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The Lived Experience of Graduate Nursing Students in Distance Education

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THE LIVED EXPERIENCE OF GRADUATE NURSING STUDENTS IN DISTANCE EDUCATION

by

Nancy L. Mosbaek
Master of Science, University of North Dakota, 1994

A Dissertation
Submitted to the Graduate Faculty
of the
University of North Dakota
in partial fulfillment of the requirements
for the degree of
Doctor of Philosophy

Grand Forks, North Dakota
May
1999
This dissertation, submitted by Nancy L. Mosbaek in partial fulfillment of the requirements for the Degree of Doctor of Philosophy from the University of North Dakota, has been read by the Faculty Advisory Committee under whom the work has been done and is hereby approved.

(Chairperson)

This dissertation meets the standards for appearance, conforms to the style and format requirements of the Graduate School of the University of North Dakota, and is hereby approved.

(Dean of the Graduate School)

Date
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Title The Lived Experience of Graduate Nursing Students in Distance Education

Department Education and Human Development

Degree Doctor of Philosophy

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Signature __________________________

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ABSTRACT

This study explored the lived experience of graduate nursing students enrolled in an interactive television course offered through distance education. Areas of focus were the technology of distance education, instructional strategies, the learning community, and communication. The qualitative research methods of interviewing, observation, and artifact/documentation review were employed.

Students reported returning to school for both personal and professional reasons; self-satisfaction was most frequently mentioned. The need to work in a changing health care system was the major professional reason given. Due to multiple role responsibilities which made the participants time- and place-bound, distance education was reported to be the only way the students were able to participate in affordable, quality higher education. Computers appeared to play a major role in the students' learning experience. Commitment by the College of Nursing to deliver the program in an orderly manner was perceived as weak and created anxiety in the students. Student supports such as enrollment services, advisement, library services, and communication channels were available during this distance education event and appeared to be adequate. A variety of teaching/learning strategies used by a dynamic instructor were perceived by the students as being important for their learning.
CHAPTER I
INTRODUCTION
Distance Education

Distance education allows adults to pursue their education with a minimum of disruption to their lives while providing them with the structure of a formal education program as well as with the guidance and feedback of an instructor. Furthermore, well-planned distance education allows adults to use strategies that are characteristic of this population, for example, their propensity for self-directed learning activities (Verduin & Clark, 1991).

Developments in technology have enhanced the opportunities of distance education. Telecommunications-based education has broadened the opportunities of participants whose options in the past would have been limited to those who could attend traditional classroom-based programs. However, for many would-be students, distance education has given students opportunities previously not available.

There are a variety of reasons why some students favor distance education over on-campus programs. While no two distance education participants are identical, they do share some common characteristics. For example, they appreciate the convenience of distance education, they may have
financial concerns, and may be time-, place-, and responsibility bound (Hawkridge, 1995).

Ohler (1991) suggests that distance education is a step in the social evolution of education. "It is an imaginative and yet practical attempt by society to invest itself with the survival skills needed in a highly competitive world that increasingly values the educated, cooperative, technologically competent citizen" (p. 23). He goes on to note several important reasons for distance education: geographic isolation, avoiding abandoning their life styles or culture, anxiety reduction, increasing communication between participants and instructors, the motivational aspect of media, and access to experts.

Along with the convenience of outreach programs for distance learners must come questions as to its effectiveness. McClelland and Daly (1991) conducted a comparison study of two groups of registered nurses returning to school through an RN to BSN program in Iowa. They found there appeared to be "... a significant difference in grades received by the on-campus participants [n=34] as opposed to the off-campus participants [n=37]" (p. 266).

However, Russell (1997) has compiled the results of 248 studies related to student learning outcomes in distance education. The majority of these studies report no significant difference in the quality between on-campus learners' and distant learners' knowledge or experience. Keck (1992) also reported that distant learners were as successful as on-campus learners and
found no significant differences between those in traditional settings and those in distance education settings.

Statement of the Problem

The above, and other reviewed studies, have provided valuable information about specific areas of distance education. What has not been examined in these studies is how the participants perceived their learning experiences and what influences distance education had on their learning. What is now needed is a more holistic view of the distance education experience as reported from the participants' perspectives.

Research Questions

Since this study was qualitative in nature the following questions were adopted as a way of organizing thoughts about this research and were not used as a strict research protocol. They were used to promote conversations about these issues but not to define these issues. Areas of interest for this study were:

- How do graduate nursing participants perceive distance education via interactive television affecting them personally, professionally, and as learners?
- What affects the graduate nursing student's learning in distance education via interactive television?
- How do the participants perceive the technology in the classroom? What teaching/learning strategies help participants learn?
- Is the teacher significant in the distance learning classroom?
• How important is the establishment of a community of learners?
• How important is communication in the classroom?

Significance of the Study

This study will be beneficial to distance education providers, program developers, and teachers as they develop, prepare, and deliver courses and material via interactive television. It will also help fill the gap in the literature related to student learning experiences in distance education. According to Moore (1995) “recent studies have focused on teaching, design, certain subject areas, participants' workload, course completion, and participants’ perspectives regarding effectiveness of instruction, and student support services (p. 33).

Moore (1995) also writes that there is a “need to study course structures, procedures, and learner behaviors” when telecommunications are used to deliver courses (p. 33). Relationships between these variables need analyzing and defining for the transition from on-campus classrooms to distance learning. Computer technology and electronic information systems tie the student to the institution and to the instructor. McKeachie (1994) describes distance education as stimulating new roles for teachers specifically and positively effecting teaching and learning generally.

Participants' perceptions of content delivery, teacher style and methods, content organization, and teacher roles should be considered to inform the practice of distance education. Their voices need to be heard. The information gained from this study may help develop both quality control measures for
distance education programs and reliable criteria for monitoring learning quality.

This study may also contribute to the collection of knowledge on adult learners and learning theories. Cross (1981) provided a framework for accumulating data regarding personal and situational characteristics of adult learners. She claimed the presence of a warp variable but she stated there was very little research that had been undertaken on the weft variable. Hopefully, this study will contribute to the body of knowledge of the weft variable.

This study will explore the graduate nursing participants' distance learning experience as they take a course from Public University College of Nursing (pseudonym for the university in which the study was conducted) via Compressed Interactive Television.

Distance Education Defined

As the changes in technology increase, so do the opportunities available in distance education. While the correspondence course was once the primary delivery method, technology has provided new delivery systems: interactive television, video tapes, e-mail, conference calls, etc. However, in defining distance education, one must look at the characteristics of this educational structure and not the delivery systems. With this in mind, distance education may be defined as:

1. The separation of teacher and learner during at least a majority of the instructional process.
2. The influence of an educational organization, including the provision of student evaluation.

3. The use of educational media to unite teacher and learner and carry course content.

4. The provision of two-way communication between teacher, tutor, or educational agency and learner (Verduin & Clark, 1991, p. 11).

"Distance education can be defined as formal instruction in which a majority of the teaching function occurs while educator and learner are at a distance from one another" (p. 13). It is carried out "by an organization that develops educational media to unite teacher and learner and provides appropriate evaluation of the learning" (p. 19). Two-way communication is present. After defining what distance education is, one must examine its roots.

**History**

Distance education may have roots in biblical times as evidenced by Paul's letters to the Romans. Correspondence study in America can be traced back to the 1720's. Germany and England had established correspondence study schools in 1856 and the 1880's, respectively (Verduin & Clark, 1991). Another form of distance education, public lectures or lyceums, were popular in the early 1800s (Willis, 1996). "Distance university study in America began in 1874 at Illinois Wesleyan University where both graduate and undergraduate degrees could be pursued *in absentia*" (Verduin & Clark, 1991, p. 16). Anna
Elito Tichnor "originated the exchange of comments as well as grades with students in 1873" (p. 16).

Distance education covered a variety of needs and was delivered in a assortment of ways. Moore (1989) called the Chautauqua movement the first significant distance education effort in America. Job related distance education programs were available as early as 1891 in the form of correspondence study. Elementary schooling by correspondence started in 1906, and "the first federally licensed radio station devoted to educational broadcasting" was established in Wisconsin (Verduin & Clark, 1991, p. 17).

Holmberg (1996) writes, "it was the founding of the Open University in the United Kingdom in 1970 that above all marks the beginning of the new era" (p. 4). Willis (1993) believes the "emphasis is shifting from single-technology systems to integrated approaches seeking to cost effectively combine voice, video, and data technology, often in tandem with print" (p. 10). He also believes distance education is "in a period of evolutionary growth" (p. 10).

Pilot Study/Background

A pilot study of distance education undergraduates was undertaken in preparation for this study. It revealed student concerns with the technology, learning/interaction, community, the course structure as well as content, and pedagogy determined in the context of their other behavior and after an extended period of observation" (p. 56).
Methodology for Pilot Study

An undergraduate class of 26 business majors was observed for a period of one semester. Eighteen students took the class during a weekday evening from the distance site and eight were at the on-campus site. Institutional Review Board approval had been received and permission had been obtained from the instructor and the students.

Six, three-hour observations were completed, for a total of 18 hours of observation. Two of the observations were from the distance site. Volunteers were sought for interviews and five students volunteered. Two were from the on-campus site and three were from the distance site. Permission slips were signed by the interviewees which included audio-taping. Two interviews were done with each student. Once the first interview was transcribed, the participant was given a copy to correct the text and to expand on their comments. The first interview was near the beginning of the semester and the second interview was near the end of the semester. The data was organized, coded, reduced, and thematized.

Findings of Pilot Study

When asked when they would choose-distance education over an on-campus course, they reported that the course itself and the teacher were more important than the technology. They also stated they did not feel comfortable responding to questions the instructor asked when they did not know their classmates. These participants stressed the need for clear expectations and assessment practices for the course.
The participants expressed varying degrees of comfort and experience with technology going into the interactive television course. In the beginning the camera took on an “entity” status for some participants. One student never got past that point. Others reported learning to not let the technology bother them although they also stated the technology was “a pain” and was “limiting.”

Participants varied in their preferences of learning activities, but all reported liking discussion and interaction with fellow participants. Participants stated they needed to know each other (be a family) for them to feel comfortable speaking in class and working together in groups.

The participants reported the teacher played a major role in the success of the class. The teacher needed to be well-organized, prepared, and accessible. The teacher was also expected to use appropriate methods in teaching the course content. The participants appeared to be able to separate content and instructor as originally researched by Silvernail and Johnson (1992).

Definitions of Terms

The following definitions are used in this study:

- State Distance Education - flexible, compressed interactive video network that uses a two-way communication system. Cameras, microphones, and television monitors are provided at all sites for real time exchange of audio and video.

- Distance Education - courses offered by the Public University via Interactive Video Network to ten cities within the state.
• Distance Nursing Participants - participants enrolled in graduate nursing
courses offered by the Public University via IVN to Distance City.
• Purposive Sampling - technique through which the site, event, or people
are chosen on the basis of availability, accessibility, and theoretical
interest (Schwandt, 1997).
• Technology - the machines and equipment (microphones, television
monitors, cameras, telephone, and computers) used to implement
distance education.
• Technician - person who often may be the only contact that students and
participants have with the network. Each campus allocates money for the
technician in their distance education classrooms. That campus is then
reimbursed for the technician by the sending site. The following is a
partial list of duties and responsibilities of the classroom technician: Turn
on equipment, check for handouts, and do other necessary duties for the
event, provide quick training if necessary, show introductory videos,
distribute materials as instructed, provide assistance to instructor or the
presenter, pan/tilt/zoom the camera.

Delimitations and Limitations

This qualitative research study is based on the students' lived experience
in distance education. It concerns itself with (a) interviewing and observing
participants enrolled in an interactive television distance education course, (b) a
focus group of interviewees, and (c) artifacts. The following are potential
limitations of this study: Because of purposive sampling, the finding of this study may not be generalizable to all components of distance education. The findings could produce other interpretations by a different evaluator. Other interpretations could also be produced should the data be evaluated at another point in time (Creswell, 1994; Erickson, 1986).

The presence of the researcher in the observation field may affect the subjects' behaviors in undetermined ways (bias) (Schwandt, 1997). Researchers must identify and suspend their own assumptions and expectations of the context of the study (Bogdan & Taylor, 1975; Schwandt, 1997). There is danger in over-reliance on especially verbal or easily accessible informants (Schwandt, 1997). Researchers may fail to identify and acknowledge their own world view (Glesne & Peshkin, 1992). Observation itself is "subjective, unrepresentative and ungeneralizable" (Mason, 1996, p. 62).

Summary

Distance education is an important option, and sometimes the only alternative, for many students. Although distance education has a long and interesting history, the development of technology has given students more options than ever before. This is an exciting time in distance education and, as the number of students involved in distance education continues to increase, examination of the experiences of distance education students becomes more important. The examination of the student experience is the primary goal of this study. It will examine how three College of Nursing graduate students' perceive
their experience as distance learners. Areas of interest for this study include the following issues: (a) The perception of the technology and how students use the multiple modes of technology available to them for their learning, (b) The factors promoting or inhibiting the process of community development, (c) The importance of community, itself, in distance education, and (d) The amount and quality of communication both in and out of the classroom, (e) The methods used for communicating, and (f) What are the factors affecting the graduate nursing students' learning in the distance education experience?

Chapter Two will examine the research methodology that will be used in this study, Chapter Three will present the findings. Chapter Four will discuss those findings in relation to relevant literature, relate the educational implications of the findings, and give recommendations for distance education, practice (education and nursing), and research.
CHAPTER II
METHODOLOGY

This chapter presents the rationale for the selection of the research method used to study graduate nursing students' perceptions of their distance education experience. The methodology for the current study is next. The literature justifying the methodology concludes the chapter.

Rationale for Choice of Method

The research design connects the data from the study's initial research questions to the conclusions drawn from the study (Yin, 1989). It is the process that begins with conceptualizing the problem, continues through data collection methods, and concludes with composing the narrative and communicating the findings (Creswell, 1998). The research strategy must be coherent, linking questions and methods (Mason, 1996), and should remain flexible in order to handle unexpected events as the inquiry may move in unanticipated directions as the researcher explores the subject's lived world. One should ask, "What is my research question and how can I best answer it?" Qualitative methodology best serves the needs of this study because it allows the richness of the characters, and what they have to say, to be heard in the context in which their lives exist.
Methodology for the Current Study

The type of design used for this study was determined by the research questions. To examine the lived experience of graduate nursing students, a qualitative phenomenological design was selected. This type of design allows human behavior to be examined in its context and setting. It also allows for the flexibility needed to investigate whatever areas were opened by the participants for discussion.

Validity, Triangulation, and Reliability

Validity means that the findings accurately represent the phenomena observed, and are backed by evidence (Schwandt, 1997). In order to assure validity the method of triangulation was employed. Data from participant interviews, researcher observations, the focus group (Ellen, Mary, and Sally), and artifacts were used to verify the data. Feedback from each participant was sought and encouraged regarding what they had said, what had been observed, and what others had said about the learning experience.

Interview transcripts were given to each participant to allow them to make corrections or expand on their comments. During the interviews, data from observations would be mentioned, if appropriate to the topic of the conversation. The focus group allowed the three distance participants to share what they had said previously, with each other. This technique verified their interview data and many of the observations. The data appeared to be well supported.
Reliability was addressed by using a consistent and standardized approach to collecting and recording data. Field notes were written immediately after the observation period without discussing them with anyone else. Audio-taped interviews and the recording from the focus group were immediately transcribed.

The same method of data analysis was employed throughout the study to bring order, structure, and meaning to the collected data. The data was sorted, codified, reduced, and organized into patterns which made it useful for analysis. Analysis started with the beginning of data collection. The data was made more understandable with analysis and relationships between the facts emerged over time.

Entry

This study required a site with graduate nursing participants participating in distance education/interactive television. The Public University had a well established Rural Health Nursing tract that was being delivered via distance education. Conversations with the College of Nursing Graduate Dean resulted in permission to conduct my research using Public University’s distance education sites and graduate students.

The next step in gaining entry was to obtain permission from the course instructor. A third party assisted with the introduction to the course instructor. Since the instructor was not yet on campus for the new semester, e-mail was used to become acquainted with the instructor and to obtain permission to
observe the class and interview participants for the study. During the first class, I explained the purpose and nature of my research to the participants at both the on-campus and distance sites and then invited them to share their experiences through individual interviews, focus groups, and my observations.

**Personal Biographer**

A journal was kept from the inception of the project, through its completion. The journal helped bring issues to light and allowed me to develop a perspective concerning my own perceptions regarding distance education, instructional strategies, and adult learning theory. Bracketing allowed me to recognize biases and to set them aside to not taint the data.

**Reciprocity**

Reciprocity in this research project was addressed by valuing and appreciating the time the participants spent with the interviewer during the interviews. Appointments for interviews were arranged with consideration for the interviewees' work and personal schedules. The interview site was mutually selected so it would be comfortable for both the researcher and the interviewee and so confidentiality could be maintained. One site selected was a restaurant. This was a good choice as in that particular region of the state business often becomes a social event when food is involved, consequently the food contributed to a more relaxed environment resulting in a setting more conducive to sharing. Other sites were the homes of one of the interviewees and the
distance education classroom. One of the participants invited the focus group to meet at her home.

**Sampling**

The plan for sampling in this study was to complete one to three weeks observing the class where the anticipated activity was taking place and then invite individuals to share their experiences with distance education through the interview process. However, the class itself was small (seven students) so the three distant site participants were all invited to participate. Later, two of the four students on campus were invited to participate in an interview to compare their experience with the off-site participants.

**Ethics of Data Collection**

Creswell (1998) gives several steps for gaining access to a site and one of these steps places the researcher in the realm of ethics. Permission from a human subjects review board was obtained.

Subject consents were developed in accordance with Public University's Institutional Review Board (IRB) and contained the following:

- The right to withdraw at any time from the study.
- The purpose of the study.
- Procedures to be used to collect data.
- Confidentiality of respondents.
- Risks associated with participation in the study,
• Any benefits to participant, and
• Signature and date of participant signing (p. 116).

Approval from the Public University IRB was applied for concurrently with site and instructor approval. Included in the forms submitted were the basic requirement for the IRB and draft consents. Consents were obtained from the course instructor, observed participants, and interviewed participants. Permission for voice recording was included on the interviewed student consent form.

Data Collection

Interviewing

The interview plan for this study was to interview each of the distance participants twice during the semester, once near the beginning of the semester and once near the end. The focus group at the completion of the course would provide an opportunity for the participants to discuss their experiences in the semester in a group, and also, to provide triangulation of data. The design was flexible enough to handle all areas of data provided from the interviews. The focus of the project helped reduce data to recurring themes which were then tested by further questioning of appropriate interviewees. A focus group discussed the emergent themes to verify their validity. The interviews and focus group were audio recorded and transcribed by the interviewer immediately after the interview event. This allowed for familiarization of the data. The transcribed
interviews were then entered into the Ethnograph v4.0 textual analysis computer program to aid in coding and analysis of data.

Two of the distant site participants were interviewed twice during the observation period. The third student declined the second interview but participated in the focus group. These interviews were arranged after observation periods when times were convenient for the participants. The two on-campus participants were each interviewed once. E-mail was used to arrange these interviews. The course instructor was interviewed initially on an informal basis. Phone conversations and communication via e-mail were also used to visit with the instructor. A brief meeting with the instructor toward the end of the semester provided further insight.

Observation

The observational plan for this study was to observe the interactive television class which met once a week, over the course of one semester (12 weeks), after permission from the instructor and the students had been obtained. A total of 20 hours observation was completed over a 10-week time span. Eighteen hours were undertaken at the distance site during class time and two hours were completed at the on-campus site. Actual class time was two hours per week with one hour being devoted to group work time. Students did not usually stay in the class-room for the group time and would meet during the week or on a weekend.
Notes taken during the observation period were written up immediately following the observation session. The setting and people were observed as well as their conversations and actions. Classroom activities were also noted. The written field notes were entered into Ethnograph v4.0 to assist with coding and data analysis.

**Artifacts/Documentation**

Artifacts/documents used in this study included the course syllabus, handouts, and video-taped lectures and programs provided by the instructor. A history of the Rural Health Nursing Tract was provided by the College of Nursing Graduate Dean. The College of Nursing Mission and Philosophy were also provided. The history of distance education, the State Distance Education Administrative Manual, and the Distance Education Training Manual were provided by the State University System.

These artifacts/documents provided a rich background on which to plan questions for interviews and observations. They allowed cross-referencing of information obtained from the students and the course instructor.

**Data Analysis**

Analysis of the data collected from interviews and observations for this study began at the start of data gathering. Coding was begun and interesting text highlighted. The pilot study, literature review, and the study design provided cues for the codes. As data continued to compile, the codes and themes were
reorganized at the end of collection and the data was reduced to a more manageable size.

Data display assisted in helping to see the whole picture. Relationships between the concepts were identified. Theory testing was undertaken on a continual basis throughout analysis. Categorization, synthesis, and pattern recognition played key roles in data analysis. Assumptions and summative statements were developed and verified by appropriate quotations.

Trustworthiness or validity of my research was present due to project planning. Triangulations helped confirm points by using the data from observation, participant feedback, interviews, focus group, and artifacts. Accurate, thorough, and consistent documentation helped ensure the data was solid. Constant review and analysis of data helped assure the researcher’s familiarity with the data. This, in turn, helped ensure validity.

Literature Justifying the Methodology

**Type of Design Used**

The purpose of this study was to describe the experience of graduate nursing participants taking courses through distance education/interactive television. It also includes secondary questions such as how distance learning affects the participants personally and professionally. Wilson (1977) believes that human behavior is connected to the setting, context, and participants’ frame of reference. Consequently, it is imperative to conduct research in that environment. He also believes that behavior must be understood in the setting
in which it occurs. Because qualitative subjects are complex, the researcher immerses her/himself in the lives of others and uses multiple data gathering techniques. In this manner the researcher can illustrate the complexities in the research (Glesne & Peshkin, 1992). Qualitative research methods are an important means of inquiry for education (Marshall & Rossman, 1995). The most appropriate and logical choice of designs for this research was the qualitative paradigm using a phenomenological approach. Since the intent of this study is to investigate the experience of the participants' educational world, phenomenology seemed highly appropriate. Schwandt (1997) writes “Phenomenologists insist on careful description of ordinary conscious experience of everyday life (the life-world), a description to ‘things’ (the essential structure of consciousness) as one experiences them” (p. 114). Moustakas in Creswell (1998) says a phenomenological study “describes the meaning of experiences of a phenomenon . . . the researcher reduces the experiences to a central meaning or the ‘essence’ of the experience” (p. 236).

Validity and Reliability

Validity

Schwandt (1997), writes that in qualitative research, to call something “valid is to indicate that it is sound, cogent, well grounded, justifiable, or logically correct” (p. 168). Maxwell (1996) defines validity in qualitative research to be the “correctness or credibility of a description, conclusion, explanation, interpretation, or other sort of account . . . validity does not imply the existence of
any objective truth to which an account can be compared" (p. 86). Maxwell maintains that validity consists of strategies to rule out the threats to the qualitative design.

Maxwell (1996) believes the threat to descriptive studies includes inaccurate or incomplete data. He recommends making field and observational notes as complete as possible. Two specific threats to validity are bias or reactivity. Bias is related to the researcher's stance and knowledge. Reactivity deals with the effect the researcher has on a setting. Both bias and reactivity exist. Therefore, acknowledgment and identification of biases are essential.

Creswell (1994) notes that the study design should address how the study will deal with validity. He presents procedures which could lend internal validity to the study. Procedures include discussing plans to triangulate or find convergence, discussing plans to receive feedback from informants on correctness of conclusions, and identifying how informants and participants will be involved in all phases of the research.

Polkinghorne (1994) writes, "Validity refers to the notion that an idea is well grounded and well supported . . . Does the general structural description provide and accurate portrait of the common features and structural connections that are manifest in the examples collected?" (p. 57).

Reliability

Schwandt (1997) describes reliability as "capable of being replicated by another inquirer" (p. 137). Reliability could result from carefully reported
protocol for data collection. A different researcher could use the protocols for another setting. Qualitative studies are not meant to be replicated. However, the themes or categories may be used for other studies.

Marshall and Rossman (1995) write that qualitative studies can not be replicated because the world changes... By keeping thorough notes and a journal or log that records each design decision and rationale behind it, researchers allow others to inspect their procedures, protocols, and decisions... by keeping all collected data in well-organized, retrievable form, researchers can make them available easily if the findings are challenged or if another researcher wants to reanalyze the data (p. 146).

It is important to remember that qualitative research "does not pretend to be replicable" (Marshall and Rossman, 1994, p. 146). They contend that the flexible design can not be replicated by other researchers and that it should not be attempted.

**Triangulation**

Triangulation is a basic element in qualitative validity (Fetterman, 1989). It checks the integrity of inferences drawn by the researchers. Phenomena is examined from more than one vantage point (Schwandt, 1997). Fetterman says triangulation works with any topic and any setting. It improves the quality of the data and of the finding. Triangulation can occur formally or informally (unstructured event).
Entry

Well-planned entry into the field setting is an important factor in the future quality of the data. Erickson recommends broad access to subjects and settings. He expresses concern over "evidentiary adequacy" (p. 141). He also recommends that subjects be as informed as possible and also that they be protected as much as possible from risks that may result from participating in the study.

Schatzman & Strauss (1973) give what they call rather obvious strategic requirements for entry. After the focus of the study is identified, the researcher should "locate a site that contains people and social activity" that relate to the focus (p. 18). In addition, and perhaps most important, the researcher then must gain entry to the site by forming a relationship with the appropriate people, gain their trust, and establish credibility. The researcher "has promised confidentiality, respect, objectivity" and has promised to be a well-behaved guest (p. 27). Ideally, this will lead to permission to enter the site. Once entry into the site and access to research participants are gained, a familiarization with the setting, people, and language is necessary for data collection.

Personal Biographer

It is important that the researchers identify their own biases as well as experiences which might affect how they view the study. Creswell (1998) and Marshall & Rossman (1994) suggest that such experiences should be written in a journal thereby bracketing the experiences. Van Manen (1990) quotes Husserl
who "used the term 'bracketing' to describe how one must take hold of the phenomenon and then place outside of it one's knowledge about the phenomenon" (p. 47). This knowledge can include common sense understandings and assumptions.

**Reciprocity**

Reciprocity involves the researcher's realization of the costs of the study to the study participants. Marshall and Rossman (1995) write that "reciprocity should fit within the constraints of research and personal ethics, and within the constraints of maintaining one's role as a researcher" (p. 71). Marshall and Rossman suggest things such as listening, tutoring, and making coffee.

**Data**

**Sampling**

Schwandt (1997) presents two issues in sampling in qualitative research: Selecting a field site and sampling within the site. Schwandt (1997) states that "the site or place (or person) is chosen on the basis of a combination of criteria including availability, accessibility, and theoretical interest" (pp. 140-141). A single place may be chosen because the process or action is occurring there. Another criteria to be considered is "Is this usual or customary? Is this what typically goes on here?" (p. 142). The site selected must have the activity occurring in it for the researcher to collect information relating to the research question.
Marshall and Rossman (1995) reiterate Schwandt when they describe the ideal site as: "where entry is possible; there is a high probability that a rich mix of the processes, people, programs, interactions, and structures of interest are present; the researcher is likely to be able to build trusting relations with the participants in the study; and data quality and credibility of the study are reasonably assured" (p. 51). Miles and Huberman (1994) write, "Qualitative researchers must characteristically think purposively and conceptually about sampling" (p. 441). They recommend the researcher sample through a variety of activities, events, times, and locations. Sampling choices tend to evolve through data collected.

Data Collection

Denzin and Lincoln (1994) describe qualitative research as "multi methods in focus, involving an interpretive, naturalistic approach to its subject matter. This means that qualitative researchers study things in their natural settings, attempting to make sense of, or interpret phenomenon in terms of the meanings people bring to them" (p. 2).

They describe a collection of materials that can be accomplished by several different means including observation, interview, and visual text. These methods are interconnected enabling the researcher to get a better grasp of the subject.

Interviewing

The preferred approach for a phenomenological study is in-depth
interviewing. Schwandt (1997) writes that qualitative studies make the best use of "unstructured, open-ended, informal interviews for they allow the most flexibility and responsiveness to emerging issues for both respondents and interviewees" (p. 74). Structured open and closed-ended interviews may be used when time is a factor. The interview may be viewed "as a form of discourse between two or more speakers or as a linguistic event in which the meanings of questions and responses are contextually grounded and jointly constructed by interviewer and respondent" (Schwandt, 1997, p. 75). Marshall and Rossman (1995) describe a qualitative interview as "a conversation with a purpose" (p. 80).

Research interviewers need to be good listeners and be able to pick up verbal and nonverbal cues. They should not repeat questions to the same participant and should strike a balance between talking and listening. The interviewer should be comfortable with note taking, audio recorders, and interviewing techniques to be effective (Mason, 1996). The interviewer should be prepared for unexpected data and decide the best way to manage it (Marshall & Rossman, 1995). The goal of the phenomenological interviewer is to find the structure and essence of the shared experiences of the interviewee. Bracketing of the interviewer's biases is essential. The data obtained is clustered in themes which then leads to description (Marshall & Rossman, 1995).

Observation

Observation is another qualitative research strategy. Schwandt (1997)
describes observation as “Direct first-hand eyewitness accounts of everyday social action” (p. 106). Bogdan and Taylor (1975) advise that “Researchers remain relatively passive throughout the course of the fieldwork, but especially during the first days in the field” (p. 41). Researchers can shut off the free flow of data by entering the field too early or too strongly. They must also decide who, what, and when to observe. Researchers need to blend into the setting and yet develop close and honest relationships when appropriate. Bogdan and Taylor (1975) write, “the observer must remember that his or her primary purpose is to collect data. Any participation that interferes with the ability to do so should be avoided” (p. 51). The researcher’s presence will have some effect on the situation and should be kept in mind (Mason, 1996).

“Systematic and analytical participant observations depend upon the recording of complete, accurate and detailed field notes” (Bogdan & Taylor, 1975, p. 60). Suggestions for the recall of conversation and events include (1) note key work, (2) don’t try to remember too much at one time, (3) write notes as soon as possible after observation, (4) don’t talk about observations until they are written, (5) follow a time line, and (6) fill in pieces of lost data. Realistic expectations concerning time to record field observations is an important factor (Creswell, 1998).

Glesne and Peshkin (1992) give important suggestions for observation. The researcher should enter the setting and try to observe everything using all the senses. They should 1) use detailed written description and sketches, and
2) note participants, events, gestures, and acts. Also, besides the objective observations the researcher should note what he/she sees, hears, feels, and thinks. Vocabularies and language are important to understand in terms of the purposes of their users (Bogdan & Taylor, 1975). They caution the researcher, “The true significance of subjects' verbal and nonverbal symbols can only be determined in the context of their other behavior and after an extended period of observation” (p. 56).

Artifacts/Documentation

Artifacts or documents “help in the process of reconstructing meaning” (Tuchman, 1994, p. 214). They can be used for data triangulation (Janesick, 1994) and to help “corroborate your observations and interviews and thus make your findings more trustworthy” (Glesne & Peshkin, 1992, p. 52). They may also guide interviews and observations. Artifacts can provide various types of information such as historical, demographic, and information that may not be available from other sources of data.

Artifacts reflect and are part of the culture of a group of people along with concepts, and technology (Schwandt, 1997). They do not stand alone but in relation to other things. Silverman (1997) describes this as intertextuality. He believes, however, that “documentary materials should be regarded as data in their own right. They often enshrine a distinctly documentary version of social reality” (p. 47). Artifacts are a part of society and of culture and are thus part of the context of distance education.
"Data analysis is the process of bringing order, structure, and meaning to the body of the collected data. It is a messy, ambiguous, time-consuming, creative, and fascinating process. It does not proceed in a linear fashion; ...analysis is a search for general statements about relationships among categories of data" (Marshall & Rossman, 1995, p. 111). Schwandt (1997) defines data analysis as being "recursive and begins at the onset of generating data. The inquirer employs a variety of analytic strategies that involve sorting, organizing, and reducing the data to something manageable and then exploring ways to reassemble the data to interpret them" (p. 4). Glesne and Peshkin (1992) write that data analysis is the organization of what has been seen and heard to help make sense of it. Analyzing the data allows the researcher to "create explanations, pose hypotheses, develop theories, and link your story to other stories" (p. 127). Categorization, synthesis, searching for patterns, and interpreting are activities essential for analysis.

Conclusions drawn and verified involve interpretation of the data. Huberman and Miles (1994) write the "tactics used appears to be large, ranging from the typical and wide use of comparison, contrast, noting of patterns and themes, clustering, and use of metaphors to confirmatory tactics such as triangulation, looking for negative cases, following up surprises, and checking results with respondents . . . Many accounts of this aspect of analysis demonstrate that there is a multiple, iterative set of tactics at play rather than
one or two central ones . . . we can speak of data transformation as information is condensed, clustered, sorted, and linked over time" (p. 429).

The iterative nature of qualitative research is based on the belief "there are regularities to be found in the physical and social world" (Huberman & Miles, 1994, p. 431). Analysis begins with the first visits. Researcher notes and reflexive notes begin the process which continues with coding. With the questions "What" and "How" the complex set of data is made more understandable. The "Why" helps put facts in relation to one another.

Glesne and Peshkin (1992) recommend to simultaneously practice analysis with data collection. Reflection is important and may be recorded by memos to self or a reflective log. Analytic files can help track information and thought. They may be set up originally with generic or broad categories then organized with more specificity.

Data reduction begins with the inception of the study and proceeds through data collection, coding, clustering and thematizing. Data display is the organization and collection of data that is necessary to take action or draw conclusions. "The researcher typically needs to see a reduced set of data as a basis for thinking about its meanings" (Huberman & Miles, 1994, p. 429).

Coding involves naming the data and organizing it into divisions and subdivisions. If data is coded and organized throughout the study the researcher won't be left with masses of unorganized data at the end of the collection period. There should be as many codes as needed to organize the
data. Codes can be blended and changed over time as indicated by ongoing analysis. Themes can be identified when sub-codes are present across major codes.

Van Manen says the phenomenological study tries “to grasp the essential meaning of something” (p. 77). To grasp the essential meaning the researcher must reflect, clarify and decipher the structure of the experience. Van Manen (1990) writes, “meaning is multidimensional and multilayered” and can’t be “grasped in a single definition” (p. 78). Meaning is communicated through text or prose.

As data analysis unfolds, the emerging hypotheses are tested through the data. The hypothesis itself is challenged and negative cases are sought. The emergent hypothesis may be subsumed into other constructs. The data itself is evaluated for “their informational adequacy, credibility, usefulness, and centrality” (Marshall & Rossman, 1995, p. 116). Alternative explanations always exist and the researcher “must search for, identify, and describe them, and then demonstrate how the explanation offered is the most plausible of all” (pp. 116-117).

Summary

This study investigates and describes the experience of graduate nursing participants taking courses through distance education/interactive television. Qualitative research methodology was the most appropriate way of investigating these research issues, and, since the intent of this study was to investigate the
experience of the participants' educational world, phenomenology was particularly useful. It provided the richness of the participant's own voice in telling the story of their experience in distance education.

The next chapter, Chapter Three, will present the findings of this research.
CHAPTER THREE
FINDINGS AND DISCUSSION

This chapter contains portraits of participants and distance education, the
findings, the evidence related to the findings, and a summary of the findings.

Portraits of Participants

The three participants involved in this study were all baccalaureate
prepared Registered Nurses (RN) with varying years of work history (8 to 30)
and who work in a variety of settings. They had enrolled in a graduate nursing
course in the College of Nursing's (CON) Rural Health Tract. The class called
"Rural Nursing Strategies" met once a week for twelve weeks during the spring
semester (January 12th through April 27th). The class period ran from 9:00 A.M.
to 10:50 A.M. except for the two weeks when presentations were being given by
the students, when class ran from 9:00 A.M. to 11:50 A.M. Eight textbooks were
required for the course and another 11 textbooks were recommended.
Assignments included the community analysis which incorporated group work,
an individual paper, and a group presentation; a presentation on a vulnerable
population; and a letter to the "Rural - Care" listserve.

Ellen

Ellen is a student at the distance education site. She is married, in her
early 50s, and the mother of two adult children, one of whom is married and recently purchased a home. Ellen's elderly parents live approximately three and one-half hours from her and call upon her for information relating to health and health care and for assistance.

Ellen was engaged in her initial nursing education for two years and then married and moved away before completing the program. Her husband and she moved to a small rural community. "While I was living there this hospital- a little community hospital- in a small neighboring community called me and wanted to know if I'd come over and work. I would work night shift relief." She continued with her reflections of her professional life, "That was when you had one RN and one aide working in a hospital. That was your staff, you know." And so they wanted to know if I'd work the two nights off relief for this gal. They would have an RN covering for me. I could telephone her if I needed her. So I said sure. So, I worked over there." Ellen then shared the circumstances which allowed her to return to school to become a registered nurse. "And then they said to me - you know, if we gave you a loan - a kind of contract - would you go back to school? Because they were going to need registered nurses."

By this time, Ellen's first child had been born. She felt there was no way she could return to school but didn't want to miss the opportunity. She completed a diploma in nursing in the late 1960s. She started her baccalaureate degree in the late 1980s and completed it in the middle 1990s. Throughout the
time she was working on the baccalaureate degree she worked full-time and went to school part-time.

Ellen started graduate courses shortly after obtaining her baccalaureate degree. "I always kinda thought I'd like to be a graduate of Public University and then with this program coming along, it just seemed it was meant to be." She took classes for two semesters and then sat out one semester. She decided she missed going to school and continues to take classes.

Ellen is a perceptive, mature student. She is a highly motivated learner and is realistic in her expectations of herself and her abilities. She is a pragmatic and determined person.

Mary

Mary graduated with her Bachelor of Science in Nursing degree from an out-of-state college in the early 1970's. She took "a couple" graduate classes in the late 1970's but wasn't real interested in pursuing a master's degree since hospitals weren't hiring nurses with master's degrees, and she wasn't interested in teaching. She has worked primarily in intensive care units throughout her career.

Graduate school "became more of an interest," and she wanted to enter a nurse practitioner program at a private university. She was accepted into the graduate program but not the nurse practitioner program which had a limited enrollment. Mary then started taking classes via distance education from Public University. "I'm thinking probably, maybe a year from now, of maybe seeing if I
could flip over into the nurse practitioner program and then ultimately end up
with a double master’s.” Mary is single, has a dog, and recently made a “huge
commitment” by buying a house. She is a conscientious student. She
effectively deals with new situations. She enjoys woking in groups with other
students.

**Sally**

Sally is married and the mother of two elementary-aged children. She
graduated from Public University in the middle 1980’s. Her family recently
moved from Public University City to Distance Site City. She was hoping they
would have more money and she more time so she could enter the nurse
practitioner program at a private university located there. “I took classes there
the first year we lived here. I didn’t apply to the nurse practitioner school the first
year. But the second year I did and didn’t get in.” She heard about the distance
education classes and started taking them even though the rural track was not
what she wanted. She needed to be a half-time student because of her loan.

Sally has applied and been accepted to Public University’s nurse
practitioner program. She plans to commute from Distance City to Public
University which is approximately 600 miles round trip.

Sally talked about her decision to get her bachelor’s degree. When she
was a senior in high school her father was laid off from his job and since he was
in his fifties he had a hard time finding work. It was at that point she realized
how tenuous employment might be and decided to go on to school. She felt that
if/when she married and her husband ran off and left her with kids she could support herself. She thought education was a good idea even if she wasn't married in that she could support herself and not be dependent on anyone.

Public University College of Nursing

A growing number of institutions of higher learning are providing educational opportunities for students via distance education. The Public University College of Nursing (CON) felt a responsibility to provide education to health care providers in the Health Care Shortage Area in which it was located. Distance education was also a way to increase the number of students enrolled in the college. The following section provides a brief history and status report on the College of Nursing and the Rural Health Nursing Track offered by the CON via distance delivery.

Public University started offering courses for nurses in the early 1900's. A baccalaureate program was begun in the late 1940's and the first degree from this program was awarded in the early 1950's. The Division of Nursing became a college in the late 1950's.

The CON has both baccalaureate and master's nursing programs which are approved by the State Board of Nursing and accredited by the National League for Nursing as described in a 1989 grant proposal. The mission of the CON is to provide high quality nursing education to students and communicate the discipline of nursing by commitment to inquiry, research, and the practice of professional nursing.
A 1993 grant progress report by the College of Nursing said, the goal of the Rural health Nursing Project was to “increase the supply and qualifications of nurses in the state and surrounding areas by: 1) providing relevant graduate education to practicing rural nurses, and 2) increasing the number of master’s prepared nurses in Rural Health Professional Shortage Areas.”

According to information in the 1993 grant proposal, the CON believed that prospective students for the program would be older than average, working full or part-time and have families. Participating in graduate education would be difficult because of cost, travel distances, time, and release from work.

The overall objectives for the Rural Health Nursing Project were

- Significantly expanding the enrollment in the Rural Health Nursing Specialization within the major in nursing.
- Developing a coordinated system for outreach of graduate nursing education through telecommunication.
- Recruiting, enrolling, and graduating nurses with capabilities for academic success and leadership in rural health nursing.
- Identifying communities with the resources needed for clinical experience and developing a support network for rural health nursing students.
- Planning for continuation of the graduate nursing education through telecommunication systems for outreach following the grant.

The program is currently offered to remote sites using the State Interactive Video
Network. Students and faculty are also beginning to use other electronic modalities for learning and communicating, such as e-mail, computer disk, etc.

The CON believes that students should be encouraged to be self-directed and participatory learners. In addition the CON believes students should be committed to life-long learning since society is constantly changing. The CON feels it has a responsibility to provide graduate education in nursing via distance education as it is the only public university authorized to offer graduate nursing education in the state.

According to the CON, students can access the Public University Library through computers as well as access university libraries at all satellite locations. The availability of rural health nursing material varies from site to site. The CON reports the students have voiced no difficulty in accessing needed library resources and the quality of papers has not differed from those submitted by on-campus students. Students are strongly encouraged to have their own computers or to have access to one in their home communities.

Access to faculty can be obtained by several means. Each faculty is to travel to each distant site once a semester, allowing three hours for conferencing/consultation. FAX and a long distance phone system provide other means. Students are encouraged to come on-campus for usually the first class each semester.

The responsibility for advisement is left to the individual student. Each student is given a temporary advisor when he/she is officially admitted into the
program. It is the student's responsibility to initiate and maintain contact with that advisor. When the time comes to select a permanent advisor for the thesis, the student may elect to keep the temporary advisor or select a new one, who would have expertise in the area the student chooses to research.

The Public University College of Nursing (CON) developed a rural Health Nursing Specialist Master's program in the middle 1980s. One of the program goals was to encourage graduates to practice in rural areas. Data taken from the Report on Nursing (United States Department of Health and Human Services, 1986) revealed a projected national shortage of master's degree nurses of 258,020 by 1990. The State Board of Nursing reported that 3.6% of nurses in the State were Master's prepared. The projected need was 12% for 1990. In 1988, 2% of nurses in the State had master's degrees. According to the Board of Nursing, out migration was a problem.

According to the CON Mission Statement "as the only state assisted institution authorized to offer graduate education in nursing, the college has a distinctive responsibility to provide distance learning opportunities for access to the master's degree program." In a 1996 report the CON stated "the program is currently offered to remote sites using the State Interactive Video Network. Students and faculty are also beginning to use other electronic modalities for learning and communicating."

Data released by the CON shows that by the end of the 1996-1997 school term a total of 29 on-campus students had been admitted since 1987 to the
Rural Health Nursing Program. Twelve of those students have graduated. There had been a total of 73 off-campus students admitted to the program since 1987, and 30 of those students had graduated. There were 69 students enrolled in Rural Health. Students must have a bachelor's degree to enter the program and may have completed eight semester hours before entering it. The grade point average (GPA) for off-campus graduates of the program was 3.91/4. On-campus graduates had a GPA of 3.93/4. The average age of off-campus graduates was 42.5 while the average age for on-campus graduates was 44.7.

The Rural Health Nursing Specialty Master's Program has been in existence since 1987 and present plans indicate continuance at least through Fall 2001. The program started using the Educational Telephone Network, expanded to the IVN, and has incorporated computer technology— including e-mail and the Internet. The use of multiple modes of technology for delivering the program parallels distance education as seen by Willis (1996).

Themes

The following section reports the themes that emerged, the evidence supporting the themes, and a summary of each finding. Whenever possible the voices of the participants were used to explain the findings. The following five themes emerged from the data: (1) Students returned to school for personal reasons and professional concerns; (2) Participants became comfortable with the technology of distance education as the class progressed; (3) The participants felt anxious and stressed when their expectations of the program
Theme One: Students returned to school for personal reasons and professional concerns.

While it was apparent that all of the participants, without exception, reported returning to school for self-satisfaction, it was also evident their motives were multi-faceted and overlapping and consequently sometimes difficult to categorize. It was important to identify the themes but to do so in a way that did not detract from the richness of their responses.

Personal Reasons

Self-Satisfaction

Even though the participants all agreed that self-satisfaction was the predominant reason for their enrolling in classes in the College of Nursing at Public University, the responses were rather vague and very general. For example, Mary said she went back to school "more for myself." On the other hand, there was evidence indirectly supporting this contention throughout the other themes.

Intellectual Stimulation

Perhaps the area that the participants found to be the most exciting was what they defined as intellectual stimulation. During the focus group discussion
with Ellen, Mary, and Sally the topic of intellectual stimulation became a major point of discussion. Mary said, "there's a whole other part of your brain that you don't use and that you kinda just feel that going back to school just stimulates that part of it and makes what you're doing more interesting." Ellen, building on Mary's observation, said, "If you don't go back you have to figure out ways to see things differently or otherwise you're always doing the same thing." She continued, "Sometimes it's like I've done this for so long and then I'm tired of doing it. I get no satisfaction out of doing what I'm doing . . . Thinking differently in order to get that good feeling about work. You hope to be autonomous in what you do."

Sally also believed school "Stimulates you intellectually." However, she seemed to be more concerned about the formation of good relationships with co-workers. She was hoping for "collegial relationships."

Professional Concerns

All of the participants reported taking classes because of professional concerns. Sally was interested in what she saw as advancement. She was enrolled in the nurse practitioner program and liked the idea of being financially independent and professionally more autonomous. Sally voiced that she expected that with an increase in her educational status there would be an increase in her salary.

Mary believed she needed to be prepared for whatever changes appeared in the health care system in the future. Ellen demonstrated her
conviction about her professional needs by saying that "in order to continue on in nursing that I had to [go back to school]." She felt that the ability to be flexible would be a necessary trait to survive in health care in the future.

While the participants had a variety of professional reasons for enrolling in this nursing class specifically, and in the program generally, they all had professional concerns they felt were being met by taking this class.

Idiosyncratic Reasons

There were reasons for taking the class that were individual and yet were insightful and helpful. Mary used the class in part as an avoidance mechanism "... part of it was dissatisfaction not so much with my present job as with my present management." She went on to say that by going to school she could focus on something other than her job and, since leaving her job was not an option, she needed a way of coping with her unhappiness. School provided her with "... something else to center on."

Sally felt that by going to school as an adult she would be a good role model for her children, "especially for my daughter." She thought in order for her children to function in the future they would need lifelong education and that she was doing just that. Ellen went back to school to enhance her self-esteem ... "I didn't feel good about myself." Sally "... wanted to be challenged." And Julie also felt that going back to school provided her with a kind of "personal challenge."
Summary

The reasons participants returned to school fell into two categories. One was professional, where participants talked about attaining the flexibility needed to survive in the evolving health care system. The hope for more autonomy, respect, expanded work roles, and collegial relationships with co-workers were also stated as important reasons for returning to school. On a more personal note, participants were seeking self-satisfaction, intellectual stimulation, and a change in world view. They viewed school as a personal challenge which appeared to be fulfilling to them.

Theme Two: Participants became comfortable with the technology of distance education as the class progressed.

Participants reported having taken other courses via distance education and were quite comfortable discussing the technology. However, they reported initially feeling uneasy and uncomfortable with the technology of distance education. They described the technology as initially overwhelming. However, by the end of their first course the participants reported feeling comfortable with the technology and that working with it had become "second nature."

Initial Experience with Technology

Participants gradually developed a level of comfort with the distance education technology during their first semester. Ellen said, "The first class was just horrible." Other students in that particular course had taken Interactive Video Network courses before and were interacting freely. Ellen said they [off-
campus students] wondered how they'd participate, then talked the problem over, and decided to "just blurt in."

Ellen and Kathy believed that students new to the system should be instructed in the technology of distance education - the picture change delay when students talk, etc. Ellen recommended new students should just stick it out. Mary thought the technology was "fairly self-explanatory . . . It's not all that much different than a regular class. You can talk and you can see who you're talking to."

However, in reality they all had areas of difficulty and confusion. Participants thought the cameras took some getting used to. Julie was uncomfortable seeing herself on the monitor. "I remember last semester being kind of eerie 'cuz it's one thing [to view yourself] . . . in person and [another to] then see yourself on the TV." Kathy agreed and added, "You really do get used to it."

Mary said that after awhile it "just becomes second nature." Sally initially felt intimidated by the technology but reported that as she has had more experiences she, " . . . didn't mind it at all."

Problems with Technology

In regards to problems with distance education technology, the participants felt that most of the problems dealt with communication factors. They mentioned feeling uncomfortable breaking into a discussion when the class was large and/or had many sites. They did not like being graded on class
participation when the system itself was seen as a barrier to communication.

Both on-campus and distance students brought up control of air time by
domineering students as a major problem and commented on the fact that it was
difficult for the instructor to control situations of this nature.

Ellen said the technology problems were annoying but that they hadn't
"happened real often." In addition, problems with old, slow computers and with
differing versions of software such as Power Point were mentioned by Sally, one
of the more computer literate participants.

Sally expressed concern over getting graded on participation in class
when it was difficult "to break into discussions." The number of sites seemed to
have an impact on how easy it was to talk over the system. Sally reported
having more trouble "getting in" during a class with six sites than during a class
with a lesser number; Mary agreed.

It is interesting to note that although they all had areas of concern about
the distance education technology they never complained during class time to
the person in a position to do something about it. There were occasionally
problems with low volume on the interactive television system and yet they said
nothing. When they could not hear comments made by a campus student they
did not ask the speaker to repeat what had been said. Also, the participants
said nothing about the occasional poor camera work of a technician. For most of
a two-hour class the instructor was shown at the bottom left of the screen
instead of center screen and yet nothing was said. They were very tolerant of
most technology problems but were annoyed by the sound of pages being
turned by on-campus students although they never mentioned this annoyance to
the people on-campus. However, there was a distraction the participants
actually enjoyed and shared with the campus students. During one class a
robin was pecking on the classroom windows as it walked on the outside window
ledge and the distance participants interrupted the proceedings to share the
robin with their classmates on-campus.

A scheduling mixup occurred during the last class of the semester which
was also the class in which the students were to give presentations. When the
distance site technician contacted the campus he was informed class had been
canceled. However, both he and the participants had heard the instructor say
the previous week that there would be class, and she had requested use of the
technician and the site for that date. The on-campus technician had not
appeared. It took the instructor and distance site technician 15 minutes to get
the on-campus room open and the students settled. Without a technician
available the campus site students were forced to take over the technician's
responsibilities and to help one another with their presentations.

Again, there were no complaints heard from the students. The students
revealed they were flexible and could improvise when problems did occur. None
of the students said the problems were insurmountable - the problems were just
annoying.
The Role of the Technician

The technician is obviously an important component of the Interactive Video Network (IVN) system. Students and instructors see the technician as an integral part of the system and acknowledge the technicians' part in the success or failure of the class.

The technicians for the classroom are the responsibility of the local institution. Funds are distributed to the local institutions to pay for a technician in the distance classroom during class. Technicians manage the room and the technology. They zoom and pan the cameras as appropriate and assist students with the technology when students give presentations. The technician at the distance site was thoughtful in a variety of ways, upon occasion he brought Ellen fresh coffee. The distance students were comfortable with their technician. He was comfortable with them as evidenced by the fact that he would on occasion leave the room for a few minutes, informing the students where he was going.

The technician at the distance site carried out his responsibilities as prescribed by the State System. He adjusted the sound, did trouble-shooting, assisted the students and presenters, managed the cameras, and distributed materials sent by the instructor. The participants developed a comfortable working relationship with "their" technician.

Summary

Participants reported that the discomfort with the technology of distance education seemed to last one semester. The video cameras and breaking into a discussion were reported to be the most stressful to new students. The
problems encountered by participants dealing with the distance education system technology did not appear to be insurmountable. The site technicians played an important role in the effective delivery of distance education. They assisted the students with materials and equipment. Over time a technician could become an unofficial member of the class.

Theme Three: Participants believed the computer was an important component of their distance education experience.

Computers enhanced communication, facilitated information access, and assisted students with assignments. Although this section is brief, the recurring and consistent statements by the participants necessitated a closer look at computers in relation to distance education, particularly in regards to communication which is an important factor in learning.

Computer Requirements

Computers are playing a progressively larger role in distance education. They serve a multitude of purposes, playing a major role in communication. Students were required to have access to a computer and to the Internet for their nursing courses. However, there was no written policy in the College of Nursing (CON) related to this issue. The CON faculty were expected to use computer capabilities as frequently as possible in their distant education classes. When participants started their first class they were told that they needed e-mail access. Mary was surprised that, "It was a class requirement. In fact it almost caused a few people to drop the class." However, Sally was comfortable with
the computer and liked using it whenever possible. "I like giving presentations on the computer." Ellen's reactions were more like Mary's than Sally's. Ellen reported that

It was like we were told we had to have a computer if we were going to continue on in the class. It was like - Oh, my God! Now I'm going to have to do all that! But . . . I wanted to learn. And this was kind of an impetus - I have to do it. But that caused stress, too. Because now you are not only learning new content and working in a different way than you did before - now you have to learn how to use the computer to do your work. There was so many new things for a while . . . that I feel more comfortable now.

Computer Skill Levels

Computer skill levels varied among the distance education students from minimally prepared to highly skilled. Participants reported using computers made word processing and presentations easier. Computers were also used to submit course assignments, take tests, communicate with the instructor and other students, and undertake literature and information searches. All the participants except Julie used their computers for literature searches. Julie said it was easy to use all one's Internet time and not get a lot of the search done. For her, cost was a factor.

The distance participants were all using Microsoft Word for word processing and would help each other when they had problems. Sally and
Kathy used Power Point for presentations but the other three participants would not use it yet. The non-Power Point users had prepared paper overheads for their presentations on the Elmo unit.

Self-reported computer skills varied among the participants. The skill range varied from Julie who said she was a beginner to Sally who rated herself as moderately skilled. Participants felt it was best to learn new skills as they needed them; that way the skill would be repeated immediately and wouldn't be forgotten.

The College of Nursing and Public University library provided participants with assistance when they were having problems accessing listserves or completing assignments. The instructor was also helpful. Ellen said "So I just e-mailed the instructor and asked 'How do I do this?' And she just said 'Copy and paste'." The participants reported that each course they had taken helped them build their computer skills.

E-Mail Use

E-mail was a primary communication mode in the course. Ellen and Mary reported feeling "out of touch" when their server was down. They reported that communication was enhanced between student and instructor when e-mail was used. Sally said it was much nicer to send an e-mail knowing the instructor would reply and she wouldn't have to worry about being home to answer the phone. Student-to-student interaction was also used especially for working on projects. Kathy said, "with e-mail it's not a problem. The problem with trying to
make contact with the four of us working on this project together is when Jean
goes back home she doesn't have e-mail access up there." Julie said that
distance was more of a problem for students were when they were working on a
project. E-mail helped eliminate the barrier of distance.

Summary

Computers permeated all aspects of the course. They were used for
assignments and communication. Participants' computer skill levels varied but
they reported consistently adding new skills with each new course. They
commented on the ease of communication between instructors and students with
e-mail.

Theme Four: The participants felt anxious and stressed when their
expectations of the program were not met.

The participants expressed concerns in regards to the program sequence.
A course scheduled for the semester had been changed without the student
being notified. The distance students were concerned over the sequencing and
availability of courses. Because two of the three distance students had loans,
they needed assurances that six semester hours would be available to them
throughout the program. Students felt they had committed themselves to the
program and expected the CON to show the same commitment toward them.

Course Sequence

One of the biggest concerns the participants expressed in connection with
the program supports dealt with delivering the courses in the program in an
organized sequence. Mary said, "My big question is what do we do with sequencing. They seem to change it continually on us. . . What happens when I hit a semester that I've had everything? Does that mean I'm just out of luck? . . . I don't know how strong the [College of Nursing] commitment is." She continued, "At the end of this semester I'm 18 credits into this. I've committed myself this far. I hope to God there's going to be a commitment on the other end."

Sally had similar concerns and reinforced Mary's concerns:

> It's hard to get all the classes that you need. When you have signed up for them and they cancel them before they start [it is very difficult]. Especially if you have loans or aid of any kind [for then] you have to take a certain minimum of credits. That I think they need to work this out [and develop a] better commitment to the people they have [at off-campus sites].

**Convenience of Distance Education**

On the other hand, Ellen felt she wouldn't have been able to get her masters degree if it hadn't been for the distance education program. She had been impressed with the undergraduates from Public University's College of Nursing, who she had employed. "I always kind of thought I would like to be a graduate of Public University, and then, with this program coming along, it just seemed that it was meant to be." Sally echoed Mary's sentiments about the program and expressed appreciation for the opportunity to go to school and continue working: "I like Public University's reputation and philosophy."
Ellen, Mary, and Sally reported hearing about the distance program from students who were taking, or who had taken, courses in the program. Mary said, "They're losing the ball game by not promoting the nursing [program]." Being told they, as students, needed to advertise the program was problematic for the participants.

**On Campus Resources**

**Library**

Library services were reported as good. Participants were able to obtain library materials as needed. In addition, a local medical center library was available for student use. What the medical center library didn't have, participants could order via computer from the campus library. The turn around time was "well within a week, so that's been pretty good" Ellen said. "As far as the library and ordering books, after I figured out who I need to call it works well." Ellen was wondering "if there couldn't be ... a small space at the medical center to keep references needed for the courses."

**Bookstore**

Until the current semester there had been no complaints regarding obtaining text books from the university bookstore. Mary and Sally reported problems getting text books from the bookstore this semester. Mary felt the problem could have been because she was paying for her books with her student loan this time. She had not done that before, and she said she hadn't had problems before.
Advisement.

Advisement didn't seem to be a problem for students, even though in Ellen's case her advisor had left the program and her temporary advisor was retiring at the end of the semester. Independent and pragmatic, Ellen felt it was her responsibility to "find someone that would be there." She took responsibility for advisement on herself.

Miscellaneous Concerns

Sally reported that she would have liked to have had ready access to the university's writing center. Of the four she felt the least secure about her writing. Ellen, Mary, and Sally all said they'd like more timely notification of changes, like when courses were rescheduled.

The participants wanted information on what would be covered in future courses and what these courses would entail, what technology would be involved, as well as a calendar of the structure of the classes. For example, would classes over the Interactive Video Network meet every week or meet three times a semester with e-mail conferences with the instructor for the remainder of the semester? They felt they could organize and plan their lives more effectively and efficiently if they had the information.

Participants also wanted a better understanding of the thesis/independent study component. They were asking for information on faculty who might share their research interests. Besides students receiving various pieces of information relating to the program, there is an opportunity to meet faculty, and
to learn what faculty research interests are at graduate student orientation day, each semester, at the College of Nursing. Although, all four participants had attended this event they still did not feel they knew the faculty well enough and had recently started contacting faculty that they knew for information pertaining to the thesis/independent study requirement.

Summary

Participants verbalized unhappiness with the manner in which the scheduled courses were being changed without, what they believed, was appropriate and adequate notification. Participants felt very uncomfortable being asked to advertise the program. The program components of advisement, bookstore services, and library access did not receive any complaints. In fact, participants were very satisfied with library services.

Theme Five: Participants appreciated the variety of instructional strategies and techniques used in their distance education course.

For the purposes of this study the course instructor was not evaluated by the students or the researcher, however those instructional strategies and techniques that were beneficial to the participants were. The participants readily discussed the strategies and techniques that they had experienced in their distant education graduate education.

Factors in Learning

The selection of appropriate instructional strategies in adult education is critical for the facilitation of learning. Building a community of learners and
creating a classroom where communication flows freely between instructors and students can be considered important strategies. The more traditional strategies such as discussion, lecture, guest speakers, videos, and projects/assignments are more effective and welcomed by students who are in a caring, open, and supportive educational environment. The participants seemed to enjoy discussing instructional strategies. They were sure of themselves and they each had strategies they preferred.

**Group Work**

The distance students liked working together. Ellen put it this way, "Just the idea of learning and sharing with somebody else...That you actually get together in groups and do things. I like that -'cuz you learn from other people. That's been good." She felt learning from each other was probably more effective than sitting down and reading a textbook. Sally said, "...I think if you didn't have people you could work with, it would really be hard."

They developed a collegial relationship evidenced by the fact they refereed to the other participants as their colleagues. The community assessment project was a major assignment for the course. It was a group project. Ellen laughed after Sally said, "I'm glad I don't have to do it again." Then Sally exclaimed, "It's hard work!"

Community building activities started in the class when the instructor spent time at the beginning of the first class to allow the students to introduce themselves to each other and tell something about themselves. The instructor
role-modeled the behavior she expected the students to exhibit. She went through roll call on each successive class session. When the instructor checked on the progress of student assignments during class, there was inter-site dialog on projects and sharing of resources. These updates and dialogs were a regular feature of the class. Time was scheduled into the course for group work and for students to watch the videos on their own.

The participants at the distance site had become a community of learners. They talked about becoming friends and sharing areas of expertise with each other. Mary and Ellen had taken three classes together. Sally and Mary had met at a pharmacology class they were both taking at Private University. Sally works at the same hospital Mary does. Mary said "it seems like you form a little bit of a bond even with other people because for two or three classes you're seeing the same people in the same location. It is possible to form some level of community with other sites but not of the same depth as at your home site. Upon the completion of the class Sally had called Ellen regarding class work and had said, "I'll miss you guys." Mary added, "You kind of find it is funny . . . by the end of every semester you could bawl [when you say good-by]. And then the next thing you know, [like] little kids going back to school in the fall . . . [you want to be] in the same group."

These relationships continue even away from the classroom. Sally said when at work she, " . . . looks for her [Mary] when I take patients to her floor." The on-campus students, who had not taken a class together before, reported
they did not form a learning community. The distance students had taken classes together before and felt they were like a family.

Food was often a sign of group nurturing. The distance participants celebrated Mary's birthday the day of the focus group by bringing a birthday cake for her. One time Sally brought cookies to class that her daughter had made and another time she brought doughnuts. She also brought pastries to celebrate her acceptance into the nurse practitioner program.

Group interaction was valued by the participants. They also enjoyed one-to-one communication. Kathy then said, "I always feel comfortable doing a small little side thing with the person next to me as long as we were quiet and weren't close to one of the monitor things." She felt, as did the participants at the distance site, that exchanges between students [at a site or between sites] helped them clarify the material being presented. Student-to-student exchanges during class were fairly common. Table 1 summarizes the extent of student to student interactions during class time.

Table 1

<table>
<thead>
<tr>
<th>Observation</th>
<th>Date</th>
<th>Interactions</th>
<th>Class Activity</th>
</tr>
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<tbody>
<tr>
<td>I</td>
<td>01-12-98</td>
<td>4</td>
<td>Before class</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Course orientation</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>Library orientation</td>
</tr>
<tr>
<td>II</td>
<td>01-26-98</td>
<td>3</td>
<td>Before class</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Large amount interaction during class</td>
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Table 1 cont.

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<tr>
<th>Observation</th>
<th>Date</th>
<th>Interactions</th>
<th>Class Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>III</td>
<td>02-02-98</td>
<td>5</td>
<td>Before class</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Less interaction than 01-26</td>
</tr>
<tr>
<td>IV</td>
<td>02-09-98</td>
<td>0</td>
<td>Before class</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Speaker-question &amp; answer</td>
</tr>
<tr>
<td>V</td>
<td>02-23-98</td>
<td>6</td>
<td>Before class</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>Student presentations</td>
</tr>
<tr>
<td>VI</td>
<td>03-09-98</td>
<td>3</td>
<td>Before class</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Lecture with discussion</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Student presentation</td>
</tr>
<tr>
<td>VII</td>
<td>03-23-98</td>
<td>0</td>
<td>Before class</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Teacher on-site</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>More interaction on-site</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Less on distance site</td>
</tr>
<tr>
<td>VIII</td>
<td>04-06-98</td>
<td>5-UC*</td>
<td>Substitute teacher</td>
</tr>
<tr>
<td></td>
<td></td>
<td>5-DC**</td>
<td>(observed from campus)</td>
</tr>
<tr>
<td>IX</td>
<td>04-20-98</td>
<td>1</td>
<td>Before class</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Guest speaker</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Work time</td>
</tr>
<tr>
<td>X</td>
<td>02-27-98</td>
<td>5</td>
<td>Before class</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Student presentations</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Closure of class</td>
</tr>
</tbody>
</table>

* UC - University City  ** DC - Distance City

The student-to-student extraneous talking decreased with the increase of opportunities for in-class interaction. The participants "touched base" with each other at the beginning of each class period. During my observation of the on-campus students I noted that there was less interaction between students than
was normally exhibited by the off-campus site.

The group experience was valuable to the participants even if the activity was not group oriented. The combination of the two sites provided the students with a greater number of colleagues from whose experiences they could learn. Kathy appreciated instructors encouraging students to share their own professional experiences. She said it made the material "...more understandable, it was in touch with reality." Ellen said it was "...helpful to see how somebody else started a project. I find that really helpful." Ellen, referring to a guest speaker who had described her community assessment project, found the information presented gave her a framework to organizing her thinking about her work.

The Instructor

According to the participants, the instructor herself/himself was an important factor in learning. The distance participants described another class in which the instructor provided an excellent learning experience. Sally said "You have to be dynamic to be a professor, and to be able to teach well you have to be a dynamic person." Mary said the instructor "was interested in what she was doing and she liked teaching." Ellen felt that instructor had a "common sense approach." They went on to say that what the instructor had given them was "usable and applicable." Sally also appreciated the "high expectations the instructor had of everyone." She observed that the instructor directed her lectures to the needs of her students, her lectures drew from the things that were
going on in the world . . . "And so it was really interesting in that our discussion would go from there . . . to our own experiences. A lot of it was talking about our world and life and how it affected us as nurses, and as community nurses."

**Handouts**

Participants found the presence of handouts related to course materials was helpful. Julie said in relation to handouts: "It's so much easier." Sally reported, "everything that was important was on those handouts. And I would maybe jot down something next to them to remind me of something of particular importance. And I did refer to those handouts when I was writing my paper."

Kathy recommended that the instructor "Send the handouts to the different sites in advance so we had a chance to look at them. I think it makes it easier to come in. You're prepared." Students used and appreciated the handouts.

**Feedback**

The amount of feedback desired from course instructors varied among the distance students. Sally said, "Sometimes I wish there was more feedback on how well you do in certain things and certain areas, and how you could improve in those areas," while Ellen was generally comfortable with her self-evaluation. "You know, how I see that at this point - it's almost like self-learning and to the point that you are not even realizing what you're learning at the time. It's like after you take a few classes, this is a little easier as far as doing what you're doing." Mary also wanted feedback and in a timely manner. She said it was "hard when they're (instructors) so abstract."
Feedback from course instructors varied in level of importance for the students. Sally and Mary felt it was nice to know how well they were doing, if they needed to improve in an area, and if they were going in the right direction. Ellen felt that at this level (graduate education) it was self-learning, and feedback wasn't that necessary.

**Syllabus**

What appeared to be a critical component of the course for learning was the course syllabus. Mary explained "The one thing I found out with the syllabus is that they're almost the bible for interactive video classes. They give you the route of the papers and when classes are. You feel kind of lost now if you don't have one." Ellen echoed Mary when she said, "The syllabus is very important. This is one thing I refer back to all the time. Where am I supposed to be and what I'm supposed to be doing? That's kinda like a guide map for the class."

**Readings**

Readings are another instructional strategy discussed by participants. The distance participants felt there was too much reading for the course and too many textbooks (seven). Sally said,

This class she has a ton of reading. A lot of it is really the same information in the different books. And so I've been skimming to see if there's anything different. I thought, I'm never going to read all this. Right now I have more time than those other girls because they work full time.

When Mary was asked if she had been able to do the reading for the
course she replied incredulously, "All of them?" She continued, "I think the load level has been pretty incredible. I mean the fact that there were seven text books this semester for this class alone . . . I'd read one or two of them." Ellen felt the class load was "fairly reasonable." However, she did think there were "far too many" text books:

   It was kinda like - Which one do I choose and which one would be best? . . . Once you started reading it, a couple of them sounded like similar information - probably just stated in a different way. I think it's nice to know those are all out there. There was no way I could get all the readings done.

   Ellen, Mary, and Sally recommended a maximum of two to three text books for a course. Mary said, "Everything's out-of-date so quick. By the time the text book comes out everything's outdated with some topics." The students thought a combination of text books and journal articles would be a better idea than the use and purchase of seven text books.

   **Instructional Strategies**

   A variety of instructional strategies had been observed in the class over the semester. Table 2 lists those strategies.
### Instructional Strategies Observed January 12, 1998 - April 27, 1998

<table>
<thead>
<tr>
<th>Observation number</th>
<th>Date</th>
<th>Strategy observed</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>01-12-98</td>
<td>Community building&lt;br&gt;Course orientation&lt;br&gt;Break&lt;br&gt;Guest speaker&lt;br&gt;Visuals - Power Point&lt;br&gt;Work time - video&lt;br&gt;E-mail addresses</td>
</tr>
<tr>
<td>II</td>
<td>01-26-98</td>
<td>Community building&lt;br&gt;Question and answer&lt;br&gt;Personal examples - student and teacher&lt;br&gt;&quot;Popcorn&quot; style interaction&lt;br&gt;Assignment discussion and decisions&lt;br&gt;Break&lt;br&gt;Course logistics&lt;br&gt;Assignment clarification&lt;br&gt;Group work time</td>
</tr>
<tr>
<td>III</td>
<td>02-02-98</td>
<td>Guest speaker - example of completed project&lt;br&gt;Visuals - Elmo &amp; Power Point&lt;br&gt;Check on assignment progress&lt;br&gt;Lecture with interaction&lt;br&gt;Break&lt;br&gt;Handouts</td>
</tr>
<tr>
<td>IV</td>
<td>02-09-98</td>
<td>Guest speaker - RAIN program&lt;br&gt;Visuals - slide, pictures, overheads&lt;br&gt;Break&lt;br&gt;Assignment clarification&lt;br&gt;Lecture with interaction&lt;br&gt;Examples - teacher and students&lt;br&gt;Work time</td>
</tr>
<tr>
<td>Observation number</td>
<td>Date</td>
<td>Strategy observed</td>
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<td>--------------------</td>
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<td>-------------------------------------------------------</td>
</tr>
<tr>
<td>V</td>
<td>02-23-98</td>
<td>Assignment progress&lt;br&gt;Examples&lt;br&gt;Breaks&lt;br&gt;Student presentation&lt;br&gt;Interaction with each presentation</td>
</tr>
<tr>
<td>VI</td>
<td>03-09-98</td>
<td>Examples - teacher&lt;br&gt;Handouts&lt;br&gt;Humor&lt;br&gt;Student presentation&lt;br&gt;Visuals - overheads&lt;br&gt;Progress with projects</td>
</tr>
<tr>
<td>VII</td>
<td>03-23-98</td>
<td>Teacher on site&lt;br&gt;Examples - student and teacher&lt;br&gt;Progress with projects&lt;br&gt;Lecture with interaction&lt;br&gt;Handouts</td>
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<tr>
<td>VIII</td>
<td>04-06-98</td>
<td>Guest substitute teacher&lt;br&gt;Lecture with interaction&lt;br&gt;Examples - teacher&lt;br&gt;Humor&lt;br&gt;Break&lt;br&gt;Handout</td>
</tr>
<tr>
<td>IX</td>
<td>04-20-98</td>
<td>Guest speaker with interaction&lt;br&gt;Break&lt;br&gt;Group work time&lt;br&gt;Course logistics&lt;br&gt;Assignment clarification&lt;br&gt;Overheads&lt;br&gt;Handouts to be sent (table continues)</td>
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</table>
A variety of teaching strategies were used during the semester in this course. "Real life" examples were given by the instructor. The students were allowed to share their experiences and relate these experiences to the material they were studying. Students were allowed to practice presentation techniques. Group work time was allowed as was time for students to watch the videos which contained core content of the course. Breaks were routinely taken. Assignments were clarified and progress on them was ascertained at intervals throughout the course. The instructor incorporated course closure during the last class meeting.

Summary

The participants discussed their learning experience in distance education enthusiastically. They appreciated the many different instructional strategies employed in the course. Relating what they were learning to "real life" situations, the handouts, and group assignments were the most helpful to them. An informal strategy that participants found useful was of student-to-student consultation in and out of class. The distance students had developed into a
learning community and enjoyed learning from each other. However, participants did express concern over the amount of reading and the number of textbooks for the course and suggested a maximum of three textbooks with an emphasis on current journal literature.

Chapter Four covers the findings; the discussion and implications of the findings in relation to relevant literature; and recommendations for distance education, practice (education and nursing), and research.
CHAPTER FOUR

FINDINGS, DISCUSSION AND IMPLICATIONS OF FINDINGS IN RELATION TO RELEVANT LITERATURE, AND RECOMMENDATIONS

This qualitative study was designed to explore the lived experience of students taking graduate nursing courses by distance education through the Interactive Video Network. The course was offered through Public University and delivered to Distance City. I set out to explore the experiences of students taking a course by interactive video and its accompanying technologies.

The phenomenological approach of this project allowed for the discovery of the students' perceptions and actions in the context in which the event was taking place. Interviews, a focus group, observations, and examination of appropriate artifacts allowed for a careful examination of the students' experience.

Seven students were taking the observed course. Four of the students were at the on-campus site and three students were at the distance site. Each participant was interviewed on more than one occasion. A focus group of the distance students concluded the interviewing process. Observation consisted of 18 hours at the distance site and 2 hours at the on-campus site during class times. Artifacts (State Administrative Manual and College of Nursing grant information) were obtained from the State University System and the College of
The data obtained was coded, reduced, and used as background for interview questions. After the data was reduced it was organized and analyzed. Five themes emerged from the data.

Distance education provides the means by which time and place bound students can access graduate level courses to upgrade their education and/or change the direction of their careers (Verduin & Clark, 1991). The majority of studies have demonstrated that in most cases there is no significant difference between on-campus and distance learners’ grades (Russell, 1997). However, where differences did occur, the variables causing the distance learners to achieve a lower grade were family and work responsibilities (May, 1995). Students who obtained their education via distance education tend to remain in their communities. This serves one of the purposes of distance education.

Findings

The five themes that emerged from the data of this study are as follows: Theme One: Participants returned to school for personal reasons and professional concerns. Theme Two: Participants became comfortable with the interactive video system and its technology. Theme Three: Participants believed the computer was an important component of their distance education experience. Theme Four: Expectations of the program that were not met created stress in the participants. Theme Five: Participants appreciated the variety of instructional strategies in their distance education course.

Discussion and Implications of Themes in Relation to the Relevant Literature
Discussion and Implications of Themes in Relation to the Relevant Literature

Theme One: Participants returned to school for personal reasons and professional concerns.

While the reasons for participating in this class and enrolling in the nursing masters program is not directly related to the topic of distance education, it provides information salient to this study. It provides information that helps one understand personal and group motivation which consequently helps one explore how distant education can best meet the needs of these participants.

People return to school for reasons which are unique to them and yet universal in scope. The participants in this study expressed both personal and professional reasons for their return to school. The interplay between the two realms - personal and professional - was complex and inseparable. Sally provided an excellent example of this when she said she could not give up nursing for it was a part of her. It was her "identity." The hope for more autonomy, respect, expanded work roles, and collegial relationships were also important reasons for returning to school.

Personal Reasons

Knowles (1980) believes that lifelong education is a means for an individual to reach his/her full potential and become self-actualized. Education helps the individual lead a richer more satisfying life and achieve self-identity. Brookfield (1986) writes that the adult acquires increased self-confidence and esteem from these experiences and writes that adults learn in response to
crises, the joy of learning and for specific reasons. This appears to be the case with the distance education participants.

One of the more interesting comments made by the participants was that they needed the intellectual stimulation provided by continuing their education. They believed a change in how they saw things would help them find satisfaction in the work place.

Tennant and Pogson (1995) write that adults participate in education for self-development, which includes dealing with social and economic conditions. They believe that education must respond to life-cycle events and patterns such as the workplace itself and delayed retirement. Another reason for education is the need for fresh knowledge and skills. They believe “this ongoing tension between continuity and change lies at the heart of what it means to develop” (p. 10).

Cross (1981) envisions a blended life plan. She believes “work, education, and leisure are concurrent, rather than alternating, at all points throughout life” (p. 12). The old practice of educating only our youth is a thing of the past. The new order of education makes life a seamless occurrence of work, learning, and leisure. Cross also believes that the “more education people have, the more education they want” (p. 15). Diane had stated she enjoyed learning so much she could do it the rest of her life. Mary “kind of” thought so, too.

Professional Reasons

Flexibility within the changing health care system was a predominant
verbalize a vision of the future in health care, they felt they needed to be ready for any eventuality, and they also felt an advanced degree would give them flexibility. Sally had said that she felt bachelors-degreed nurses were not allowed to do everything they were trained to do. She was hoping the advanced level would give her that opportunity.

The knowledge explosion has required professionals to keep up with the times. Changing careers and career patterns also are motivating factors for adults seeking education. Cross (1981) gives Morstain and Smart's six factors of why adults participate in education opportunities:

- To build social relationships including making new friends.
- To meet external expectations directed by authority.
- To have the ability to serve society.
- For professional advancement.
- For escape and/or stimulation.
- To learn for learning's sake.

In my observation the most salient factors for these participants were those of professional advancement, and escape and/or stimulation.

Ellen, Mary, and Sally hoped to be able to professionally advance by completing the a master’s program. They were uncertain where this would lead, but they all believed that something would change in their professional life.

Professional advancement was one of the most important factors that motivated
Professional advancement was one of the most important factors that motivated the participants to formally continue their education.

Mary very definitely wanted to be able to use school as an escape from dealing with work factors. School helped her focus her energies and attention on learning and not on her present situation, which she felt powerless to change. During the focus group, Ellen, Mary, and Sally were animated in their discussion of the need for intellectual stimulation and the desire to view the world of nursing from a different perspective. These were highly motivating factors for the participants.

Cross (1981) wrote "... change is now so great and so far reaching that no amount of education during youth can prepare adults to meet the demands that will be placed on them" (p. 2). She believed this reality would change the way education would become available and be delivered to learners.

Participants spoke of training for new machines and procedures at work. However, they separated this job-essential learning from the stimulation their graduate courses provided. Education plays an important role in improving job skills, promoting self-satisfaction, improving life circumstances and helping the individual fit into a working society. Cross also referred to changing careers and career patterns as well as the knowledge explosion which has necessitated the need for adults to keep up with the times.

Jarvis (1987), in reference to nursing, felt self-directed learners are present in nursing and are probably learning to keep up with changes, as well as
to demonstrate commitment to their work and profession. "No practitioner 
prepared for nursing now can expect to be performing precisely the same job in 
ten years time" (p. 54). Participants consistently mentioned the changing 
health care system and their need to be prepared for any eventuality that could 
confront them.

It is interesting to note that the participants went outside of "work" to find 
satisfaction and did not attempt to manipulate the work environment to gain 
satisfaction. Mary’s comment about school providing her with "something else to 
center on" besides the work situation was telling. Sally wanted autonomy and 
collegial relationships, and her obvious path of action was to enhance her 
opportunities by going to school “hopefully” to change her present situation.

A theme of powerlessness pervades the participants’ comments. Instead 
of staying and working within the work environment to achieve autonomy, 
collegial relationships, and intellectual stimulation, these participants exited the 
work environment to find something in the educational environment. They then 
hoped what they thought they would gain in education would transfer back to 
their work environments without changing the work environment itself. The net 
result in this process is frustration.

Boughn and Lentini (1997) write that nurses contribute greatly to society 
but are rewarded at low levels. Nurses “experience great frustration at the lack 
of power they enjoy as individuals . . . the selflessness exhibited in the student’s 
responses is problematic” (p. 286). Boughn and Lentini mention a lack of
political motivation, interest in financial matters, job security, and good working conditions, leading to frustration and disillusionment with nursing. Consequently, it has implications for nursing education. Kubsch (1991) studied organizational culture and its effect on nursing. She wrote, “In this respect, organizational culture is viewed as an important condition that is related to autonomy and professionalization” (p. 105).

Larger issues for nursing education are those addressed by Bough and Lentini (1997): lack of political motivation, interest in financial matters, and good working conditions. When these are combined with an institutional culture as described by Kubsch (1991) the problem facing nursing education programs appears formidable.

**Educational Implications**

1. It is important that educational institutions be aware of the reasons students return to school. The complex interplay of personal and professional reasons may set up interesting dynamics in how students approach their education and their motivation to succeed. Since public institutions are socially responsible entities, knowledge concerning students attending the institution will enable the institution to provide appropriate services to the public.

2. The changing and evolving health care system creates the need for upgrading of skills and knowledge for people who work in the system. The rapid improvements in technology also necessitate continuing training and orientation.
Theme Two: Participants became comfortable with the interactive video system and its technologies.

Contemporary technology is an important part of distance education. The tools of technology allow participants to stay in their home environment and not only see and hear their instructor but also interact with her and with students at other sites. Technology brings students in distance education face-to-face with their instructor. Computers, e-mail, phone conferences, video tapes, etc. move the nature of distance education from correspondence courses to instantaneous contact situations. The following factors were identified by the participants in this study as most important to them.

Opportunity and Distance Education

One of the most exciting things about distance education is the opportunity afforded time- and place-bound people. The participants in this study repeatedly said if it wasn't for the distance education program being offered in their locale they wouldn't be able to continue their educations.

Verduin and Clark (1991) give four characteristics of adult distance education. The first is time and place. The second is a traditional affiliation. Literature is third, and learner traits is fourth. Bates (1995) believes that distance education provides learners with a flexible means to continue their education. He goes on to say that distance learning is sought because of lifelong learning and economic development, social equity and access, cost effectiveness, and geography.
Reilly (1990) quotes from a report released by the Institute of Medicine, "To alleviate nursing shortages in medically under-served areas, their residents need better access to all types of nursing education, including outreach and off-campus programs" (p. 1). This appears to be a call for social responsibility by institutions of higher learning and the nursing profession. Outreach programs prepare professionals to serve their communities. Reilly also mentions unequal access to higher education. She calls unequal access an impediment and lists "structural, philosophical, economic, or educational concerns" (p. ix) as well as geography. She believes the higher the educational level the more difficult it becomes to access education. She writes, "Graduate preparation in the professions, especially in fields of health and human resources, is essential to the needs of the communities, yet such programs are the least likely to be available beyond selected campus areas" (p. ix).

Nichols, Beeken, and Wilderson (1994) write that in Wyoming, a state with many of the same problems of the Public University's home state, "Use of telecommunications to deliver courses and even complete educational programs is becoming increasingly popular" (p. 184). West (1994) writes that distance education "enables us to reach those who could not otherwise participate in under graduate and graduate education" (p. 73).

Maltby, Drew, and Andrusyszyn (1991) conclude that distance education provides nurses with access to education thus reducing the barrier of geographic distance. They believe, "These opportunities should be expanded to post-
baccalaureate and doctoral education for all nurses" (p. 122). Johnstone (1991) also talks about the demand for "educational equity to students regardless of the students' location" (p. 50). Distance education has become an effective means of delivering on the demands of students. She concludes "there is a long history of research establishing that students can learn effectively via electronic media" (p. 57).

Pym (1992) describes distance learning "... as a set of teaching and learning strategies for connecting people who have learning needs with the resources required to meet those needs" (p. 384). Fulmer, Hazard, Jones, and Keene (1992) write that distance education makes university courses available to students who would not otherwise have the opportunity. The students in their study "came to class after a full day of work and after caring for their family" (p. 293). Pickard (1992) writes that distance learning nursing students reported they would not have been able to enroll in classes and the program without the opportunities that distance education has afforded them. The participants in this study consistently repeated if it weren't for the program from a quality institution being delivered to them they would be unable to go to school.

Just as the students in the Fulmer, et al, study found it advantageous to be able to take classes in their home community so did the distance participants in my study. All three distance participants were employed outside the home. Two participants had full-time positions and the third participant was one-third time. Ellen and Sally were married and had families, while Mary had an aging
mother to care for and a pet to which she was very attached. Hegge (1993) writes that education for nursing via interactive television has become more accessible, and that after some adjustment by the learner, it had no negative effect on their learning. In addition, students were appreciative of the access to education.

Educational Implications

1. As the participants discussed distance education and how important it was to them, they echoed many of the reasons given in the literature cited above. The participants saw the affiliation with a known and respected university and nursing program as desirable. This should inform the College of Nursing how to improve recruitment of students for this program.

2. While the participants were pleased to have the opportunity to access a graduate program that they saw as a quality program, due to the lack of open communication there was the possibility of misunderstanding and repressed anger.

Problems in Distance Education

Although there were some problem areas in their distance education experience, the participants chose not to complain to the College of Nursing. In conversations between themselves they would address issues such as a domineering student at another site, difficulty with compatible software, or breaking into discussions when their contributions for class were graded. Participants dealt with these issues on their own using creativity and flexibility.
At times, it was impossible to hear what students on-campus were saying. The classroom technician would occasionally have to notify the home site that he couldn't hear and ask them to repeat their comments and to "speak up." It was fortunate that the technician assumed this role as none of the participants would ask the on-campus student to repeat her comments. Upon occasion the instructor would ask the distance site participants if they had heard an on-campus student's comments when there was no response from the distance site.

The reticence of the participants to make their needs known was problematic. They were so grateful for the educational opportunity that they wouldn't risk jeopardizing it by saying anything that might be perceived as negative and were willing to settle for less-than-optimal conditions because of the lack of availability of another program. Their silence prevented the system and instructor from making the necessary changes in the delivery of the program.

May (1994) says that students adapt to the rigid technology and put up with things because they may believe that's the way things are. This was applicable to this study when the students would not request changes in the sound level which could have made their learning experience more satisfying. There is a danger that students might accept less than what is available and somehow sacrifice the quality of their education, rather than push the envelope of the technology. My study participants had reached a stage where they were using their own learning styles and accommodating to the technology. Those
less familiar with the technology showed some hesitation but followed the lead of the more experienced participants.

Willis (1993) writes,

Unfortunately, due to the captivating nature of many distance delivery technologies and techniques, faculty, students, and administrators can easily become distracted by the opportunities and limitations of the delivery system and lose sight of the academic needs to be met. In fact, if faculty, staff, and students are constantly being reminded of the technological delivery system itself, either through technical problems or through impressive but unnecessary technological capabilities, they will be distracted from effective teaching and learning (p. 4).

The response of the distance participants was surprising when they were asked if not hearing what the on-campus student had to say bothered them. They were not overly concerned and said if it was an important enough topic or statement it would be repeated in further discussion.

Educational Implications

Because there is the danger that the technology could interfere with learning and with discussion in particular, it is important that the technician be assertive enough to correct sound problems during class. Student using the interactive video system should be adequately oriented to the system and know how to face the microphone, avoid putting paper on the microphone, and speak clearly. The instructor must monitor discussions to ascertain that all students
are hearing other students' comments so they can reply to them appropriately. Discussion and dialog are important for learning to occur and must be nurtured.

**The Initial Experience**

Participants' descriptions of their initial experience with distance education were informative. All participants reported wondering what they had gotten themselves into when they took their first distance education class. The video camera was particularly disturbing to them. They reported having to get used to seeing themselves on the camera. Learning to initiate conversation and contribute to a discussion was initially a challenge. The distance participants reported talking the problem over and then applying their solution as a group.

Even though participants reported having difficulties with the technology they recommended new students should just "stick it out." They recommended the program inform students what to expect regarding the technology involved with the delivery of the program. Mary said distance education was not that different than a regular class. She felt she could talk and could see to whom she was talking. For her the visual aspect was important even though she didn't like herself on camera. Participants reported no difficulty getting used to the technology and didn't give any complaints about learning on the interactive television mode. The period of adjustment was approximately one semester for students before the technology became "second nature."

"In distance education settings, technology is typically the conduit through which information and communication flow" (Willis, 1993, p. 27). He believes
students should be helped to learn to use the technologies which are the information conduits and that practice will promote comfort. Participants need to learn how to use and operate the distance education delivery system. They must also get to know each other well enough to make learning comfortable and possible. Duning, Van Kekerix, and Zaborowski (1993) cite a study by James where "a comfortable environment (implying the absence of disturbing, painful, or distressing features) was the most important feature for successful learning" (p. 256). Draves (1995) says the learning environment is composed of four elements: the room, teaching tools, natural environment, and objects that assist people to learn.

The distance classroom, designed in the traditional style of classrooms, is probably one of the hardest learning environments to energize (Peterson, 1992). However, the pale walls, good lighting, and organized technology helped eliminate that stressor. Rows of tables do hinder dialog to a certain extent. Because the interactive video classroom is used by many programs the environment cannot be decorated with things specific for a particular course or class.

Educational Implications

1. Getting accustomed to the technology is an issue that needs to be addressed early in a course so it doesn't disrupt learning. Exercises designed to force students to use the technology and develop a relationship with it should be introduced at the onset of the course. The first class is a good time to start. The
instructor can model behaviors expected of the students. The instructor should not expect the students to do anything the instructor would not do.

2. Competencies of increasing difficulty or skill level can be added to each succeeding class. As students use the technology early and often, they become accustomed to it and develop competencies which (1) do not distract from their learning and (2) will aid learning.

Support Staff

"Support staff are the silent heroes of successful distance education programs" (Willis, 1993, p. 33). The support staff can have many functions including keeping records, completing and filing reports, scheduling, troubleshooting, duplicating, distributing material, monitoring testing, and mailing. Instructors should also become acquainted with and make use of facilitators who can help with delivery of course content, be a bridge between students and instructor, provide guidance for students, and answer their questions. Often budget constraints limit the availability and use of this person (Willis, 1993).

The participants at the distance site had developed a very good relationship with their classroom technician. He was extremely competent and showed genuine interest in the participants. However, at the on-campus site the technician seemed new to the system and did not appear to have developed the same type of helpful relationship with the students.
**Educational Implications**

1. Since the technician does much to make the environment more comfortable for the students and is the bridge between the instructor and the students, great care should be taken in the technician's training and monitoring. The importance of a competent technician in the classroom cannot be over emphasized.

2. Communication has been enhanced by current technologies and consequently has improved the quality of the educational experience for distance education programs. While celebrating these advances, it is important to remember that technology assisted communication has not been proven as effective as "face-to-face" encounters. Communication efficacy should be monitored. Communication between student and instructor and student to student is important for learning.

**Theme Three: Participants believed the computer was an important component of their educational experience.**

Distance education appears to be leading the use of e-mail for education. Students in distance education courses are experimenting with e-mail for communication and other course activities. Currently students use computer technology for interacting with the instructor and other students, searches, listserves, and to submit course assignments.

The use of e-mail and computer technology has met with some resistance from traditional academia. However, because of the very nature of distance
education and the fact that learning is a social activity, students have grasped the technology and are using it to meet their needs.

In informal conversations with students who have taken distance education courses, they report that returning to a traditional classroom is boring. They miss the communication capabilities, the audio-visual options present in the distance education classroom, and the networking with students from other areas and states. In the future the technology of distance education may be demanded for traditional classroom by both students and instructors. Computers have given students more control of their learning, and they may not be willing to surrender the control.

**Computer Skill**

One of the more interesting findings in this study relates to computers. The participants' self-reported computer skill levels provoked animated discussion. The younger participants were not as hesitant about using the required technology as were the older students. The participants reported that they preferred to learn the needed skills as they were needed and were opposed to learning them all at once. All the participants were adequate in the use of the word processor, and two were doing their class presentations on Power Point.

Bachman and Panzarine (1996) reported the basic operations of e-mail and accessing the Internet as the most difficult skills for the students to learn. Following a class activity which forced the participants to use a variety of computer skills, the participants were observed using their computers (in class)
with greater frequency. Also, they shared they had learned new skills with each
course. They reported feeling much more confident at this point in their
program than they had when initially entering the program.

Ellen felt learning the necessary computer skills should be a part of class
activities and assignments. Ellen, who had taken a more traditional computer
course from a community college, agreed and said she learned better when she
could make immediate application of the new knowledge. Mary felt frustrated by
having someone demonstrate what should be done and then being left on her
own to repeat the action.

Anderson (1995), Landis and Wainwright (1996), Reinert and Fryback
(1997), and Bachman and Panzarine (1998) discussed the results of computer
course work on skills and usage. Of interest in the above studies, is that
computer learning was tied to nursing course work and real life situations, as it
was in my study. Participants had learned the skills necessary to meet the
requirements of the courses in which they were enrolled, although at times it did
create stress for some of them. They appreciated learning the skills as they
needed them.

**Educational Implications**

1. Since computer skills vary widely in adult learners it is important for the
program and the instructor to know the skill level of each student. A skills survey
conducted on admission to the program or registration for the first class could
help categorize students into skill levels. By doing so, course instructors,
resource persons, or tutors could address learning needs before the skill was to be used in class. Since students said they learned better if they learned new skills as needed, incorporating this learning intervention into the course would be helpful.

2. Quick and easy help sheets showing actual computer screens or bars could give students ready access to help at home. The program should also have a designated resource person for student questions and assistance regarding computer technology.

Communication

The second finding related to the ease of communication with the use of e-mail. Ellen was pleased at how easy it was to contact the instructor and observed that it had much more difficult to reach instructors prior to using e-mail. Reinert and Fryback (1997) write that all distance education programs have separation of student and faculty in common. Students, however, have a need for faculty contact, a sense of belonging, and socialization. E-mail access is one way to meet these needs.

Willis (1992) writes, “Although many instructors incorporate media and technology in their courses, the distance instructor relies on technology as the principle link with students” (p. 36). As was observed in my study, the instructor obtained e-mail addresses during the first class. Also, some course assignments were to be submitted on the computer and students were to participate on a listserve relating to a specific topic. Both students and
instructors needed to be comfortable with the technology and be able to use it without difficulty. Communication and interaction are necessary and important for learning.

Cleveland (1992) writes that communication is important for community building and for the smooth execution of a course or program. Communication is important among all members of the distance education team as well as among the students. The use of computers within the course allow for prompt feedback from the instructor to the students and from other classmates. Computers provide the means for communication when students who were separated by distance needed to work together on projects. Lack of cost-effective access to e-mail was seen by participants as problematic. Because cost may be an issue, it is important for the program to investigate less expensive means of access for students than the students' local long distance carriers.

E-mail was used in this particular course to provide information to the students, for communication between participants, to send in assignments, and to access information. Holmberg (1995) writes that computers are useful for distributing materials, handling assignments and grades, and communication as was evidenced in this course. Bates (1995) concurs when he writes it is possible to have interpersonal communication through e-mail. "Social interaction is not necessarily time or place dependent" (p. 53). Social interaction can include learner-to-instructor and learner-to-learner. The rapidity of computer communication can provide immediate feedback to the students. In
this study, timely responses from the instructor by e-mail eliminated the waiting time for phone contact or mail reply. Participants appreciated the prompt responses.

Sally was very appreciative of the fact she could e-mail the instructor and not have to wait at home by the phone for a return call. She could get her questions answered without undue hardship. Landis and Wainwright (1996) were in agreement after examining computer conferencing in an outreach program for nurse practitioner students in Texas. They found computers were useful for enhancing communication between distance learners and instructors. The asynchronous communication allowed for reading and responses at the convenience of participants. Their participants expressed no major problems with instructor contact and said that they were comfortable with their e-mail. With e-mail many of the problems of negotiating a conference time had been eliminated.

Computers have become an important component of distance education. They provide an avenue for communication which includes e-mailing, completing assignments, as well as seeking and finding information. Moore (1995) believes one of the emerging trends in distance education is the merging of computer and video technologies which leads to greater learner control of learning. Holmberg (1995) writes that the computer is a "very useful and economical instrument for both the distribution of course material and the handling of students'
Holmberg says the computer can help personalize contact between students and campus.

**Educational Implications**

1. Given the growing importance of computers in distance learning and the diverse level of skills reported by students, it is important the instructors be aware of their students' computer capabilities. Assistance should be easily and readily available to students in regards to the skills needed in the course. The instructor should be able to perform the skills required of the students and be able to explain it to them.

2. Issues of cost related to local access and long distance charges should be addressed by the offering institution. Toll-free access for distance students to the Internet should be considered.

**Theme Four:** The participants felt anxious and stressed when their expectations of the program were not met.

The support of students through their distance learning experience is very important. The components of the university, the program, and the course need to be seamless. Student support should be well-organized and located within one area. The number of hurdles a student may encounter needs to be minimized.

**Scheduling and Sequencing**

The most stressful aspects of the distance education experience for the participants was the change in the sequencing of courses. The participants
were concerned that the College of Nursing would not offer the graduate nursing program in an organized and sequential manner. Without consistency they feared losing financial aid and facing the possibility of commencement of loan repayment. The participants needed six semester hours to remain eligible for financial aid. This was problematic as the actual listing of classes differed from those that had been listed in the course guides given to the students upon their entry into the program.

**Timeliness of Notification**

The participants' lives were so tightly scheduled that any unexpected changes created a stressful situation. These women felt a lack of control when things beyond their influence occurred. Lack of timely notification of changes were also perceived as a problem. Late notices from the College of Nursing had the potential for creating conflict with the participants' home and work schedule.

Family activities were often scheduled around school activities. For example, students had come to one class to find out it had been switched to another. Unfortunately, they had brought the books and materials for the assigned class.

**Advertising**

As in a study done by Reilly (1990) in Michigan the participants felt the College of Nursing needed to do more advertising. They did not feel it was their responsibility to proactively advertise. Although, they often shared information
as colleagues they did not see this as advertising. Specific suggestions mentioned by the participants included newspaper advertisements, pamphlets in nurses' work environments, conferences, meetings, etc. One participant felt that non-specific billboards or general university advertising "did not help the program".

**Educational Implications**

1. Participants enrolled in distance education require adequate and timely information and notices to prevent anxiety and unnecessary worry. Any changes in the program should be communicated to students considering the changes and adaptations they have already made and will make in their lives. The participants felt they had committed themselves to the program and expected the same level of commitment from the College of Nursing. It is important to students that they be kept informed of events that affecting them.

2. Students also liked specific information concerning course activities and requirements. Perhaps a fact sheet describing the type of course activities that will take place during a course would be beneficial to students. Grapevines can produce inaccurate information.

3. If students are asked to help advertise a program they need to be sold on the idea and realize why it is important for them to be involved. Clarification of advertising roles and providing them information on what was being done by the university and College of Nursing might be helpful in this instance.
Student Supports

Dillon, Gunawardena, and Parker (1992) evaluated learner support in a state-wide telecommunications system. "Support systems contribute to the process of a course as do the learning materials and support systems developed in recognition of student needs help the distance learner become competent and self-confident in learning, social interactions and self-evaluation" (pp. 297-298). Support includes the process of learning in the course and the communication process. Mechanical and electronic transfer of information is essential. This study provided a framework that can be used to evaluate learner support in other programs and systems.

The three main areas of learner support include, first of all, resources directly related to learning, such as access to courses, interaction, learning materials, and library access and quality. Issues of course availability were addressed in the previous section. Participants offered no complaints relative to enrollment but the cost of classes needed to complete the program was of concern to the participants. Sherwood, Armstrong, and Bond (1994); Verduin and Clark (1991); and Duning, Van Kekerix, and Zabrowski (1993) say cost is a major consideration for students in selecting and participating in a program. Two of the participants financed their studies through student loans and one participant took only one class at a time as a way of dealing with the issue of cost.
Regarding learning materials and library access, none of the participants found these to be problematic. They could order material from the campus library and have it in a week. A local library also was a great help. To make the local library even more helpful they recommended that the College of Nursing supply the library with references for each course. This also would help cut down on the number of textbooks a student would be required to buy.

Books and learning materials were generally not a problem for the participants even though the University Bookstore had not had their books and materials when students needed them. Late orders, however, were shipped to students at the bookstore's expense.

The second area deals with the resources indirectly related to learning, which included academic advisement. Generally, counseling, job placement services, and student activities would be included in this category but the participants didn't feel a need for these resources.

There were no complaints about advisement on the part of the participants. The College of Nursing (CON) policy regarding student advisement is that it is the responsibility of the student to seek and maintain advisement. The CON had numerous personnel changes during the last two semesters, consequently there have been numerous changes of advisors. One participant was on her second advisor, and, to make matters even more complicated, her new advisor was unfamiliar with the program. Each of the students had talked to an advisor and felt adequately informed. The participants were flexible and
understanding about the changes in faculty. Again, one has to ask if the students were merely settling for what they received as opposed to having their advisement needs well met.

There are several occasions planned for students by the College of Nursing (CON) to come to campus and become acquainted with the university and the CON instructors. One event is the CON luncheon scheduled for Homecoming weekend. Another is a special orientation day the first day of class each semester. Students are invited to come to campus for a session for new graduate students that acquaints them with services and resources the university and CON have for them. The distance participants had gone to at least one orientation session at the beginning of a semester. Program participants also receive a quarterly newsletter from the Rural Health Specialty program.

The third area is the communication process. This includes the coordination and technical support needed for effective communication. Phone numbers, FAX numbers, and e-mail addresses were shared in the class, and university numbers and e-mail addresses were given to the students. Participants reported using e-mail more than any other mode to contact their instructor. There were no complaints or problems brought up concerning contact with the course instructor or the students' advisors. Technological support was available from the university library, CON, and course instructor.
The CON provided resources for the instructor to teach from a distance site and spend three hours at the site for contact with students. The instructor for this course was on-site toward the end of the semester.

**Educational Implications**

1. For effective distance learning the entire education package must be present and functioning. Personnel involved with the distance education program, including the course instructor, must know the components of the package and be able to direct students appropriately. In distance education support services are very important. These services include library services, financial aid, advisement, technology assistance and orientation, course materials, registration, and contact with instructors. Coordination between services units on campus is essential for smooth operation.

**Theme Five: Participants appreciated the variety of instructional strategies and techniques used in the distance education course**

A variety of instructional strategies based on adult learning theory appeared to make the distance education course interesting for the participants. Participants had engaged with the material and worked together well. They accomplished both the goals of the course and the goals they had set for themselves. The variety of instructional strategies addressed the different learning styles of the students. The variety helped insure the pacing necessary to capture participants' attention and maintain their interest in the material.
Adult Learning Theory

Mezirow (1991) writes about the process of transformative learning. The learner takes in information and compares it with what he or she already knows. The learner then decides to either reject the new material or assimilate it and reorganize his or her knowledge bank. Learners need support and interaction throughout this process. Brookfield (1990) also talks about a student's learning rhythm where the student reaches and learns, becomes uncomfortable, retreats to safety and then ventures forth again.

Duffy and Jones (1995) describe Kolb's four processes of a learning cycle. In the first phase the students participate in a concrete experience so they can understand it. The second phase has the student examining the problem and the reflecting on it "from a variety of perspective" (p. 168). In the third phase the students are to integrate their activity experience with their reflective observations. In the last phase, the experimentation phase, the "students apply their explanations or theoretical frameworks to other situations" (p. 169).

"Realistic goals, challenges, and reasonable learning speed" helps adults learn (Verduin & Clark, 1991, p. 26). Adults may also seek social relationships, stimulation, and "knowledge for knowledge's sake" (p. 26). Adults like hands-on learning and feedback. They do not like to perceive they are wasting their time. The instructor should manipulate the environment to put the learner in contact with materials and other things needed for learning.
Slotnick, Pelton, Fuller, and Tabor (1993) give nine recommendations for teaching adults. Recommendation One is, "Faculty should demonstrate the range of ways in which students will use what they're learning" (p. 79). This was evidenced by the instructor in the course role-modeling behaviors expected of students. Recommendation Six is, "Communicate clear expectations for what students are to do, and state those expectations early so that students can plan their schedules with confidence" (p. 87). The course syllabus in this distance education class helped meet this criteria for an effective class. Recommendation Eight is supportive faculty. The open communication through the course in my study, the instructor's willingness to answer questions, and the warm caring atmosphere demonstrated supportive faculty.

Knowles (1993) writes that "adults need to know why they need to learn something" (p. 57). Learning takes time that could be used in other areas of their lives. Adults need to be seen and treated by others as being self-directed. Adults' life experiences provide for a "wide range of individual differences" (p. 59). This in itself allows adults to look to themselves for resources for learning. These external events also give the adult his or her identity. To ignore their experiences is to deny their identity. In contrast to children's subject-centered orientation to learning, adults are task or problem-centered. They want what they learn to be useful to them. They learn best when things are presented as or in real life situations.
The students in this distance education course were encouraged to bring their own or other's observed experiences into the classroom. Participants reported finding what other students had to say was interesting and informative. Guest speakers who presented their projects for the students provided another avenue of discussion. Participants appreciated the real-life situations. They found the situations practical and helped them learn the course material.

**Educational Implications**

Adult learners know what they need to do to learn and they also know what helps them learn. Instructors must recognize this fact in order to help facilitate student's learning. Participants in the study were very clear on what they like from the instructor. Finding out from the students what they need from an instructor will help the instructor plan an effective distance learning event.

**Instructional Strategies**

A variety of instructional strategies were used in this course. There was something for everyone. In other words, many different learning styles were accommodated. Competition between students was minimized and cooperation encouraged and fostered.

**Lecture**

Lecture has recently been seen as a dirty word. However, Brookfield (1990) writes the lectures "can provoke valuable critical thought" (p. 27). He asks teachers, "Do your methods and techniques help people learn in the context in which you and they are working? Do your approaches and exercises
take account of how students are experiencing learning? (p. 27). Lecture in the
distance education course employed the use of questions and answers, and
discussion along with lecture to help students engage with the material.

Handouts

Handouts were cited as very useful by the participants. They felt they
could participate better in discussions if they didn't have to take notes. Sally
said she referred to the handouts when she was writing her papers. One of the
recommendations from the participants was to make sure the handouts were
distributed to the students well before the class. Kathy said it helped her
prepare for the class discussion and “provided direction midst the reading
required” for the day.

Mailings

Something that may not be thought of as an instructional strategy are
timely mailings. This include those prior to the course and before classes.
Handouts mailed early can guide studying. Questions, comments, or suggested
readings mailed to students can help students focus and bring students into
class on the same wavelength. Pre-course mailings also help focus students on
the course and the course material. They also help allay anxiety by reducing the
unknown. Information and protocol for the interactive video system are also
helpful to students and should be mailed to them ahead of time.
**Group Activities**

Willis (1993) writes that group activities and assignments also stimulate interaction and learning. The community assessment project in the course was a group project. The students had to organize themselves, decide which community they would assess, develop a plan for doing the assessment, and then implement the plan. This project required cooperation and interaction between group members. It allowed students to negotiate assignments and responsibilities for the project. The distance site students composed one group and the on-campus students the other.

The project itself was a practical exercise and could be shared with the community that was assessed. Their next semester’s class would require students to use the data from the assessment to plan, implement, and evaluate an appropriate health care intervention for that community.

Students expressed surprise over some of the data they had collected. Concern for each of the two assessed communities was evident. It was enjoyable to watch the students take pride in what they had accomplished, share in the accomplishment, and report their findings in a professional manner in both written and oral reports.

Potential health interventions had been suggested by the students based on the data. They developed these interventions in an idealistic mind set. However, they evaluated them very realistically based on their material from the course.
The community assessment can be considered a capstone assignment. It incorporated communication/interaction, group theory and practice, the nursing process, critical thinking, and all the components of Bloom's taxonomy: knowledge, comprehension, application, analysis, synthesis, and evaluation (Orlich, 1990).

**Syllabus**

The syllabus was available for participants the first day of class. The instructor carefully went through it, the assignments, and the course schedule. Students were encouraged to ask questions and issues were clarified. Throughout the interview process the participants repeatedly spoke of how important and helpful the syllabus was. Participants used the syllabus like a road map. It provided direction for the course and its worth can not be underestimated.

Hegge (1993) writes that “clear expectations for performance should be articulated early and often during the course” (p. 40). This was done in the distance education course. During each class session the instructor checked on student progress, asked if there were any questions, and clarified issues including assignments. This methodology was highly effective for student learning and support.

**Textbooks**

Participants recommended two to three textbooks for a course. They felt the cost of several texts was prohibitive. Participants reported the information
was "basically the same in the course texts - just seen from different perspectives." With limited time they selected a "favorite" text or two to read and then skimmed other material if time allowed. Mary rationed her money and only purchased the texts she thought she'd need.

Educational Implications

1. Participants liked and appreciated real life examples, realistic assignments, and usable information. They understood they needed "theory" but also felt it was helpful to them when it was applied to situations. They seemed to appreciate a variety of teaching strategies which kept them from getting bored.

2. Learning from each other in groups was reported as "stronger learning" than that from the classroom. Group cohesiveness should not only be encouraged but be included in course planning. For those groups that never quite congeal, alternative strategies should be considered.

3. Two aspects of the course of particular interest to the participants were the syllabus and the textbooks. The syllabus was a critical component of the course. The participants used it as a guide to travel through the course. The list of references and bibliography were reported to be helpful. The syllabus needs to be well-organized and complete. A clear schedule of events and assignments should be included. Text books were another concern of the participants. They recommend no more than three required texts. After that the texts tended to be repetitive. Because text books out date so rapidly they suggested using current literature. They also recommended a set of reference books for the course at
each site which would reduce the number of texts required and provide consistency of reference material.

4. Planning activity periods and the pacing of activities can energize the learning environment. Handouts on topics for the class allows students to focus on the topic and not on taking notes.

5. A guide to using the technology of distance education would be helpful to students. Protocols, operational factors and components, as well as the history of the system would be appreciated by students.

It becomes obvious that instructional strategies are interdependent on each other. This symbiotic relationship when recognized and used by educators facilitates and enhances learning. The use of multiple strategies in this course supported this symbiotic relationship and thus promoted and supported learning.

Communication and Interactivity

Garrison (1990) writes, "education is a social, not a private, activity which ultimately demands critical analysis and testing of understanding to avoid ideology and indoctrination" (p. 16). Garrison believes that education is "dependent on two-way communication" (p. 13). It is important that students share and analyze what they hear and read. Again, the community assessment project promoted this sharing and testing mentioned by Garrison. Not only did the assessment allow students to analyze what they learned in class but gave them an opportunity to analyze and evaluate practice.

Bates (1995) also writes that learning is a social activity which can occur
via mail or technology such as telephone or computer. Two-way delivery systems also provide a means of inter-student communication. Guided conversations can introduce the students to the instructor or the student to the material. Interaction can be synchronous or asynchronous. This communication format was seen throughout the course. Communication was conducted through multiple modes (interactive television, computer, telephone, and mail) and was synchronous (interactive television and telephone) and asynchronous (computer and mail). Interactions occurred between students and between students and instructor. Schlenker (1994) recommends that student interaction include e-mail, group projects, reports due to the instructor, small group discussions, telephone, and a relaxed atmosphere.

"Interaction is a function of good instruction" and is not necessarily present with two-way interactive technologies (Wagner, 1993. P. 30). The technology provides the medium for the interaction, which consequently helps students remember more - thus improving learning. Instructional variety is another strategy to improve learning and foster communication. This distance education course provided the ingredients for interaction. Activities were planned to enhance communication and the players were present and actively participating.

Zhang and Fulford (1994) studied interaction in the distance learning classroom. They found, "There is no adequate evidence to substantiate a claim that students' perceptions of interaction is closely associated with the actual
amount of time spent on interaction ... a student-constructed psychological reality of the interactive television class room can be quite different from the intended reality controlled by the instructor’s time allocation” (p. 61). Interaction time by itself may not increase interaction. Student perceptions of the nature of the interaction is more important than the time allowed.

Zhang and Fulford (1994) also found that observed participation with no active participation contributed more to a positive view of interaction than actual participation. Perception of interaction can be shaped by other members of the class. Therefore, “effectiveness of interactivity should be assessed from the student’s perspective rather than considering time allocated” (p. 63).

Zhang and Fulford (1994) did not directly address the use of the number of student participation events during a class being used as grading criteria. It would seem however, use of mandatory participation would run contrary to some student’s learning styles. If instructors wanted to ascertain whether students were prepared for class or understood the material, structured activities would meet that purpose.

The instructor for the course created opportunity for interaction. If she had not heard from someone for awhile she would make a point to ask their opinion or ask if they had seen anything similar to what was being discussed. Participants themselves reported liking to hear what other students had to say. Students were not required to speak in each class, however, they did by virtue of the planned activities.
Educational Implications

1. Interaction in a course should be planned for and built into the course. Various teaching strategies that enhance interaction and communication should be used.

2. Communication between instructors and students and between students should also be planned to occur across multiple mediums/modes. A caring, open instructor can help facilitate communication in a course. Role modeling the behavior expected of the students is an excellent idea. Communication and interaction are important ingredients for building a community of learners.

Feedback

Moore (1998) writes that students like and deserve immediate feedback from instructors for active learning to take place.

Sometimes I wish there was major feedback on how well you do in certain things and certain areas, and how you could improve in those areas. 'Cuz I think we write and write and write and we get a grade, and they kinda write whatever on there. But it's not really - the paper as how I could do better... (Sally)

Feedback from instructors was desired and students had different reasons for wanting it. Sally thought feedback would let her know if she was heading in a direction in which she shouldn't be going. Mary felt feedback could help her find her way through new areas of learning. Sherwood, Armstrong, and Bond (1994) write that adult learners feel that prompt feedback is more important than faculty
interaction. Willis (1993) writes that feedback can be used for useful interaction. Participants in this course desired feedback from instructors. They felt it was important for it to be relatively immediate so they could proceed with more learning. They hesitated to dive into new material until they knew they were traveling in the right direction. At the same time they were self-directed enough to feel comfortable tackling new material. It was an interesting dichotomy.

Community

The instructor must be aware of the importance of a first class meeting. Schlenker (1994) is concerned with the atmosphere in the distance classroom being conducive to teaching/learning. He views the first class meeting as very important. He urges going over the course thoroughly. Introductions with students using the technology which will lessen the fears students have concerning technology. An exercise or assignment can be used to stimulate discussion the first or second class. In this particular course, the instructor took time during the first class to assess each student's experience with the technology of distance education, to do expanded introductions, and to introduce the course. She modeled the behavior she expected of the students and appeared to be comfortable with the technology.

Vella (1994) reports a study where "It was dramatically shown that the relationship between the instructor and the learner was the most important factor in the learning process" (p. 64). Relationships for learning involves respect, safety, open communication, listening, humility, and affirmation. The
participants felt that they were fairly well-acquainted with their instructor. They were cognizant and respectful of her accomplishments. They also said they could tell she was interested in them and how they were doing. The use of self by an instructor is always a risk but, if successful, it pays off in very positive ways.

Millis and Sapp (1996) recommend calling on students by name. Large name cards can be used to aid in name recognition. Equal treatment for on-campus and distance site students is also important. Millis and Sapp (1996) and Major and Shane (1991) recommend broadcasting from the distance sites. In the distance class students' names were mentioned each class when roll call was taken. Students were always called by name both by the instructor and by other students. The instructor taught class from the distance site and was able to visit with the participants at that site on a one-to-one basis. The on-campus participants reported not liking the instructor away from their classroom.

Major and Shane (1991) write that distance site students tend to form their own work and social groups. This formation should be encouraged and facilitated. The distance participants, probably by virtue of their geographic isolation, course activities, and continual contact with one another developed into a very supportive community of learners. Peterson (1992) says learners are “helped along by the interests, ideas, and support of others . . . One could use the work ‘family’ to describe life in a learning community” (p. 3).
1. In the words of Frank Herbert (1965), "A beginning is the time for taking the most delicate care..." (p. 3). It is important to start building a community of learners before the first class with the use of course mailings. A welcome letter and class information sent two weeks before class starts gives students a sense of belonging and a feeling of being cared about. The barriers of the technology and not knowing each other must be eliminated or reduced to a point where they will not interfere with the community building process.

2. Other strategies that can be used to build community include the use of names and expanded introductions during the first class. Continual use of names, group project time built into each class, and communication/interaction facilitate the community building process. Celebrations when appropriate should be allowed.

Recommendations for Distance Education, Practice, and Research

The following are recommendations for distance education, practice (education and nursing), and research developed as a result of this study.

Distance Education

- Investigate the effect of combined technological modalities on the delivery of educational offerings.
- Ascertain what kind of university access is most beneficial to distance education students.
- Evaluate the use and role of computer assisted communication in student learning and interaction.
• Explore student acceptance of using lower end technology for the delivery of distance education.

• Investigate the efficacy of interactive television in light of the trend to combine modalities to deliver distance education.

Practice

Education

• Investigate the efficacy and appropriateness of instructional strategies transplanted from the traditional classroom to the distance education setting.

• Determine how classroom instructional strategies can be modified to be effective in the distance education setting.
• Determine the importance of face to face communication for distance learning participants.
• Investigate what factors promote the development of a learning community and the length of time it takes for that community to become functional in the distance education setting.
• Investigate the effects of, type of, and necessity for interaction in the distance learning environment in light of the movement toward asynchronous learning.

Nursing

• Investigate the effect of workplace culture on the professional attitude and voice of baccalaureate nurses.
• Ascertain how nursing education addresses corporate and workplace culture in nursing education.

Research

• Define the particular traits and skills a distance education instructor needs to teach effectively in distance education.
• Explore the development of new instructional strategies specifically for distance education.
• Review the lived experience of distance education instructors.
REFERENCES

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