students, our schools and ourselves a disservice if we don't prepare our students to succeed in the standardized environment (MB).

Standardized tests.... oooooo what a happy subject! I find that I spend a lot of time just trying to reduce student anxiety around standardized tests. As much as I hate them ~ I do have to admit that I love how much my students appreciate having me back as their teacher when the tests are over!! (EM)

Whether you are talking about classroom or standardized tests, teaching to the test is not good when the emphasis is on a test score rather than on the learning. We need to help our students pass all kinds of test (EC).

The discussion moved from issues around teaching to the test to issues involved with using multiple forms of assessment and finding the right balance in assessment.

For me, assessment is the set of all the different alternatives I can use to evaluate work done in the classroom. My classroom assessment plan of action consists of formal and informal assessment. Some examples of formal assessment that I use are: Skills tests, writing journal, personal portfolio, cooperative learning, homework, reading profile, and writing profile. Some of the forms of informal assessment that I use are: group projects, individual projects, oral presentations, demonstrations, experiments and discussion groups (OS).

Sometimes informal assessment is as simple as stopping during instruction to observe or to discuss with the students how learning is progressing (MR).

Learning is going on continuously, and one of the goals of assessment is to organize learning so that it is visible and documented. Assessment tools should be sufficiently diverse as to include all students regardless of background and skills, yet specific enough to be meaningful to the students (IL).

After the general comments about assessment had been posted by the participants, I asked them if they had any favorite assessment activities which they would like to share with the group.

My favorite two types are my own. MINUTE PAPER - during the last few minutes of class I ask the students to answer on a half sheet of paper: "What is the most important point that you learned today?", and, "What point remains the most clear to You?" My second favorite is CHAIN NOTES - I write a question about the class and students pass it around one envelope with one question. When the envelope reaches a student he/she spends a moment to respond to the question and then places the response in the envelope (OS).

Other techniques I use is self-assessment. They can compare their work over time, create evaluation criteria for a project, discuss their strategies for reading difficult texts, work with peers to evaluate and revise a piece of writing, and judge their reading preferences and habits by reviewing peer journals (OS).

I use a portfolio because it is an ongoing evaluation of students and with portfolios students have self-evaluations of their work (MV).

One classroom assessment technique I use for getting feedback on student learning is QUICK EXERCISES - during the last ten minutes of class, I ask students to answer some worksheet with sample problems very similar to the ones given as examples (MR).

One of the mentors also shared her favorite assessment activity.

There is this show on Nickelodeon called "Win Ben Stein's Money". Most of the kids have seen the show but at the beginning of the year I show a little clip of the show and once a week for review (informal assessment) we play "Win Mrs. M's treasures". They play for points (\$ amounts) and then at the end they can use their points to select something from the treasure chest at the back of my room. I get ice cream certificates and small prizes for the treasure chest. They love it and I can see what they know (EM).

The participant group investigated a wide variety of assessment techniques. Individuals shared their favorite ways to measure student learning and each person seemed to feel that they had new ideas for his/her bag of assessment tricks. Not surprisingly, the debate over the purpose of assessment and the best way to assess was not resolved by this group. Posting 7 and the subsequent questions which emanated from Posting 7 represented the last formal exchanges for the e-mail discussion group. The final workshop was held two days before the onset of the 1998-1999 academic year and the participants were asked to bring sample lesson plans for the group to review.

Workshop 5

The topic for the final workshop was lesson planning and strategies for teaching. We used protégés' lesson plans to stimulate discussion around setting objectives, creating anticipatory sets, and deciding on appropriate student-centered methodologies. The

protégés were broken into 4 groups with one mentor (myself included) facilitating an assessment of each person's lesson plan.

Each group was asked to edit the lesson plan for grammatical and logical errors and to identify the "red flags" (places where the lesson could fall apart). As a group they needed to decide on at least one alternative way to teach the material presented in the lesson. The small groups never came together to report out to the large groups; they elected to remain in the small groups because they felt they were getting useful information.

Concluding Commentary

As I reflect on the group's transition from Workshop One to Workshop Five I realize that this could easily be a study of group dynamics. The participants started out as virtual strangers and ended as a true support group. In the beginning the postings were cryptic and I had a sense that the participants were minimally invested and were simply trying to meet the requirements. By the end of the study they were sharing of themselves, offering critical analysis of each other's work, and bonded by friendship and collegiality.

At the conclusion of the initial interviews I was concerned that I had undertaken a project which went far beyond the scope of my original intent. I had intended to complete this project with four first year certified math teachers who were comfortable with

technology. Instead I was presented with 10 uncertified teachers who were computer-phobic and with whom I faced language barriers, cultural barriers, content area and grade level barriers. I felt as though my expertise was a complete mismatch for this group.

The first workshop affirmed all of my fears. The group needed a great deal of assistance with the technological components and they felt coerced to participate. Through the technology workshops I was able to help them become familiar enough with the medium to be able to respond to the initial postings. The initial postings were painfully dry and no sense of community seemed to emerge.

The third workshop was the turning point. Participants came to the workshop ready to engage with one another. They were meeting their "pen pals" and they were excited. At this point they were there for themselves and their original reasons for participating were forgotten. At this workshop and in subsequent postings and workshops the group acted with a sense of community and collegiality.

Participants began to respond to postings on a personal level and to be able to envision the writer's situations. The medium came alive and became a personal mode of communication. Individuals were able to "hear the message" as if the writer were speaking to them. Passion became part of the e-mail postings and

the writer's voice shone through in his/her words. The combination of these events made the project a success for me and for the participants.

Concluding Interviews

The purpose of the concluding interviews was to directly address the research questions and to allow the participants to experience some closure with the process. The research questions were integrated into the concluding interviews as major open ended questions, each followed by more specific probes where necessary.

How does continuous on-line support/communication affect the mentoring process? How do protégés and mentors feel about on-line support as a component of the mentoring process? How does participation in a group e-mail discussion influence reflection about teaching? How does an e-mail discussion group facilitate conversation about teaching?

Computers as a Communication Medium

I began by asking the participants how they felt about e-mail as the medium for conversation. The responses fell into two general categories, "I like it" and "I liked it after I really got to know the participants".

"I Liked It". Several of the participants really enjoyed using e-mail because it allowed them to take the time to think about

their responses and to review them before they sent them. It seemed to give new meaning and possibility to the concept of “think before you speak”.

I felt like it made me take the time to think about what I was going to say because it was so permanent. I hated if I hit send before I remembered to spell check. I felt like it made me take the time to think about what I was going to say because it was so permanent (MR).

Many of the participants for whom English is a second language found the computer to be an accessible medium because it allowed them to be understood in ways that the spoken language did not allow.

I sometimes don't get to speak up in group situations because it takes me a long time to think about my answer and either someone else says it or the question is gone. Sometimes someone else would say it first but I would still say it in my posting!! (MR)

I really like the computer because, well I was really scared of it, but people can understand what I say when I write it down (OS).

Two individuals addressed how language differences and difficulties were minimized by the computer.

There are no accents heard on the computer (MV).

Everyone was very good when I did my presentation but I know that people could not understand some of what I said because of my different language. But I think that they seem to understand what I write (OS).

Two of the individuals who were the most fearful of the technology at the onset fell into the "I like it" category and were very proud of their accomplishments.

My friends are very surprised when they get e-mails from me. They say oh my goodness you can use a computer, you don't even know how to use an ATM. To be quite honest, I am very proud. But, like you promised, you showed me how to make it work and now I am a "surfer" (laughter) (IL).

I don't even think about the machine any more. It IS like driving a car. Now I want the sports car - this is going to be an expensive hobby (laughter) (JP).

Even though IL loves the "stinking machine" she realizes that it holds her back from engaging in oral communication. I have to laugh as I envision her gesturing to her computer and trying to put her passionate inflection into the typed word!

It took some getting used to and I really do love to talk so it was especially hard for me to not be able to talk and to try to use the stinking machine! If you ever saw me when I was typing you would laugh at me because I am still talking out loud... all by myself (laughter)!

It was very moving to hear people say that they had become comfortable communicating via a medium that they were previously terrified of operating. They felt a real sense of empowerment, and expressed their gratitude. When I had worked with them during the first workshop their anxiety levels prevented us from engaging with one another. By the exit interviews they were laughing at the very things which had caused this anxiety.

"I Liked It After I Got To Know the Participants". Several of the participants who concluded that they "liked it" stated that they only liked it after they really had a sense of who they were communicating with on the e-mail. They did not like the anonymity.

I really did not like the first postings. I felt like I did not know who I was talking to and I felt like I was being judged by masked judges (JP).

It really wasn't comfortable for me until I knew who I was talking to ... after the third workshop I felt like I really was COMMUNICATING rather than writing an anonymous note. (JP)

It was good after the get together. Before it was kind of like oh boy I better do my assignment. (MV)

Prior to conducting this research project I had honestly believed that I could create a sense of community on-line. I had thought that the anonymity would allow people the freedom to take risks in conveying the problems which they encounter while teaching. This group did not want to be supported by strangers. They really built the community when we came together and that allowed them to "put a face on" the communications which they received. This group has shown me that a combination of face-to-face and on-line is the way to go in this type of study.

The mentors seemed to share similar views:

Some people seemed to feel that they were more comfortable with the computers once they had connected with the other protégés but I do not feel that this was the only element which

helped them to feel comfortable. I feel that the computers worked better as the participants used them more and their computer phobia was alleviated (NJ).

..I definitely think that this was a good experience for everyone involved. Using the computer is something that is part of our reality. They now have a skill which they did not have before. By the end they all seemed comfortable having conversations on-line. (EM)

On-line Component of Mentoring Experience

The participants felt that actual mentoring had not occurred. They felt that they learned from one another and that the mentors helped with some things but they did not participate as much as the protégés.

...It really isn't fair that they got paid. We did more to help ourselves than they did. Except you. I don't mean you. (CA)

...It did not feel like mentoring. We were all working together. They were not in charge, you were. You really directed the group as the teacher. (OS)

...I guess it was kind of mentoring because they were the experts but they did not really tell us what to do or how to make things better. I appreciate their input but it wasn't what I think of when I think about mentoring. (JP)

The protégés still seemed to define mentoring as a teacher-student hierarchical relationship. The mentors were supposed to teach them something or fix something in their teaching. According to their perception, mentoring had not occurred because the mentors did not assume the teacher role. Part of this seemed to be cultural. The protégés' definition of

mentor seemed to emanate from their understanding of a leader who does not have a participatory style.

The mentors were happy with their individual level of participation. They stated that the project really allowed them the flexibility which they needed to participate.

I have been involved in a wide variety of mentoring programs and I really liked the flexibility of this program. We were able to make time in our busy schedules to respond to the protégés (MB).

This was terrific. The computer really addressed the major concern that I have about being involved in mentoring - where can I possibly find the time (NJ).

The mentors recognized that the most over committed teachers tend to volunteer to mentor and e-mail allows them to work within their available time parameters. One mentor even expressed sadness when there wasn't "work" for her.

You usually find that the teachers who volunteer to be mentors are also the same teachers who are significantly over committed. It is certainly true of my schedule. It was really nice to be able to switch on the computer at my convenience, and still feel like I was meeting my mentor requirements. (MB)

I was disappointed the times that I would find no e-mails. I will miss the group. (EM)

One mentor confirmed for me that the mentors were somewhat underutilized. She did not complain but it did reinforce what the protégés had stated in their interviews.

We did not have a lot of responsibility but I felt like you used our expertise appropriately (NJ).

The mentors agreed that on-line mentoring could help to assure continuous and convenient connections between protégés and mentors. I had a sense that the mentors would try to incorporate on-line mentoring into future mentoring programs within the LPS.

Reflection and Communication. The protégés identified times that the computer allowed them to really take the time to process information and their responses to new information. They seemed to feel that they were able to dedicate time to reflection and then engage in conversation because the medium did not require immediate responses.

I noticed a difference between being in class and being on the computer. I still did not get to talk very much in class because everything was moving very fast - well I am sure that it is not very fast for you and the rest but for me it is still very fast. With writing rather than speaking, I could really think about my answer before I gave it. For me in learning the computer, English, and more about teaching the computer made it so much easier for me to give answers, to think in detail, and then to be able to give the answers back as sharing with the group.
(OS)

Some individuals implemented a writing process in which they “drafted” their responses and held them as draft documents and then went back and reviewed what they had written prior to sending the e-mail. This process allowed for continued reflection and refinement of their responses.

Reflection is so important. I learned to read the questions and other people’s answers and start my response in draft form. I would save my e-mail as a draft and then I would edit it with a more in-depth answer. Because I did not answer and be done at

that point but I continued to go back to my answer before sending then I believe that I really reflected more in-depthly than I would have in a normal conversation (JP).

This reflection also allowed individuals to take the time necessary to present their views in a well thought out response.

When we write something down then we have to give it more careful thought. That makes us reflect more on what we are saying so people will not think that we are not smart (MR).

A drawback of this well thought out response is that expectations are higher and some individuals feel that when they write something down it is a permanent record which can be judged by the reader.

But the computer also makes everything more formal and easier to judge. I would like to have the advantages of the thinking but not the judgment of the writing. We need computers that we can just talk into (laughter) (MR).

In my culminating interview with IL I was continually drawn into her analysis of the situation, her passion for teaching and learning, and her genuine kindness. Her words about on-line communication demonstrate to me how the medium can cross so many communication barriers. IL had spoken frequently of not being heard and of assumptions which people made about her because of her "language deficiencies". Her comments about being heard in our communications moved me to tears.

I have to laugh - it is like you said - we really get to finish our sentences when we talk on e-mail. Interruptions - I mean

people interrupting one another breaks down communication and sometimes people think they know what I am saying but they don't really listen, then don't let me finish. They cut in with what they want to say because they think that it is more important so I never like you say reflect because I am cut off. (IL).

At the conclusion of the interviews, these participants had undergone a paradigm shift. It was as if they were viewing the computer through new eyes. The medium no longer presented the anxiety-elevating challenges which existed at our first meeting. In her culminating interview IL referred back to an analogy which I had used in Workshop 1 when she said, "the computer is just like driving a standard shift car - you don't think about how to make it work once you are comfortable driving".

The interviews indicated that the protégés felt supported by the process; they just did not call it mentoring. The protégés indicated that they had learned a lot by reflecting on their teaching, responding to situations presented by me and by their peers, and by practicing on the computer.

All of the participants who completed the project expressed their gratitude for being allowed to participate. Three participants wrote me cards expressing their feelings of gratitude for my support and their new found sense of empowerment.

...Thank you, thank you, thank you (OS).

...I really hope that we get to work together again. You have helped me in more ways than you could possibly understand (JP).

...You are a Rose!! When I buy my new computer you will be the first person that I e-mail. I am a new person because of your help and patience. You are a great teacher and friend...(IL).

CHAPTER V

DISCUSSION OF FINDINGS

Research Questions

Through this study, I explored a mentoring model which encompassed mentor/protégé workshops and continuous on-line communication. I examined behavior in context and answered the following research questions: How does continuous on-line support/communication affect the mentoring process? How do protégés and mentors feel about on-line support as a component of the mentoring experience? How does on-line communication influence protégé and mentor reflection about teaching? How does on-line communication facilitate conversation about teaching?

Significant Findings

The significant findings from this study can be grouped into three categories: (a) how on-line communication influenced discussions, (b) how on-line communication influenced group cohesion, and (c) how on-line communication paralleled and differed from traditional mentoring parameters.

How On-line Communication Influenced Discussion

Participation

On-line communication was used to provide a medium of ongoing support for protégés. Three significant differences between on-line communication and traditional communication influenced protégé participation: (a) use of this medium increased protégé participation in discussions because it provided opportunity for participants to reflect on discussion questions and on others' responses prior to formulating their own responses; (b) on-line communication allowed protégés to participate when it was convenient for them to do so; and (c) support was systematic and ongoing.

Opportunity to Reflect

On-line discussion allowed participants to think about questions and when appropriate to research answers to questions which had been posted to the group. OS spoke directly to how she was able to participate more fully due to increased time for processing of questions when she commented, "I still did not get to talk very much in class because everything was moving very fast ... with writing rather than speaking, I could really think about my answer before I gave it".

On-line discussion provided participants with the opportunity to be heard. The on-line format provided them with the appropriate

amount of time needed to formulate a response. In classroom discussions teachers are encouraged to increase "wait time" to allow students opportunities to process questions and formulate responses. On-line discussions provide the ultimate in wait time in that individuals determine their own wait time.

Seven of ten protégés listed English as their second language. The additional processing time provided by the on-line medium allowed them to increase their participation in discussions. In traditional face-to-face discussions the opportunity for response is limited. By the time an individual is able to process a question, a discussion may have moved to a point where the response is no longer appropriate. Protégés were able to really "dig in" to some issues related to teaching. "Discussions" on-line allowed them to reflect on other participants' responses and to communicate thoughtful ideas related to topics posted to the group. The opportunity to think and rethink their answers prior to sharing with the group provided a level of safety in communication.

Convenience

Teachers have identified lack of flexibility in their schedules as one of the major obstacles to the success of mentoring programs (Bird, 1986; Kent, 1985; Newcombe, 1988; Pigge & Marso, 1991; Theis-Sprinthall, 1992). Mentor and protégé often can not coordinate their schedules to afford them simultaneous free blocks

of time to communicate on a regular basis. This research study addressed the problem of schedule conflict through offering meetings which did not need to take place in real time.

Participants determined that conversations in cyberspace allowed them to work within their personal time constraints to get the assistance that they needed. The time constraints associated with traditional mentoring were no longer barriers to communication. Participants could choose when to "meet" with other participants. For some participants it was convenient to go on-line during their free blocks at work, while for others it was best to go on-line after the eleven o'clock news when their household was at rest.

It is difficult for a group of people to coordinate their schedules in order to allow for productive meeting times. On-line discussion eliminates the need to coordinate schedules. A "meeting" does not need to end when a specified period of time has expired. A virtual meeting allows participants to create their individual time parameters for the meeting and a one hour "meeting" for an individual participant can actually be attended in a variety of ways. It is not required that the entire meeting take place in one sitting.

Systematic and Ongoing Support

This study was designed to address the lack of systematic and ongoing support often cited as a primary downfall of mentoring

programs (Bennet & Neville, 1995; Little, 1990; Newcombe, 1988). On-line mentoring provided a medium for systematic and ongoing support because participants arranged their schedules in ways which enabled them to participate in discussions. The flexibility of the schedule allowed them to continue their participation in a convenient manner. The three individuals who opted out of the mentoring program did so because their employment situations had changed, not because it was difficult for them to find the time to participate.

How On-line Communication Influenced Group Cohesion

Community is a term used to define a group that shares common interests and goals in a mutually supporting collection, where norms such as respect for one another and explicit communication are paramount (Rud, 1995). These participants formed a community of teachers.

The protégés responded positively to the on-line component of mentoring. They acknowledged that on-line communication represented an accessible way to participate in a discussion and yet it wasn't until participants had met face-to-face after conversing on-line that they felt accountable for their writing. When JP said, "This is fun but not anonymous anymore. I better watch how I write" (p.80), it was clear that the opinions of other

group members were beginning to matter and affect communication.

This group of individuals believed that anonymity was not helpful to the process. They were more willing to open up on-line once they had met the other participants.

The group began to function as a cohesive unit when they came together as a full group for the third workshop. This physical meeting was the turning point in terms of group dynamics. It became evident at this point that the “community could thrive and grow via on-line communication once it had been solidified through personal interaction” (p. 93).

The on-line component enabled all participants to engage in “explicit communication”. Beyond that distinction it is difficult to differentiate between the contributions of the on-line component and the contributions of the workshop component to the formation of the community.

How On-line Communication Paralleled and Differed from Traditional Mentoring Programs

The findings from this study paralleled the traditional mentoring literature in the ways in which protégés identified their needs and topics for discussion. There were similarities in the favorable mentor-protégé matching techniques and some similarities in the power struggle. The primary differences from traditional mentoring

existed in the previously described ways protégés were able to participate.

Identification of Needs. Research studies have repeatedly determined that a mentor teacher can offer support to a new teacher who may feel very isolated (Bird, 1985; Kent, 1985; Newcombe, 1988; Pigge & Marso, 1991; Theis-Sprinthall, 1992). The on-line component extends the availability of support offered via traditional mentoring programs. Protégés can talk whenever they have the time and know that they will be listened to and responded to within a reasonable time period.

Second, traditional mentoring literature showed that beginning teachers need and want assistance with the actual practice of teaching. Beginning teachers expressed concerns regarding the actual act of teaching: the how to's of preparation, time and classroom management, and student evaluation (Ganser, 1994; Gibbons & Jones, 1994; Spuhler & Zetler, 1995). These same topics became major cornerstones for our on-line discussions. The mentoring mosaic created via the on-line community allowed for more input and response regarding actual pedagogical concerns of the participating teachers.

This on-line component provided more access to information surrounding the pedagogical issues. Technology and the World Wide Web were used to direct new teachers to information-rich

web sites which offered some specific strategies and techniques for finding resolutions for their classroom challenges. Participants generated lists of web sites which helped them examine their classroom management and assessment techniques.

Mentor-Protégé Matching. The need for fluid teams and innovative structures has been identified in mentoring research (D'Souza, 1992; Morentsen, 1992). On-line mentoring provides for fluid teams by allowing the expansion of the mentoring mosaic because the constraints for organizing a meeting with a large group of people have been removed.

Results from research studies on traditional mentoring programs suggest several guidelines for how the matching of mentors and protégés should be conducted (Galvez-Hjernevik & Smith, 1985; Gray & Gray, 1985; Huling-Austin, Barnes & Smith, 1985) and the key considerations appear to be these:

- a) parallel teaching assignments
- b) compatible teaching ideologies
- c) gender and age similarity
- d) physical proximity.

The arguments for and against a, b, and c in traditional mentoring programs still ring true in on-line programs. Results from this study support previous research regarding parallel teaching assignments. While the group was able to make substantial progress as a group it would have been useful for

teachers to have parallel teaching assignments. As a result of the diversity in teaching assignments of the protégés, no content specific assistance was offered.

The on-line mentoring discussion group provides a medium which allows mentors and protégés to transcend the communication constraints associated with traditional mentoring and allows for continuous networking amongst the participants. Goldman, Chaiklin, and McDermott's (1992) study of mentoring via e-mail concluded that both "geographic and cultural borders" can be crossed electronically through on-line communication.

Power Struggle. Goldman, Chaiklin, & McDermott (1992) found that when a mentor is not charged with evaluating the protégé as part of a formal structure then there is increased likelihood that an honest relationship will develop between protégé and mentor. It is difficult for a mentor not to become part of a protégé's evaluation if they are in the same building. Informal conversations can become part of the evaluation process. Through on-line mentoring the mentor-protégé relationship is removed from the evaluation process. The mentor is not a building member and therefore is not subject to the same expectations surrounding informal evaluation.

Original Research Design Versus Actual Outcomes

There were several aspects of this study which were not anticipated by the original design: (a) lack of technological

background of the participants, (b) differences among the content areas and the grade levels of the participants, (c) the language and cultural differences between participants and mentors and (d) protégés' non-voluntary participation.

Lack of Technological Background. The original design of the study called for four computer literate first year math teachers from different high schools. The ten individuals who ultimately participated were uncertified, first-year teachers who were currently working in the Lynchfield Public Schools. Seven of the ten classified themselves as computer novices.

I was challenged by the issues presented by a group of computer novice (and some computer phobic) participants. It was difficult to work with the range of technological ability presented by this group. The cohesion of the group was delayed because I brought them together as a group for Workshop 1, and then because of the variance in technological ability, only the five participants who needed word processing training were asked to meet for Workshop 2.

The Differences Among the Content Areas and Grade Levels. The ten participants spanned six grade levels and seven content areas. The pedagogical role of the mentor could not easily be addressed since the content issues and the classroom management issues of the participants were so different from one another.

Language and Cultural Differences Between the Mentors and the Protégés. The five mentors in this study were all Caucasian women with significant teaching experience. The protégés were four Hispanic women, one Hispanic man, and two African-American men (CA, AA, and WM did not complete the project), all of whom were uncertified teachers who were either teaching for the first time or teaching in the United States for the first time. The selection of the protégés and the mentors by the Lynchfield Public Schools did not allow the researcher to try to match mentors and protégés or even to attempt to match gender, age, or ethnic group.

The mentors did not have similar cultural histories and there were times when the lack of common understanding proved detrimental to the communication process. For example, most of the protégés were not schooled in the United States and their expectations around educational issues (e.g., issues of classroom management) were quite different from the realities which they faced in the Lynchfield Public Schools.

The Protégés' Non-voluntary Participation. Participation in a mentoring program should be voluntary. The protégés were assigned to this project by the personnel director of the Lynchfield Public Schools. Their uncertified positions made them even more vulnerable to the "suggestions" made by the director. Trust is a critical element of a mentoring program (Abell, 1995; Galbraith &

Cohen, 1996; Mihkelson, 1997; Sipe, 1996) and it is difficult to form trust in a forced relationship.

Conclusions Regarding Research Design Parameters

The previous section was framed by aspects of this research study which were decidedly different from the original research design. As each of these aspects presented itself I originally considered it to be a barrier to the project. The intent of the research project changed as a result of the participant pool. While I do contend that the removal of these barriers could help a future researcher plot a smoother course, these twists of fate were what landed me this incredible pool of protégés. We grew from our struggles and learned that “that which doesn’t kill us makes us stronger”, which became a group motto.

Creating a group was challenging because of the differences among the participants. It was difficult to cultivate a trusting environment in a situation where the participants were forced to participate through a medium which they felt was beyond their level of expertise. I had to keep asking strangers to “trust me” and keep trying to convince them that I would help them through their technological challenges. We kept referring to our “motto” and gradually all of the participants felt they were getting stronger as teachers and as computer users.

Implications for Future Researchers

Limitations of this Study

Lack of Technological Background of the Participants. For future research, I would recommend that a survey be conducted and participants who need word processing training and basic computer literacy skills be brought together prior to the actual implementation of the project. It is better to start with a smaller group and then increase the size than to begin with a larger group and then break it into segments and then try to reunite the fragments.

Much of the learning realized by the participants was about the medium. While it is valuable for an on-line mentoring group to have as one of its goals the increased computer literacy of the participants, I believe that the necessary mentoring in pedagogical skills, the acculturation process, and psychological support can best be achieved on-line if participants enter the program already technologically savvy.

Language and Cultural Differences Between the Mentors and the Protégés. Literature on mentoring suggests that protégés and mentors have common experiences (Huling-Austin, 1988; Kram, 1985; Odell, 1990). While language differences between mentors and protégés offered a wealth of opportunity regarding learning about crossing cultural barriers, the language barrier often

prohibited what we usually think of as mentoring. For example, after one of the workshops a mentor confided in me that she simply agreed with the explanation offered by the protégé because after several attempts she still could not translate the protégé's statements.

I would suggest to future researchers that if the first language of the protégés is one other than English the mentor pool reflect the same dynamic. I commend the protégés in this study for their patience with my inability to interpret some of their responses. I feel that we all gained from the experience but I wonder if they would have been happier had they not had language as yet another obstacle to communication.

Protégés' Non-voluntary Participation. Involvement in mentoring programs should be voluntary. I would suggest that future researchers limit their studies to mentor/protégé models in which all of the participation is voluntary.

Related Questions for Future Research

How Can an On-line Mentoring Network Be Established Which Is Not Facilitator Dependent? When I read Schlagal, Trathen, and Blanton's (1996) telecommunications study I was struck by their assessment that they may have over structured the communication environment. In this study I structured the environment and chose

the posting questions. While there was significant input from participants, I would have to say that ultimately the process had the feeling of an academic course. The level of accountability for the participants was high and that lessened their ability to pull the conversation in alternative directions.

In this study I served as the primary mentor. The other mentors' roles were not seen as significant by the participants and that may be due in part to my somewhat controlling nature and my need to move the study forward for the purpose of completing the research. It would be interesting to set up an on-line mentoring network and then only be involved as a monitor.

How Can an On-line Mentoring Network Be Created to Support Cultural Differences of Teachers Who Were Not Schooled in the United States? I am proud of this study and participants conveyed a sense of gratitude to me for my part in assisting them with this project. Nonetheless, now that this group has the technological skills necessary to form an on-line mentoring mosaic it would be interesting to monitor the type of communication and support which could be offered by facilitators with cultural histories similar to the participants' cultural histories.

This group of participants is ready for a Phase II project. If a project were continued with this group then it would have the benefit of being past the need to cultivate group dynamics and

ensure technological literacy. The process of mentoring could be the central focus.

What Would the Conversations Look Like if the Mentors and Protégés Were Matched by Grade Level and Content Area?

Participants stated that this was a beneficial learning experience for them. They certainly can demonstrate their new technological skills and they articulated that they felt supported throughout the process, and yet I feel that they were not mentored regarding their actual teaching processes because of the differences in grade level and content area. I would be interested to see the results which could be achieved if the original parameters of this study were set in motion.

Implications for Inservice Teacher Development

On-line mentoring allows for geographic outreach in ways that traditional mentoring does not allow. Large support networks with small mosaic groups could be formed. New teachers could potentially have a limitless supply of colleagues and mentors.

Inter-district, as well as intra-district, mentoring programs could be established. Teachers who have few peers within the same district in their content areas (e.g. physics or French teachers) could still establish mentor contacts and peer contacts with people

who had the content expertise as well as the pedagogical expertise to assist them with their transition into the teaching profession.

Impact On Me as a Researcher and as a Person

The most difficult lesson that I learned from this process was that grant money does not make life easier. I never really believed that more money could make a problem worse. In the case of this research study I learned that when someone else is supporting your work, then they are in control. The project was delayed, the participant group was altered, and the project was significantly changed because the person controlling the grant money ultimately controlled the timeline and the parameters of the research project. Learning about the pitfalls of acquiring grant money was the only negative learning which occurred for me as a researcher. Other learnings were painful but they had positive aspects.

I learned a great deal about working with a population of teachers who were significantly different from me in terms of experience, background, and world view. In many ways the realities of these teachers were not my realities. Their perceptions of situations were shaped by their histories which were significantly different from my own history. The protégés taught me about crossing cultural and socioeconomic boundaries on a collegial level. The protégés taught me that even with all of my experience, I still did not comprehend their experiences. They

welcomed me into their learning community and shaped my experience in a way which I never could have predicted because I was unaware of the gaps in my understanding of cultural experience.

The on-line mentoring project reestablished my beliefs about the reciprocity inherent in this type of relationship. Thus, these protégés served as change agents for this mentor in very substantial ways.

APPENDIX A

PARTICIPANT CONSENT FORM: ON-LINE MENTORING FOR FIRST-YEAR TEACHERS

I volunteer to participate in this qualitative research study and understand that:

1. I will be interviewed by Eileen Cyr using a guided interview format consisting of six questions. The interview will be tape recorded to facilitate analysis of data.
2. My name will not be used, nor will be identified personally in any way or at any time. Because of the small number of participants, I understand that there is some risk that I may be identified as a participant in this study.
3. I may withdraw from part or all of this study at any time.
4. I have the right to review material prior to the final oral exam or other publication.
5. I understand that results from this survey will be included in Eileen Cyr's doctoral dissertation and may also be included in manuscripts submitted to professional journals for publication.
6. I am free to participate or not participate without prejudice.

Researcher's Signature

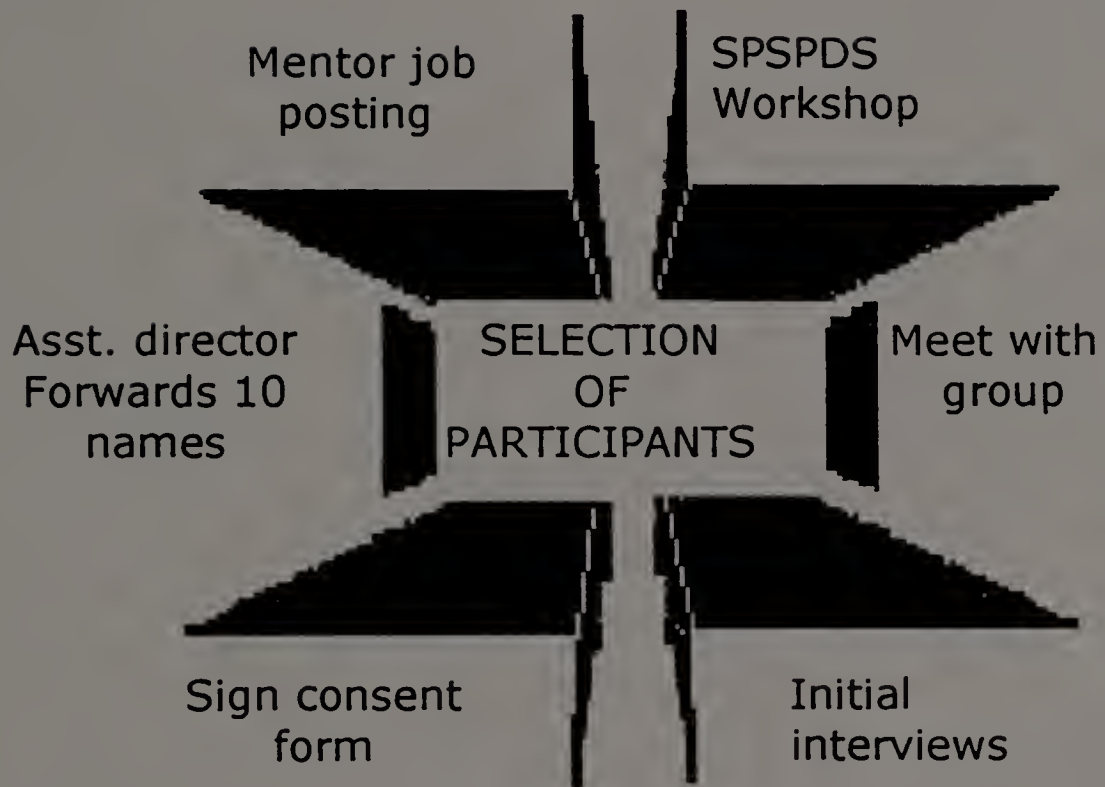
Date

Participant's Signature

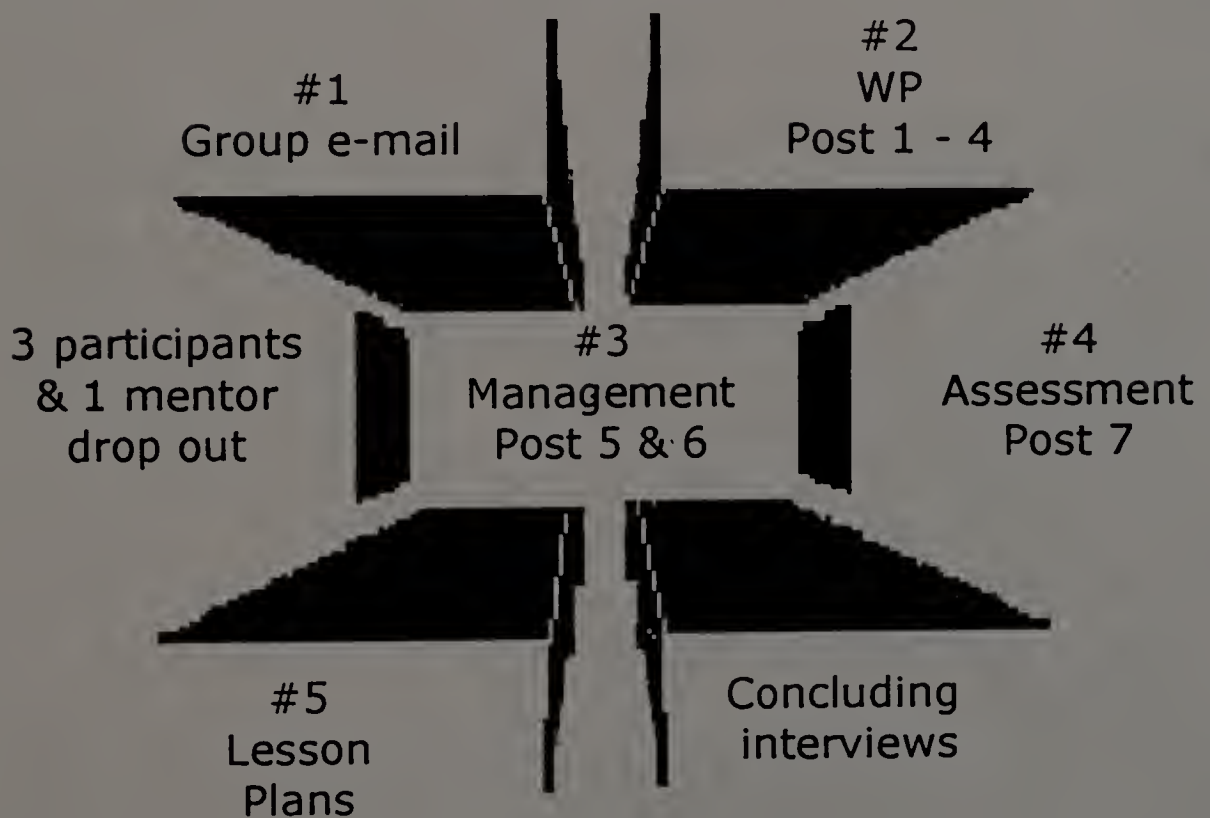
Date

APPENDIX B

TIMELINE



TIMELINE 2



APPENDIX C

UNEDITED RESPONSES

05/20/98 09:06 AM

I have only experienced minor Classroom management problems. I think the main reason is because all students are aware that 20 % of their grades are base on attitude, discipline and respect. The student must wear the military uniform every thursday and that is 30 % of their grade. We give the student three warning notice to correct any problem. If the student doesn't comply after the third warning, they can no longer be part of the ROTC and the student will fail the course for the quarter. We have strict rules we must follow. The students are given the opportunity to drop ROTC after the first week. All students understand what ROTC is all about. I may experience some problems down the road, but not at the present time.

05/13/98 08:56 PM

There are some of the classroom management problems:

1. Students behavior/attitude
2. Students lack of motivation
3. Students "appears" and "disappear" from class without notification from
the
management or counsellor.
4. How to deal when you are a floating teacher
5. Motivated teachers v. unmotivated teachers
6. Crowded classes v. small classes

05/29/98 06:08 PM

I have only minors classroom management problems. I think the reason is because I have just 8 students, well I began with 12 and 4 left. Really the students has an interest to learn and a positive attitude, and they're good kids. For me is been a real good year.

There are some Classroom management techniques:

- 1) Establish the rules and consequences.
- 2) Use student of the week or month as a reward.
- 3) Use stars, happy faces in their daily work.
- 4) Always be prepared (teacher). Very important organization.
- 5) Let the students know the agenda for the day in the mornings.
- 6) Develop a relax and not threatening atmosphere.
- 7) Be sensitive of different cultures.
- 8) Use codes or signals for quite, attention etc. (explained on the first day of school).

APPENDIX D

INTERNET REFERENCES

The Honor Level System

<http://members.aol.com/churchward/hls/techniques.html>

Detention, Time out, Rewards, Attitude Toward Inclusion,
Seating, Evaluation

<http://www.quasar.ualberta.ca/ddc/incl/gc.htm>

Classroom Management

<http://www.clarityconnect.com/webpages/terri/classmanagement.html>

Redirection, Logical and Natural Consequences

<http://www.osr.state.ga.us/bestprac/class/cm-4.htm>

Understanding Multiple Intelligences and Individualizing
Expectations

<http://www.osr.state.ga.us/bestprac/class/cm-6.htm>

APPENDIX E

CASE STUDY

1. Carlos is an excellent student. Whenever Carlos participates in class. A small group of 4 students ridicule him. Sometimes the ridicule is confined to exchanged glances and snickers but at other times sarcastic remarks are made aloud. Accusations of teacher's pet and nerd are continually hurled at Carlos both inside and outside the classroom.
2. Trina is the class clown. She raises her hand to participate at every opportunity. (If she doesn't know an answer she will still offer an outlandish response). When her answers are correct she offers them melodramatically.
3. Patrick does not pay attention in class. When called upon he usually responds, "I don't know". He often is bobbing his head to mental music or nodding off.
4. Angelina and Martine are best friends. They talk constantly. They have both learned American Sign Language and now communicate across the room.
5. Eileen reported that 2 students had cheated on a recent exam. Upon review of their exams it is clear that the students answers are identical on the multiple choice and too close for coincidence on the short answers.

BIBLIOGRAPHY

- Ackley, B., & Gall, M. D. (1992, April). Skills, strategies, and outcomes of successful mentor teachers. Paper presented at the annual meeting of the American Educational Research Association, San Francisco, CA.
- Acheson, K. & Gall, M. D. (1987). Techniques in the clinical supervision of teachers: Preservice and inservice applications. (2nd ed.). Thousand Oaks, CA: Corwin Press, Inc.
- Anderson, E. M., & Shannon, A. L. (1988). Toward a conceptualization of mentoring. Journal of Teacher Education, 39, 38-42.
- Arroyo, A., & Sugawara, A. (1993). A scale of student teacher concerns. Early Childhood Development and Care 93, 41-56.
- Bennett, N. et. al. (1995, April). The impact of training and Role Differentiation on the Nature and Quality of Mentoring Processes. Paper presented at the Annual Meeting of the American Educational Research Association, San Francisco, CA.
- Bey, T. M. (1990). Mentoring: Developing successful new teachers. Reston, VA: Association of Teacher Educators.
- Bey, T. M., & Holmes, C. T. (Eds.). (1992). Mentoring: Contemporary principles and issues. Reston, VA: Association of Teacher Educators.
- Billingsley, B.S., & Tomchin, E.M. (1992). Four beginning LD teachers: What their experience suggest for trainers and employers. Learning Disabilities Research and Practice, 7, 104-112.
- Bird, T. (1985). From teacher to teacher: Training and support for mentor teachers, master teachers, and teachers advisors. San Francisco, CA: Far West Regional Laboratory, Typescript.

- Bliss, T., & Mazur, J. (1996). Associations of experienced and novice educators through technology. Journal of Teacher Education , 47(3), 185-190.
- Blum, D., & Rowe, G. (1993). E-mail switches emerge as enterprising idea. Network World, 2(6), 82-84.
- Boone, M. (1992). Leadership and the computer: Top executives reveal how they personally use computers to communicate, coach, convince and compete. Roseville, CA: Prima Publishing.
- Bower, A.M. (1991). The nature of formalized mentor-intern relationships in a beginning teacher induction program. (Doctoral dissertation, Syracuse University). Dissertation Abstracts International, 51(7), 2349A.
- Braun, E. (1991, February). Electronic mail can do wonders, if you let it. Office, 23, 58-59.
- Brett, G.H. (1992). Navigating the Internet: A beginning. Interactive communications, North CarolinaT. (ERIC Document Reproduction Service, No. ED 453 244).
- Brooks, L., & Haring-Hidore, M. (1987, Autumn). Mentoring in academe: A comparison of protégés' and mentors' perceived problems. International Journal of Mentoring, 1, 3-10.
- Brown, B. (1993). Is host-based e-mail a 'road to nowhere'? Network World, 10(12), 23-24.
- Brown, R. (1992). Getting connected with e-mail. Systems 3X/400, 20(10), 52-56.
- Burke, P., & Schmidt, W. (1984). Entry year assistance: A promising practice. Action in Teacher Education, 6, 70-74.
- Cardin, A. D. (1990, April). Mentoring and adult career development: The evolution of a theory. The Counseling Psychologist, 18, 275-299.
- Carlson, R. (1997). Educating on-line: creating the virtual classroom community. Computerworld, 40(48), 20-56.

- Carter, M. (1988, March). Face to face communication: Understanding and strengthening the partnership. Childcare Information Exchange, 12-18.
- Charnock, B., & Kiley, M. (1995, April), Concerns and preferred assistance strategies of beginning middle and high school teachers. Paper presented at the American Educational Research Association Annual Meeting, San Francisco, CA.
- Clawson, J. G. (1985). Is mentoring necessary? Training and Development Journal, 39, 36-39.
- Coursey, D. (1992). E-mail invasion. Computerworld, 26(48), 55-58.
- D'Souza, P. V. (1992). Electronic mail in academic settings: A multipurpose communications tool. Educational Technology, 32(3), 22-25.
- Darling, L. A.W. (1989, Spring). The mentoring discovery process: Helping people manage their mentoring. Mentoring International, 3, 12-16.
- Doucette, N. (1992). Getting your message across-electronically. Rough Notes, 135(9), 12-14.
- Dunifon, W. (1985, February). Excellence in secondary education: The induction of teachers. Paper presented at the Secondary Education Conference Excellence Week, Normal, IL.
- Enz, B.J. (1990). Guidelines for selecting mentors and creating a mentoring environment. In T. M. Bey, & C. T. Holmes (Eds.), Mentoring: Contemporary principles and issues (pp. 120-136). Reston, VA: Association of Teacher Educators.
- Fulkerth, R. (1997). Translating traditional instructional materials for use in electronic learning spaces. (ERIC Document Reproduction Service, No. ED 412 977).
- Galvez-Hjornevik, C. (1985). Mentoring: A review of the literature with a focus on teaching. University of Texas, Research and Development Center for Teacher Education. (ERIC Document reproduction Service, No. ED 262 032).

- Galvez-Hjornevik, C. (1986) Mentoring among teachers: A review of the literature. Journal of Teacher Education , 39, 6-11.
- Ganser, T. (1994, February). How mentors rank mentor roles, benefits of mentoring and obstacles to mentoring. Paper presented at the annual meeting of the Association of Teacher Educators, Atlanta, GA.
- Gehrke, N.J., & Kay, R.S. (1984). The socialization of beginning teachers through mentor-protégé relationships. Journal of Teacher Education, 35, 21-24.
- Gerber, C. (1993). Oracle e-mail to pounce on Lotus approval. Modern Healthcare, 23(5), 45-46.
- Gibbons, L. & Jones, L. (1994). Novice teachers' reflectivity upon their classroom management. (ERIC Document reproduction Service, No. ED 386 446).
- Gold, M. J. (1987). Retired teachers as consultants to new teachers: A new inservice teacher training model. Final Report.
- Goldman, S., Chaiklin, S., & McDermott, R. (1992). Crossing borders electronically: Mentoring students via e-mail. In G. Spindler (Ed.), Pathways to cultural awareness (pp. 250-265). Thousand Oaks, CA: Corwin Press, Inc.
- Gordon, D., & Moles, M. (1994). Mentoring becomes staff development: A case of serendipity. NASSP Bulletin, 78, 66-70.
- Gray, W. A., & Gray, M.M. (1985, November). Synthesis of research on mentoring beginning teachers. Educational Leadership, 43, 37-43.
- Gregory, V. L. (1992). Electronic mentoring of LIS research utilizing BITNET: An ACRL pilot project. Proceedings of the ASIS, 29, 155-164.
- Grover, K. (1994, April). A study of first year elementary principals and their mentors in the New York City Public Schools. Paper presented at the annual meeting of the

American Educational Research Association, Los Angeles, CA.

- Hardcastle, B. (1988). Spiritual connections: Protégés' reflections on significant mentorships. Theory into Practice, 27, 201-208.
- Harrison, S. L. (1992). Electronic mail. Association Management, 44(5), 1-16.
- Hersh, S. (1996). Mentoring entry year teachers: A model for rural communities. Rural Educator, 17(2), 31-36.
- Hill, S. E. (1989). The impact of mentoring and collegial support on faculty success: An analysis of support behavior, information adequacy, and communication apprehension. Communication Education, 38, 15-33.
- Hollingsworth, S. (1989). Prior beliefs and cognitive change in learning to teach. American Educational Research Journal, 26, 160-89.
- Huffman, G., & Leak, S. (1986). Beginning teachers' perceptions of mentors. Journal of Teacher Education, 37, 22-25.
- Hui, W. (1997, March). Students' conversations we have never heard: Transparencies on the listserv. Paper presented at the annual meeting of the Conference on College Composition and Communication, Phoenix, AZ.
- Huling-Austin, L. (1986). What can and cannot reasonably be expected from teacher induction programs. Journal of Teacher Education, 37, 2-5.
- Huling-Austin, L. (1988, April). A synthesis of research on teacher induction programs and practices. Paper presented at the annual meeting of the American Educational Research Association, New Orleans, LA.
- Huling-Austin, L. (1990). Squishy business. In T. M. Bey & C. T. Holmes (Eds.), Mentoring: Developing successful new teachers (pp. 22-30). Reston, VA: Association of Teacher Educators.

- Hutto, N. ((1991). Mentor training manual for Texas teachers. Texas Education Agency, Austin. (ERIC Document Reproduction Service, No. ED 359 182).
- Johns, K.M. (1992). Lowering beginning teacher anxiety about parent-teacher conferences through role-playing. School Counselor, 40, 146-152.
- Kasavana, M. (1992). Computer link: Working without paper. Restaurant Business, 91(7), 194-199.
- Kauchak, D. (1985). An interview study of teachers' attitudes towards teacher evaluation practices. Journal of Research and development in Education, 19, 32-37.
- Koskela, R., & Cramer, S. (1994, October). Preservice and inservice teacher journals: What do they reveal? Paper presented at the Annual Meeting of the Midwestern Educational Research Association, Chicago, IL.
- Kram, K. (1985). Improving the mentoring process. Training and Development Journal, 39, 42-43.
- Levinson, D.J., Darrow C. N., Klein, E. B., Levinson, M. H., & McKee, B. (1978). The seasons of a man's life. New York: Alfred A. Knopf.
- Little, J. W. (1990). The mentor phenomenon and the social organization of teaching. Review of Research in Education, 16, Washington, D.C: American Educational Research Association.
- Lortie, D.C. (1975). Schoolteacher: A sociological study. Chicago, IL: The University of Chicago Press.
- McCusker, T. (1993). The database way to integrate e-mail. Datamation, 39(2), 61-64.
- Moran, S. W. (1990). Schools and the beginning teacher. Phi Delta Kapan, 72, 210-213.
- Morentsen, E. (1993). E-mail: Its impact on communications. Office, 16(3), 60-61.

- Neal, J. (1990). Mentoring: A teacher development activity that avoids formal evaluation of the protégé. In T. M. Bey Mentoring: Developing successful new teachers, (pp. 64-83). Reston, VA: Association of Teacher Educators.
- Newcombe, E. (1988, October). Mentoring programs for new schools. Philadelphia, PA: Research for Better Schools, Inc.
- Nydal, J. (1992, May). An experiment in computer ethics: Clustering composition with computer applications. Paper presented at the Annual Meeting of the Conference of Computers and Writing, Indianapolis, IN.
- Odell, S. J. (1988, May). Characteristics of beginning teachers in an induction context. Paper presented at the Annual Meeting of the American Association of Colleges for Teacher Education, Boston, MA.
- Odell, S. J. (1990). Mentor teacher programs. National Education Association, 1-32.
- Parkey, F. W. (1988). Reflections of a protégé. Theory into Practice, 27, 195-200.
- Phenix, K. (1992). Opening Tollgates to the electronic highway. Wilson Library Bulletin, Denver, Colorado. (ERIC Document reproduction Service, No. ED 456 226).
- Pigge, F., & Marso, R. (1991, February). Factors associated with longitudinal changes in teachers' attitude toward teaching during training and the first year of teaching. Paper presented at the Annual Meeting of the Association of Teacher Educators, New Orleans, LA.
- Posner, B.Z. (1993). Factors in the adoption and use of an electronic communication system for MBA students. Journal of Educational Technology Systems, 21(1), 5-19.
- Raish, M. (1993). Network Knowledge for the Neophyte: Stuff You Need to Know in Order to Navigate the Electronic Village (v. 3). Binghamton, NY: Binghamton University, Information Management Education, Binghamton University Libraries.

- Reiman, A., Head, F.A., & Thies-Springthall, L. (1992). Collaboration and mentoring. In T. M. Bey & C. T. Holmes (Eds.), Mentoring: Contemporary principles and issues, (pp. 124-132). Reston, VA: Association of Teacher Educators.
- Ridley, D.R. (1995). The 1995 assessment report on CNU online. Christopher Newport College, VA. (ERIC Document Reproduction Service, No. ED 397 070).
- Schlagal, B. (1996). Structuring telecommunications to create instructional conversations about student teaching. Journal of Teacher Education , 47(3), 175-183.
- Shealy, B. E. (1994, February). Authority and relativism "in the trenches": A case study of teacher development. Paper presented at the Annual Meeting of the Northeastern American Educational Research Association , Ellenville, NY.
- Shouse, R. (1992, April). Teachers as mentors: Creating social and academic support structures in disadvantaged schools. Paper presented at the Annual Meeting of the American Educational Research Association, Chicago, IL.
- Smaby, M. (1994). Career development consultation skill training by counselors for teacher mentors. Journal of Employment Counseling, 31, 83-95.
- Spuhler, L. & Zetler, A. (1995). Montana Beginning Teacher Support Program - Final Report. Montana State Board of Education, Helena. (ERIC Document Reproduction Service, No. ED 390 804).
- Strehlo, K. (1992). Beyond mail can help you stamp out e-mail overload. InfoWorld, 14(34), 1, 80.
- Stroble, E., & Cooper, J. M. (1988). Mentor teachers: Coaches or referees? Theory into Practice, 27, 231-36.
- Thies-Sprinthall, L. (1987, Winter). Experienced teachers: Agents for revitalization and renewal as mentors and teacher educators. Journal of Education, 169, 65.

- Teeter, T.A. (1997, October). Teaching on the Internet. Paper presented at the Fall Conference of the Arkansas Association of Teacher Educators, Little Rock, AR.
- Thomas, B., & Kiley, M.A. (1994, February). Concerns of beginning middle and secondary school teachers. Paper presented at the Annual Meeting of the Eastern Educational Research Association, Sarasota, FL.
- Varah, L. J. (1986). Beginning teachers: Sink or swim? Journal of Teacher Education, 37, 30-34.
- Veenman, S. (1984). Perceived problems of beginning teachers. Review of Educational Research, 54, 143-78.
- Wilder, G.S. (1992). The role of the mentor teacher: A two-phase study of teacher mentoring programs. Educational Testing Services, Princeton, NJ. (ERIC Document Reproduction Service, No. ED 384 680).
- Wildman, T. (1992) Teacher mentoring: An analysis of roles, activities and conditions. Journal of Teacher Education, 43, 205-213.

