Institutional support of on-campus and off-campus nursing students
by Kathleen Karen Wankel

A thesis submitted in partial fulfillment of the requirements for the degree of Master of Nursing
Montana State University
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Abstract:
The purpose of institutional support is to assist students in achieving personal and academic success. However, owing to the physical distance that separates off-campus students from the main campus, distance learners may not receive the same level of support as on-campus students. Therefore, the purpose of the study was to determine and compare on-campus and off-campus students' perceptions of institutional support.

The study had a comparative descriptive design. A questionnaire was developed using Garrison and Baynton's theory of control for distance education and Baynton's factor analysis of support as a guide. Questions were divided into four subscales: in-class teacher support, out-of-class teacher support, in-class resource support and out-of-class resource support. A six-point Likert scale was used to score the students' perceptions of support.

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At the .05 significance level, the off-campus groups' scores were significantly lower in all four subscales and on all but eight of thirty questions. The results of the study indicate that both teacher support and resource support are important considerations for distance education programs.
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by

Kathleen Karen Wankel

A thesis submitted in partial fulfillment
of the requirements for the degree

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May 1995
APPROVAL

of a thesis submitted by

Kathleen Karen Wankel

This thesis has been read by each member of the thesis committee and has been found to be satisfactory regarding content, English usage, format, citations, bibliographic style, and consistency, and is ready for submission to the College of Graduate Studies.

April 18, 1995
Chair, Graduate Committee

Approved for the Major Department

April 18, 1995
Head, Major Department

Approved for the College of Graduate Studies

Date

Graduate Dean
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Signature  Kathleen K. Wankel
Date  May 12, 1995
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ABSTRACT

The purpose of institutional support is to assist students in achieving personal and academic success. However, owing to the physical distance that separates off-campus students from the main campus, distance learners may not receive the same level of support as on-campus students. Therefore, the purpose of the study was to determine and compare on-campus and off-campus students' perceptions of institutional support.

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At the .05 significance level, the off-campus groups' scores were significantly lower in all four subscales and on all but eight of thirty questions. The results of the study indicate that both teacher support and resource support are important considerations for distance education programs.
CHAPTER I

INTRODUCTION

The on-campus college student has access to a wide variety of institutional support services which serve to enhance the total educational experience. The purpose of such services is to provide support for the student in achieving personal and academic success. Examples of support services typically offered by institutions of higher learning are financial aid, counseling and advising services, a wide variety of courses, library facilities, computer labs, and access to instructors both in and out of class. While "support" is generally thought of as the material resources a student can access in order to carry out the learning process, the concept of support in a broader sense can also include emotional or psychological support (Garrison & Baynton, 1987). Institutional support positively impacts the educational environment of the student and can be the basis of school pride that promotes feelings of belonging, identity, and community.

For the college student who is enrolled in a distance education program, access to institutional support may be difficult. Owing to the very nature of distance education in which the student and "parent" institution are physically separated, the institutional support of the distance learner is not likely the same as the support of the on-campus student. The differing levels of institutional
support between the on-campus and off-campus students could be problematic for the distance learners.

Background and Significance

The importance of knowledge about the institutional support of distance learners is apparent when considering the growing popularity of distance education. Riccobono (1986) reported that 44% of public colleges and universities offer video telecourses. The International Council for Distance Education estimates the number of distance learners worldwide to be about 10 million (Verduin & Clark, 1991). Advancing technologies and decreasing costs continue to make the provision of distance education a viable option for many institutions of higher learning.

For nursing, distance education is an increasingly attractive way to reach prospective students who are "place bound" in terms of jobs and families. Distance learning is especially attractive for rural areas like Montana where the need for qualified nurses is coupled with long distances and inclement winter weather. Owing to the potential positive impact on rural nursing education and rural health care, distance education has been designated a rural nursing research priority (Bushy, 1992).

Gibson (1989) maintained that while distance education programs have given students "physical" access to education, educators must also be concerned with the student's "psychological" access. Furthermore, by
increasing knowledge of the institutional support for the distance learner, educators can move from mere "access to" towards "success in" and from "physical access" to "psychological access".

"Psychological access" may be of particular importance for nursing. As a profession, it is desirable that new members take on the values of nursing through professional socialization. The values of nursing include altruism, equality, esthetics, freedom, human dignity, justice and truth (American Association of Colleges of Nursing, 1986). However, there is little documentation in the nursing literature on the effects of distance education on professional socialization. It may be that institutional support and "psychological access" play an important part in the socialization process.

Schools of nursing offering distance education programs may have a particular interest in institutional support and the distance learners' personal and academic success. In order to maintain approval and accreditation, schools of nursing are accountable for successful student outcomes to both the state board of nursing (Montana State Board of Nursing, 1992) and the National League for Nursing (NLN, 1991). An example of a successful outcome is the new graduates' pass rate on the National Council Licensing Examination (NCLEX).

Although institutional support is an important consideration for the distance learner in terms of the student's personal success, support is also an important consideration for the institution in terms of student recruitment and
retention. The students' perceptions of their educational experience and how they communicate that experience to prospective students can be crucial to the institution's ability to attract and retain new students (Buchanan, 1989).

Research Question

The research question for this study was, "What is the difference between the perceived institutional support of the on-campus and off-campus students enrolled in a community college associate degree registered nursing program?"

Conceptual/Theoretical Framework

The major concept for this study was institutional support. Garrison and Baynton's (1987) model of "control" in distance education was utilized to give an overall view of the relationship between institutional support and other variables in distance education. However, only the "support" dimension of control was used in this study.

Figure 1: The Garrison and Baynton Model of Control and the Educational Transaction in Distance Education.
Garrison and Baynton (1987) maintained that distance learners are often expected to carry out much of their learning independently. The model uses the concept of "control" to explain how distance learners are successful as independent learners. Additionally, the model attempts to conceptualize the interaction that occurs between the teacher, the distance learner and other variables (see Figure 1).

The Garrison and Baynton model (see Figure 1) depicts the distance learner's control as a combination of (a) the student's independence, defined as the freedom to make choices without external influence or restriction; (b) the student's competence, defined as the ability or capacity to take part in and assume responsibility for the learning process; and (c) the student's support, defined as the resources that the learner can access in order to carry out the learning process. The student's support was the sole focus of this study.

Garrison and Baynton (1987), defined support as the availability and accessibility of courses, learning materials and teachers in addition to other resources such as library facilities, computer terminals, financial assistance and emotional support. For Garrison and Baynton (1987) communication integrated and balanced all of the components of control in the educational transaction.

Baynton's (1992) factor analysis of the dimensions of control in distance education lent empirical support to the Garrison and Baynton (1987) model and further delineated the dimension of support. Although the factor analysis measured all of the components of control, only the findings pertaining to
support are presented here. Baynton's factor analysis determined that "support" of distance learners can be divided into two main areas: teacher/tutor support (human support) and access to resources (both human and material support). Baynton defined teacher/tutor support as the interpersonal, interactive and relational aspects of the learning environment. Access to resources was defined as the availability/accessibility of human as well as material resources (Baynton, 1992).

Using the Garrison and Baynton model and Baynton's factor analysis as a guide, the following model was developed to explain institutional support as it was used in this study (see Figure 2).

![Figure 2: Model of Institutional Support for On-Campus and Off-Campus Students.](image)

Unlike the Garrison and Baynton model which delineated "support" for the distance learners only, this model depicts support for both the on-campus and off-campus students (see Figure 2). The rationale for this approach is that both on-campus and off-campus students require and benefit from support.
As in Baynton's factor analysis, this model divides support into teacher support and resource support. However, in order to facilitate the evaluation of specific dimensions of support, this model further delineates teacher and resource support into in-class and out-of-class support categories (see Figure 2).

Teacher support refers to the interpersonal, interactive and relational dimension of institutional support (Baynton, 1992), which can occur either in-class or out-of-class. In-class teacher support includes lecture, class discussion, and individual student questions and answers. Out-of-class teacher support is any contact between the student and the teacher other than during class time (see Figure 2).

Resource support refers to the accessibility/availability of material support as well as the accessibility/availability of persons other than the teacher (Baynton, 1992), that is, advisors and counselors. Resource support is also divided into in-class support and out-of-class support (see Figure 2). For this study, in-class resource support refers to textbooks, videos, studyguides, handouts, and test score results. Out-of-class resource support refers to accessibility/availability of orientation, registration, paying fees, financial aid, advisors and counselors, student nurse uniforms, support courses, library resources, computers, and the college bulletin board system.

This study compared the institutional support of the on-campus and off-campus students by examining the student's perceptions of support. The
rationale for this approach was that while the institution may offer support, the students may not perceive the support as accessible. Furthermore, while the accessibility/availability of institutional support may be different for the two groups, the off-campus students may not perceive their support as different from that of the on-campus group.

Definitions

The definition of terms used for the purpose of this study were as follows:

Distance Education - formal instruction via a technological medium in which the student and teacher are separated by distance for the majority of the learning experiences.

Distance Learner or Off-Campus Student - a student who attends class at a site other than the main campus. For this study, the off-campus sites are located 80 miles and 130 miles from the home campus.

On-Campus Student - a student who attends class at the main campus. For this study the main campus is located at a community college in a rural community with a population of 9,000.

Institutional support - resources provided to the student by the institution which serve to both enhance the student's educational experience and assist the student in achieving success. Support will be divided into two categories:
1. Teacher support which denotes the interpersonal, interactive and relational aspects of the learning environment

2. Resource support which refers to the accessibility/availability of material resources as well as the support offered by persons other than the teacher.

In-class time - the allotted time set aside for the didactic portion of the nursing classes. For the freshmen students, this time is 50 minutes three times a week. For the sophomore students, this time is 70 minutes three times a week.

Out-of-class time - any time other than during the allotted time set for the didactic portion of the nursing classes.

Teachers - community college faculty who are instructors in the nursing program.

Advisors - instructors who offer guidance to help the student meet the course requirements of the nursing program.

Counselors - persons employed by the college who offer help in resolving the student's personal problems.

Orientation - the initial information given to the students informing them of the support services that are available and how to access these services.

Registration - the process of enrolling in classes and paying tuition.

Financial aid - monetary resources available to students which includes loans, grants, and scholarships.
Textbooks - books which the students are required to purchase in order to accomplish required readings and assignments for the nursing classes.

Uniforms - the nursing program's required attire for nursing students.

Support courses - courses other than nursing courses which are required to complete the Associate of Applied Science Nursing Degree.

Library resources - refers to the students' access to books, periodicals, and videotapes, or other reading, viewing, or listening materials which are arranged and cataloged in a fixed way.

Videos - VHS format films containing nursing related information.

Class hand-outs - refers to educational printed material which are given to each student by the teacher during class time.

Test scores - the percent of correct answers the student achieved on a written evaluation.

Bulletin board system - the community college's computer telecommunication system which has e-mail and file transfer capabilities and can be used by nursing students and faculty to communicate between campuses.

Associate degree nursing student - a student who is currently enrolled full time in the two-year Registered Nurse program at the community college.

Community college - a two year institution of higher learning which offers associate degrees.
Assumptions

Two basic assumptions which were explicit regarding this study are:

1. Associate degree nursing students are capable of reporting their perceptions of institutional support, and
2. Associate degree nursing students find institutional support of value to them.

Limitations

Owing to the variety of technological media over which distance education can be delivered in addition to the differences in the amount of support each institution offers, generalizations of research findings are limited. Additionally, this study only measured the differences in perceived levels of institutional support for the on-campus and off-campus groups and did not seek to answer why differences existed.
REVIEW OF LITERATURE

Time and again, distance education has proven to be as effective as traditional face-to-face teaching in terms of test scores and transfer of knowledge (Whittington 1987; Grimes, Nielson & Ness 1988; McCleary & Egan 1989; Souder 1993). In a comparative study between interactive television and traditional lecture course offerings for nursing students, Parkinson and Parkinson (1989) found no significant difference in the mean of test scores between the on-campus and off-campus groups. There were, however, statistically significant differences for the two groups in the evaluation of instructor and course. The criteria that were rated lower by the off-campus group included instructor's effectiveness, organizational presentation, learning promotion, objective satisfaction, use of visual aids, interest level and attitude toward the course. This study demonstrated that although the on-campus and off-campus students' test scores were equal, there were other variables that differed.

In a similar study, Ritchie and Newby (1989) found that while there were no significant differences in student achievement (face-to-face vs. television), there were significant differences in the perceived attitudes of the two groups. The results of this study showed the distance learners experienced less involvement, less ability to ask questions, and less overall enjoyment than
students in the traditional classroom. Thus, the educational experience of the two groups was not the same.

The findings of these studies raise an important question. Should educators be satisfied with only the equality of information and knowledge? Should there be concern that distance learners are less satisfied with their education? Holmberg (1989) argued that education is more than the transfer of information and that educators should be concerned with the intellectual and emotional development of students. Holmberg's premise is that there are inherent "snags" in distance education, and he warns of the dangers of a "depersonalized product and neutral interaction" which may stifle students' motivation.

The notion that there are inherent problems in distance education was echoed by Regan and Tuchman (1990). In particular, a concern existed as to the extent that "electronic education" lends itself to the socialization of students into the norms of a profession. They contended that the original purpose of the U.S. educational system was not merely to transmit information, but to socialize persons for participation in an industrial society. Regan and Tuchman continued by saying that socialization is influenced by a variety of factors including the students' relationships to the institution, the department, the instructor, peers and the political/social environment. All of the factors cited by Regan and Tuchman relate to the concept of institutional support.
The benefits of both formal and informal "support" are widely recognized and have been the focus of many of the health disciplines and social sciences since the 1970s (Weinert & Long, 1991). However, there is relatively little research reported on social support in higher education. This is true with respect to the distance learner, and the on-campus student.

Weir and Okum (1989) sought to address the lack of knowledge regarding institutional support of on-campus students through a study of social support, positive college events, and college satisfaction. Findings were that structural social support (defined as the extent to which one is integrated or embedded in one's social environment) had a main effect on college satisfaction.

In another study of on-campus learners, Endo and Harpel (1982) examined the effects of student-faculty interaction. Variables studied included frequency of formal interaction, frequency of informal interaction, quality of faculty advising, and helpfulness of faculty. Their findings indicated that the frequency and quality of student-faculty interaction had positive impact on personal, intellectual, and academic outcomes.

Much of the current nursing literature pertaining to distance education is largely descriptive in nature (Billings, Frazier, Lausch & McCarty 1989; Douglas & Fotos 1989; Pym 1992; Clark 1993; Henry 1993; Dirksen, Hoeksel & Holloway 1993; Shomaker 1993). Although these articles provide invaluable information about distance education program design and implementation, they
afford little evidence about the distance learners' satisfaction, attitudes, and perceptions of support.

Cookson's (1989) literature review about learners and learning in distance education reveals that much of the research in the field of distance education has focused on the effectiveness of various delivery systems. The review identified studies of specific types of technologies including audiotape, radio, correspondence, auxiliary tutor-counseling, summer schools, tutorials, audio conferencing, video conferencing, interactive video, and computer conferencing. While these studies on the effectiveness of the various technologies increases understanding of distance education delivery systems, the studies do not increase understanding of the differences in the institutional support of the distance learner.

Owing to the high drop-out rate in many distance education programs, the most studied outcome in distance education is student attrition (Cookson, 1989). One study focused on the student's reasons for drop-out and is valuable in understanding the distance learner's unique situation. A study by Phythian and Clements (1982) surveyed distance learners who failed to take a final exam in a high-level math course. Participants reported the reasons for drop-out to be: job (27%), domestic pressure (26%), and course too long or hard (16%). Of particular interest were the responses to open ended questions which included "loneliness" and "lack of support" when the students encountered difficulties.
Other distance education studies have focused on the success of the distance learner and examined the concept of persistence. Sung (1986) found "perception of the program" accounted for 19% of the variance and "environment-based perceptions" accounted for 21% of the variance in persistence of 200 students enrolled in correspondence study at Penn State University.

Sweet (1986) looked at social and academic integration in relation to student characteristics and found that social and academic integration accounted for 18% of the variance, while student characteristics accounted for 11% of the variance in persistence. These studies indicate there is more to successful learning than just the transfer of knowledge. Moreover, it is the degree to which the students are integrated both socially and academically that may make the difference in success.

Summary

To date, there have been few published studies on the institutional support of the distance learner. Existing literature is often confined to determining the effectiveness of a specific type of technological medium. However, the equality of test scores between the on-campus and off-campus groups does not reflect the equality of the variable of institutional
support. In view of the paucity of reported studies, it is important to increase knowledge of the institutional support of distance learners through further research.
CHAPTER 3

METHODOLOGY

Purpose

The purpose of the study was to determine and compare the reported perceptions of institutional support of the on-campus and off-campus registered nursing students.

Research Design

A comparative descriptive survey design was utilized to study the perceived institutional support reported by the on-campus and off-campus nursing students. This design is appropriate for studies seeking to examine and describe differences in two or more groups that occur naturally in a given setting (Burns & Grove, 1987). Since an appropriate questionnaire that would measure institutional support of both on-campus and off-campus students was not available, a tool was developed by the investigator. It was hoped that the comparative survey design would reveal areas where perceived institutional support of on-campus and off-campus students differ.
Setting and Sample

A convenience sample was obtained from the population of students who were currently enrolled in a community college associate degree nursing program. In this particular distance education program, the nursing classes are delivered to students over an interactive television (ITV) fiberoptic system which has both two-way audio and video capabilities. The home campus is located in a rural community with a population of approximately 9000. The two distance campuses are located 80 miles and 130 miles from the main campus.

All of the first and second year (freshmen and sophomore) students were invited to participate in the study. At the time the survey was administered, the freshmen students had used the ITV system for a full semester. A semester should have been sufficient time for the freshmen students to develop perceptions about their educational experience and institutional support. The sophomore students had used the ITV system three full semesters and a summer session at the time of the survey. Current class rosters indicated that there were a total of 85 students, 43 freshmen students and 42 sophomore students. Out of 85 students, 29 were distance learners.

By comparing the perceptions of institutional support of on-campus and off-campus students, this study provides rural nursing research data. Bushy (1992) maintained data is needed on the effectiveness and outcomes of technological delivery systems in disseminating educational materials to rural areas. It was hoped that this study would generate knowledge about the areas
of institutional support that need to be enhanced, not only in this distance education nursing program, but in other existing distance education nursing programs as well. Furthermore, it was hoped that this study would help to identify considerations for future distance education endeavors.

**Data Collection Instrument**

A questionnaire, developed by the investigator, served as the tool to elicit students' perceptions of institutional support (see Appendix A). The questions were divided into the two major categories of institutional support; teacher support and resource support. Each category was further divided into subscales of in-class and out-of-class support.

Demographic data was requested including the student's age, sex, marital status, campus site and year in school. Student responses were obtained through the use of a six point Likert Scale. The scale's anchors ranged from strongly agree to strongly disagree. Because extreme statements and neutral statements do not produce much variance in response, questions were stated either moderately positively or moderately negatively (Woods & Catanzaro, 1988). Additionally, in order to minimize all positive or negative responses, one-half of the items were stated positively and one-half were stated negatively. Excluding the demographic section, there was a total of 30 items on the questionnaire.
The questionnaire items were based on the review of the literature on
distance learners and the conceptual framework. The final survey format was
evaluated for content validity and found to be consensually valid by three
educators experienced in distance education. Additionally, a pilot study of
thirteen recent nursing graduates of the distance education program provided
feedback. The pilot study revealed that no adjustments to the questionnaire
were necessary. Reliability of the instrument could not be pre-established.

Procedures for Data Collection

The survey was administered in the Fall semester of 1994 during
regularly scheduled class times. Classroom instructors were notified of the
designated date two weeks prior to survey administration to allow time to adjust
class activities. Clinical instructors at the distance sites were also notified two
weeks in advance so that they were available to distribute the questionnaires to
the off-campus students on the designated day.

Two days prior to administration, the clinical instructors at the distance
sites received a sealed envelope containing a sufficient quantity of numbered
surveys. Along with the questionnaires was a cover letter explaining the
procedure and thanking the instructors in advance for their participation (see
Appendix B). A large, self-addressed stamped envelope for return of the
completed questionnaires was also included.
On the designated day, the researcher read a statement to both the on-campus and off-campus students explaining the purpose of the study and possible uses of the data (see Appendix C). Included in the statement was the approximate amount of time the survey required. Also, directions were given on how to use the Likert Scale. Students were assured that participation was completely voluntary and that they could choose not to participate simply by returning the questionnaire unanswered. The students were instructed not to put their names on the questionnaires in order to maintain anonymity. A similar statement appeared on the questionnaire.

Possible benefits and risks to the participants were also discussed. Possible benefits included the improvement of institutional support for both presently enrolled on-campus and off-campus nursing students in addition to future nursing students. Another benefit was that the data generated from this study would provide information which might be useful for distance education programs at other schools. Possible risk to the students was that they may experience some discomfort or anxiety about reporting perceptions of institutional support.

After reading the introductory statement, the researcher and the clinical instructors at the distance sites exited the classroom in order to give the students privacy in completing the questionnaire. All of the students, whether or not they chose to participate, were asked to return the questionnaires to a designated student volunteer at each site. The student volunteers at the distant
sites were asked to mail the completed questionnaires in a sealed envelope to
the researcher. The student volunteer at the on-campus site was asked to seal
and return the questionnaires directly to the researcher after class. Thank-you
statements appeared on the questionnaire and thank-you posters were posted
at each site two weeks post survey date. After the data was analyzed, a copy
of the final results of the survey was placed in each of the three classrooms.

Discussion of Human Subjects and Consent Process

Approval to access the community college nursing students was obtained
from the college president and the chairperson of the Department of Nursing
and Allied Health (see Appendix D). The community college does not have a
Human Subjects Review Committee and approval of the Montana State
University College of Nursing Human Subjects Review Committee sufficed (see
Appendix E).

There were no identifiable adverse consequences for participation in this
study other than some discomfort or anxiety about reporting perceptions of
institutional support. The researcher is a faculty member in the nursing
program. However, the questionnaire was completely anonymous and
participation was strictly voluntary. No names were required and the individual
questionnaires were identified by number only. A cover statement, read by the
investigator, specifically told the students not to put their name on the
questionnaire. Students were informed they could choose not to participate
simply by returning the questionnaire unanswered and that completing the questionnaire implied consent to participate in the study. Additionally, a similar implied consent statement was included on the questionnaire form.

Complete privacy was afforded the students in completing the questionnaire. Assurance was given that participation or non-participation would in no way affect the students' grade and the college's administration would be given the results only after final grades had been issued. It was hoped that this approach would allow the students to answer more freely about any negative aspects of the evaluation. The completed questionnaires are being kept in a locked, secure place at the Montana State University campus in Bozeman for five years.

Data Analysis

Descriptive statistics (means, frequencies and measures of variability) of the demographic variables for the on-campus and off-campus groups were computed in order to describe the characteristics of the sample. In addition, descriptive statistics were used to summarize each group's responses to subscales and individual items on the questionnaire.

The student's responses indicated the degree to which they agreed or disagreed with each statement on a scale of 1 to 6. A response of "1" signified that the respondent strongly agreed with the statement. A response of "6" indicated that the respondent strongly disagreed with the statement.
Positive and negative items were scored differently. The scale values for the negatively stated items were summed, however, the scale values for the positively scored items were reversed and summed. This approach ensured that all scores reflected institutional support. The higher the total score, the higher the degree of perceived institutional support.

Summative scores and mean averages were calculated for the multi-item subscales (in-class teacher support, out-of-class teacher support, in-class resource-support and out-of-class resource-support). Standard deviations indicated the degree of consistency among ratings.

The t-test for independent samples is commonly used by investigators to compare the means for two groups (Woods & Catanzaro, 1988). Therefore, the t-test for independent samples was utilized to test for differences in the mean scores of each question. The t-test was also used to indicate differences in the in-class and out-of-class multi-item subscales. Comparisons were made at the .05 level of significance which is appropriate when dealing with data that has no direct impact on health or life threatening consequences (Woods & Catanzaro, 1988).
ANALYSIS OF THE DATA

Of the total population of 85 students, 80 were present and participated in the completion of the questionnaire on the day of the survey. Demographic data were used to describe the characteristics for the entire sample. Descriptive statistics were used to summarize the data. A t-test was used to compare the means of the on-campus and off-campus groups. At the .05 significance level, the t-test revealed the off-campus students' perceptions of institutional support were significantly lower than the on-campus group in all of the four subscales. Furthermore, the off-campus groups' scores were significantly lower on all but eight of the thirty items on the questionnaire.

Description of the sample

The sample consisted of a total of 80 students who were currently enrolled in an associate degree nursing program at a small, rural, community college. Of the 80, 41 (51.3%) were freshmen and 39 (48.8%) were sophomores. Fifty-three (66.3%) students attended classes at the main campus and 27 (33.8%) students attended classes at the two distance sites. The students ranged in age from 19 to 49 with a mean age of 31.5 (standard deviation 8.58). Not all of the students responded to the demographic questions regarding gender and marital status. Of those responding, 60 were
females (87%) and 9 were males (13.0%). Also, 22 (32.4%) were single, 35 (51.5%) were married, 2 were widowed (2.9%) and 9 were divorced (13.2%) (see Table 1).

Table 1

Summary of Demographic Data

<table>
<thead>
<tr>
<th>CLASS</th>
<th>Freshmen</th>
<th>41 (51.3%)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Sophomores</td>
<td>39 (48.8%)</td>
</tr>
<tr>
<td>CAMPUS</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>On-Campus</td>
<td>53 (66.3%)</td>
</tr>
<tr>
<td></td>
<td>Off-Campus</td>
<td>27 (33.8%)</td>
</tr>
<tr>
<td>AGE</td>
<td>Range</td>
<td>19 - 49</td>
</tr>
<tr>
<td></td>
<td>Mean</td>
<td>31.5</td>
</tr>
<tr>
<td></td>
<td>Standard Deviation</td>
<td>8.58</td>
</tr>
<tr>
<td>SEX</td>
<td>Males</td>
<td>9 (13.0%)</td>
</tr>
<tr>
<td></td>
<td>Females</td>
<td>60 (87.0%)</td>
</tr>
<tr>
<td>MARITAL STATUS</td>
<td>Single</td>
<td>22 (32.4%)</td>
</tr>
<tr>
<td></td>
<td>Married</td>
<td>35 (51.5%)</td>
</tr>
<tr>
<td></td>
<td>Widowed</td>
<td>2 (2.9%)</td>
</tr>
<tr>
<td></td>
<td>Divorced</td>
<td>9 (13.2%)</td>
</tr>
</tbody>
</table>

Scoring the Questionnaire

The survey consisted of 30 questions and was divided into 4 subscales. The subscales were in-class teacher support (questions 1-5), out-of-class teacher support (questions 6 & 7), in-class resource support (questions 8-14),
and out-of-class resource support (questions 15-28). Questions 29 & 30 were in reference to the students' perceptions of overall support and if the students perceived their support was equal to that of students at the other two sites. There was also a space provided for additional comments (see Appendix A), although no usable comments were obtained.

Since half of the questions on the survey were stated positively (questions 1,3,5,7,9,11,13,15,17,19,20,22,24,26,27, and 29) and half were stated negatively, the positive items were scored in reverse to get all of the values assigned to the items scored in the same direction. In this manner, a high score on any item reflected a positive (agree) and a low score reflected a negative (disagree). The value labels assigned to the 6 point Likert scale was as follows: strongly disagree 1, disagree 2, somewhat disagree 3, somewhat agree 4, agree 5, strongly agree 6.

Internal Reliability

To determine the internal consistency of the subscales, an alpha coefficient was determined and reflected a sufficiently reliable instrument. The coefficients for the subscales were as follows: in-class teacher support .7919, out-of-class teacher support .7349, in-class resource support .8026, and out-of-class resource support .8228. A reliability coefficient which exceeded .7 was determined as acceptable because of the questionnaire's intended application.
(non-life threatening) and because the questionnaire was newly constructed (Woods & Catanzaro, 1988).

Findings

Because the subscales were found to be internally consistent, the items in each of the four subscales were added together. Means and standard deviations were calculated for the on-campus and off-campus groups. A t-test was utilized to determine statistically significant differences in the means of the two groups' scores at the .05 significance level. The off-campus groups' scores were significantly lower on all of the four subscales of institutional support. The results are presented in Table 2.

Table 2

A Comparison of Students' Perceptions of Institutional Support by Subscales

<table>
<thead>
<tr>
<th>SUBSCALE</th>
<th>GROUP</th>
<th>n</th>
<th>RANGE</th>
<th>MEAN</th>
<th>S.D.</th>
<th>t-TEST p-VAL.</th>
</tr>
</thead>
<tbody>
<tr>
<td>In-class teacher support</td>
<td>Off-campus</td>
<td>27</td>
<td>5-30</td>
<td>17.67</td>
<td>3.42</td>
<td>.000</td>
</tr>
<tr>
<td></td>
<td>On-campus</td>
<td>53</td>
<td></td>
<td>23.26</td>
<td>3.84</td>
<td></td>
</tr>
<tr>
<td>Out-of-class teacher support</td>
<td>Off-campus</td>
<td>- 27</td>
<td>2-12</td>
<td>4.63</td>
<td>2.39</td>
<td>.000</td>
</tr>
<tr>
<td></td>
<td>On-campus</td>
<td>53</td>
<td></td>
<td>8.30</td>
<td>2.35</td>
<td></td>
</tr>
<tr>
<td>In-class resource support</td>
<td>Off-campus</td>
<td>26</td>
<td>7-42</td>
<td>27.23</td>
<td>6.35</td>
<td>.000</td>
</tr>
<tr>
<td></td>
<td>On-campus</td>
<td>53</td>
<td></td>
<td>34.11</td>
<td>4.53</td>
<td></td>
</tr>
<tr>
<td>Out-of-class resource support</td>
<td>Off-campus</td>
<td>24</td>
<td>14-84</td>
<td>51.17</td>
<td>11.19</td>
<td>.001</td>
</tr>
<tr>
<td></td>
<td>On-campus</td>
<td>51</td>
<td></td>
<td>59.96</td>
<td>9.20</td>
<td></td>
</tr>
</tbody>
</table>
In order to more specifically determine areas of institutional support where differences existed, the means, standard deviations, and p-values were also calculated for each question. Table 3, Table 4, Table 5, Table 6, and Table 7 demonstrate that the perceived level of institutional support for the off-campus group was significantly lower on 22 out of the total 30 items. The possible range of each of the questions was 1 (strongly disagree) to 6 (strongly agree). The questions are divided into tables according to the subscales.

Table 3

A Comparison of Students' Perceptions of Institutional Support by Questions for the In-Class Teacher Support Subscale

<table>
<thead>
<tr>
<th>QUESTION</th>
<th>CAMPUS</th>
<th>n</th>
<th>MEAN</th>
<th>S.D.</th>
<th>t-TEST</th>
<th>p-VAL.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Off-campus</td>
<td>27</td>
<td>4.19</td>
<td>1.21</td>
<td>.000</td>
<td>.000</td>
</tr>
<tr>
<td></td>
<td>On-campus</td>
<td>53</td>
<td>5.08</td>
<td>.90</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
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<td>27</td>
<td>4.59</td>
<td>1.12</td>
<td>.041</td>
<td>.041</td>
</tr>
<tr>
<td></td>
<td>On-campus</td>
<td>53</td>
<td>5.09</td>
<td>.97</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Off-campus</td>
<td>27</td>
<td>3.19</td>
<td>1.36</td>
<td>.000</td>
<td>.000</td>
</tr>
<tr>
<td></td>
<td>On-campus</td>
<td>53</td>
<td>4.58</td>
<td>1.05</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Off-campus</td>
<td>27</td>
<td>2.30</td>
<td>1.71</td>
<td>.000</td>
<td>.000</td>
</tr>
<tr>
<td></td>
<td>On-campus</td>
<td>53</td>
<td>3.42</td>
<td>1.32</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Off-campus</td>
<td>27</td>
<td>3.41</td>
<td>1.19</td>
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<td>.000</td>
</tr>
<tr>
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<td>On-campus</td>
<td>53</td>
<td>5.09</td>
<td>.90</td>
<td></td>
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</tr>
</tbody>
</table>
Table 4

A Comparison of Students' Perceptions of Institutional Support by Questions for the Out-of-Class Teacher Support Subscale

<table>
<thead>
<tr>
<th>QUESTION</th>
<th>CAMPUS</th>
<th>n</th>
<th>MEAN</th>
<th>S.D.</th>
<th>t-TEST p-VAL.</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td>Off-campus</td>
<td>27</td>
<td>2.26</td>
<td>1.53</td>
<td>.000</td>
</tr>
<tr>
<td></td>
<td>On-campus</td>
<td>53</td>
<td>4.02</td>
<td>1.42</td>
<td></td>
</tr>
<tr>
<td>7</td>
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<td>27</td>
<td>2.37</td>
<td>1.50</td>
<td>.000</td>
</tr>
<tr>
<td></td>
<td>On-campus</td>
<td>53</td>
<td>4.28</td>
<td>1.26</td>
<td></td>
</tr>
</tbody>
</table>

Table 5

A Comparison of Students' Perceptions of Institutional Support by Questions for the In-Class Resource Support Subscale

<table>
<thead>
<tr>
<th>QUESTION</th>
<th>CAMPUS</th>
<th>n</th>
<th>MEAN</th>
<th>S.D.</th>
<th>t-TEST p-VAL.</th>
</tr>
</thead>
<tbody>
<tr>
<td>8</td>
<td>Off-campus</td>
<td>27</td>
<td>2.33</td>
<td>1.54</td>
<td>.000</td>
</tr>
<tr>
<td></td>
<td>On-campus</td>
<td>53</td>
<td>4.15</td>
<td>1.34</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>Off-campus</td>
<td>27</td>
<td>4.33</td>
<td>1.47</td>
<td>.003</td>
</tr>
<tr>
<td></td>
<td>On-campus</td>
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<td>5.11</td>
<td>.80</td>
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<tr>
<td>10</td>
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<td>On-campus</td>
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<td>4.60</td>
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<tr>
<td>11</td>
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<td>3.73</td>
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</tr>
<tr>
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<td>5.02</td>
<td>.87</td>
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</tr>
<tr>
<td>12</td>
<td>Off-campus</td>
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<td>4.00</td>
<td>1.39</td>
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<td>4.98</td>
<td>1.17</td>
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</tr>
<tr>
<td>13</td>
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<td>1.36</td>
<td>.004</td>
</tr>
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<td>5.11</td>
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<tr>
<td>14</td>
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<td>4.48</td>
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<tr>
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<td>53</td>
<td>5.13</td>
<td>.92</td>
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</tr>
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</table>
Table 6

A Comparison of Students' Perceptions of Institutional Support by Questions for the Out-of-Class Resource Support Subscale

<table>
<thead>
<tr>
<th>QUESTION</th>
<th>CAMPUS</th>
<th>n</th>
<th>MEAN</th>
<th>S.D.</th>
<th>t-TEST p-VAL.</th>
</tr>
</thead>
<tbody>
<tr>
<td>15</td>
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<td>3.85</td>
<td>1.59</td>
<td>.009</td>
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<td>4.64</td>
<td>1.04</td>
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</tr>
<tr>
<td>16</td>
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<td>1.61</td>
<td>.000</td>
</tr>
<tr>
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<td>On-campus</td>
<td>53</td>
<td>4.77</td>
<td>1.12</td>
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</tr>
<tr>
<td>17</td>
<td>Off-campus</td>
<td>27</td>
<td>3.70</td>
<td>1.71</td>
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<td>On-campus</td>
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<td>4.58</td>
<td>1.25</td>
<td></td>
</tr>
<tr>
<td>18</td>
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<td>27</td>
<td>4.44</td>
<td>1.28</td>
<td>.007</td>
</tr>
<tr>
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<td>5.11</td>
<td>.87</td>
<td></td>
</tr>
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<td>Off-campus</td>
<td>27</td>
<td>3.59</td>
<td>1.47</td>
<td>.107</td>
</tr>
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<td>4.15</td>
<td>1.43</td>
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</tr>
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<td>3.27</td>
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<td>3.83</td>
<td>1.31</td>
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<td>4.32</td>
<td>1.41</td>
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<td>3.26</td>
<td>1.51</td>
<td>.085</td>
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<td>1.53</td>
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<td>3.37</td>
<td>1.42</td>
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</tr>
<tr>
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<td>On-campus</td>
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<td>3.96</td>
<td>1.33</td>
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<tr>
<td>25</td>
<td>Off-campus</td>
<td>27</td>
<td>2.81</td>
<td>1.18</td>
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</tr>
<tr>
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<td>3.96</td>
<td>1.30</td>
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</tr>
<tr>
<td>26</td>
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<td>1.47</td>
<td>.377</td>
</tr>
<tr>
<td></td>
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<td>52</td>
<td>3.77</td>
<td>1.69</td>
<td></td>
</tr>
</tbody>
</table>
Table 7

A Comparison of Students' Perceptions of Institutional Support by

Questions for the "Other" Category

<table>
<thead>
<tr>
<th>QUESTION</th>
<th>CAMPUS</th>
<th>n</th>
<th>MEAN</th>
<th>S.D.</th>
<th>t-TEST p-VAL.</th>
</tr>
</thead>
<tbody>
<tr>
<td>29</td>
<td>Off-campus</td>
<td>27</td>
<td>3.37</td>
<td>1.39</td>
<td>.000</td>
</tr>
<tr>
<td></td>
<td>On-campus</td>
<td>53</td>
<td>4.79</td>
<td>1.13</td>
<td></td>
</tr>
<tr>
<td>30</td>
<td>Off-campus</td>
<td>26</td>
<td>2.62</td>
<td>1.36</td>
<td>.000</td>
</tr>
<tr>
<td></td>
<td>On-campus</td>
<td>53</td>
<td>4.98</td>
<td>1.07</td>
<td></td>
</tr>
</tbody>
</table>

For the off-campus group, seven of the questions elicited mean scores of less than 3. Table 8 demonstrates the areas where the off-campus students perceived the least amount of support.

Table 8

Questions which Elicited Lowest Mean Scores for the Off-Campus Students

<table>
<thead>
<tr>
<th>QUESTION NUMBER</th>
<th>OFF-CAMPUS MEAN</th>
<th>QUESTION TOPIC</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td>2.26</td>
<td>Student's access to teacher other than during class time.</td>
</tr>
<tr>
<td>4</td>
<td>2.30</td>
<td>Student's ability to hear comments and questions of other students during class.</td>
</tr>
<tr>
<td>8</td>
<td>2.33</td>
<td>Student's ability to hear videos during class.</td>
</tr>
<tr>
<td>7</td>
<td>2.37</td>
<td>How often the student talked with the teacher other than during class.</td>
</tr>
<tr>
<td>30</td>
<td>2.62</td>
<td>The support the student received is equal to that of students at the other campuses.</td>
</tr>
<tr>
<td>25</td>
<td>2.81</td>
<td>The availability of nursing skills videos.</td>
</tr>
<tr>
<td>27</td>
<td>2.96</td>
<td>The adequacy of the Pioneer BBS in obtaining answers to questions.</td>
</tr>
</tbody>
</table>
DISCUSSION

The purpose of the study was to compare the perceptions of institutional support for on-campus and off-campus registered nursing students. The definition of support for this study was derived from Baynton's (1992) factor analysis which determined that support for the off-campus students was divided into two main areas: teacher/tutor support (the interpersonal, interactive and relational aspects of the learning environment) and resource support (the availability/accessibility of human as well as material resources).

Using Baynton's findings as a guide, this study divided teacher and resource support into in-class and out-of-class categories. In contrast to Baynton's study which pertained to support of off-campus students only, this study applied the concept of support to both on-campus and off-campus students.

At the .05 significance level, the study identified that the perceived support for the off-campus students was significantly lower than the perceived support of the on-campus students in all of the four subscales of support. While these findings have important significance for the nursing program identified in this study, there may be important implications for other distance education nursing programs as well.
Support: A Dimension of Control

In order to facilitate understanding of the significance of the findings of this study, it is necessary to examine "support" in the context of the conceptual framework. As the reader will recall, support is but one of three interdependent dimensions which together comprise the concept of "control" (Garrison & Baynton, 1987). The concept of control attempts to explain how distance learners are successful.

The three dimensions of control are independence, competence and support. Independence is the distance learners' freedom to make choices without external influence or restriction. Competence is the distance learners' ability or capacity to take part in and assume responsibility for the learning process. Support is defined as the resources that the distance learners can access in order to carry out the learning process. In order for "control" to be achieved by the distance learners, there must be a balance among these three dimensions (Garrison & Baynton, 1987).

Although the balance of control is achieved through independence, competence and support, the three dimensions do not necessarily contribute equally to control. If one of the dimensions is diminished or lowered, one of the other two dimensions may be increased in order to compensate for the reduction (Garrison & Baynton, 1987).

In this study, the perceived support of the off-campus students was significantly lower than the perceived support of the on-campus students.
According to the control theory, either the distance learners' independence or competence would need to be increased in order to achieve the balance of control. However, the following discussion suggests that increasing the distance learners' independence and competence may be difficult for many distance education nursing programs.

The students' independence, in its truest form, means that the distance learners have the freedom to choose and determine the learning objectives, learning activities and methods of evaluation (Garrison & Baynton, 1987). Some distance education programs offer this type of format to distance learners. However, other programs, like many distance education nursing programs, have predetermined learning objectives, learning activities and methods of evaluation. In this sense, the level of the distance learners' independence is already set and increasing independence is not an option. Therefore, it is not likely that distance education nursing programs increase the distance learners' independence in order to compensate for lowered perceived support.

Like independence, it is not likely that distance education nursing programs increase the distance learners' competence in order to compensate for lowered perceived support. Competence refers to the distance learners' knowledge, skills, experience, and attitudes which students bring to the learning situation. Competence also refers to the distance learners' capacity for learning and ability to assume responsibility for learning (Baynton, 1992). The distance
learners are the source and controllers of competence. In this sense, distance education nursing programs have little influence over this dimension of control.

Since the level of independence is often at a set level, and competence is controlled by the students, support is the only dimension of control which can be manipulated by distance education nursing programs. Moreover, students' support should be increased in order to achieve the balance of control and to facilitate the students' success. However, this study's findings did not indicate that the distance learners' perceived support was increased. Rather, this study's findings were that the distance learners' perceived support was diminished.

In view of this, it is important to examine areas where perceived support for the on-campus and off-campus groups differed. Support in this study was divided into teacher support (in-class and out-of-class) and resource support (in-class and out-of-class). These divisions serve for a basis for discussion.

In-Class Teacher Support

At the .05 level of significance, the off-campus students' level of perceived support was significantly lower than the on-campus students in this support subscale (p= .000). Moreover, the off-campus students' responses were significantly lower on all of the questions. The question which dealt with the students' ability to hear the comments and questions of other students elicited a mean response of less than three from the off-campus students.
A possible explanation for these findings may be that in distance education, teachers are often responsible for running the technical delivery system in addition to leading class discussion and answering student's questions. If the instructor is not adept at running the system, student participation may be stifled, especially for the off-campus students. Another possible explanation may be that even though the instructor has the knowledge to run the system smoothly, technical difficulties may prevent the off-campus students from hearing clearly what is being said.

**Out-of-Class Teacher Support**

At the .05 level of significance, the off-campus students' perceived support was significantly lower in the out-of-class teacher support subscale also \( p = .000 \). There were only two questions in this subscale and both of the questions elicited a mean score of less than three from the off-campus students. One question pertained to how easy it was for the student to access the teacher at times other than during class. The other question referred to how often the student talked with the teacher at times other than during class.

The findings in this subscale seem to support Endo and Harpel's (1982) study of on-campus students which dealt with the effects of student-faculty interaction. The study's findings were that the frequency and quality of student-faculty interaction had positive impacts on the student's personal, intellectual and academic outcomes.
Of interest in the Endo and Harpel (1982) study was that student-faculty interaction was divided into formal interaction and informal interaction. This differentiation may provide an explanation for the findings in this subscale. The distance learners have the ability to access the instructor by telephone to ask questions. However, because of the physical distance, the distance learners may have less opportunity to carry on casual conversations with the instructor and less opportunity to establish a positive working rapport with the instructor.

**In-Class Resource Support**

At the .05 significance level the off-campus student's perceived support was lower in this subscale also \( (p = .001) \). Additionally, the off-campus students' scores were significantly lower on all of the questions except the question which dealt with the students' ability to see overheads. The questions which showed significant differences in the two groups dealt with the students' ability to hear and see videos, and the ease of access to class handouts, study guides and test scores. These findings are supportive of Garrison and Baynton's (1987) theory of control which maintains that unavailability and inaccessibility of resources decrease the degree of control the distance learners have in the learning process.

The off-campus students' response to the question that dealt with the student's ability to hear and see videos may be due to technical difficulties. It is possible that a disruption in the flow of information to the distance site
classrooms contributes to lowered perceived support for the off-campus students.

A possible explanation for the questions that dealt with the student's access to handouts, study guides and test scores may be that distance education programs often rely on the postal service to send written materials to the off-campus students. It may be, however, that written materials are not sent directly to the student but are instead sent to a secretary or another third party at the distance site. Owing to this, the off-campus students may not receive materials at the same time as the on-campus students. Or, in some instances the off-campus students may not receive the materials at all. In this sense, the "logistics" of distribution of materials in distance education may contribute to lower perceptions of support.

Out-of-Class Resource Support

At the .05 significance level, the overall scores were significantly lower for the off-campus groups on this subscale as well (p = .001). However, a closer examination of the subscale by individual items revealed that half of the questions showed differences for the two groups while half did not. The questions where no significant differences were found related to ease of paying tuition, buying uniforms, obtaining financial aid, accessing support courses and the adequacy of access to library facilities and professional journals. The areas where significant differences existed for the two groups were orientation,
counselors, advisors, registration, availability of nursing skills videos, the availability/adequacy of the BBS and access to a computer.

The difference in mean scores for the on-campus and off-campus groups in regard to orientation may indicate that the off-campus students need more than the general information routinely given to students upon entering the program. The difference in scores for the two groups in regard to counselors and advisors may be due to the fact that distance learners often obtain required support courses from other institutions. Counselors and advisors from the on-campus site may be less familiar with support courses offered at other institutions.

Additionally, the study’s findings regarding registration may indicate that registration could be a frustrating experience for the off-campus students. Since the off-campus students often access support courses at other institutions, the students may need to register at two institutions. The two institutions may have different starting days, vacation times and final test schedules. This confusion may add to the off-campus students’ lowered perceptions of support.

The lack of availability of nursing skills videos also elicited a mean score of less than three from the off-campus students. The lack of videos for each of the distance sites may be a problem for many distance education programs.

The distance learners also scored availability of a computer to complete assignments lower than the on-campus students. This may be due to the fact
that the on-campus students often have access to the institution's computer labs whereas the distance learners may have a limited number of computers to use.

Other

Additionally, the off-campus students showed significantly lower perceptions on question 29 (p = .000) and 30 (p = .000). Question 29 (off-campus mean = 3.37) dealt with the student's feelings of being supported by the college in their efforts to complete the nursing program. Question 30 (off-campus mean = 2.62) related to the support the student receives being equal to that of students at the other two campuses. This demonstrates that the distance learners' perceptions of overall support are significantly less than the on-campus students.

Implications for Distance Education Nursing Programs

The study demonstrates that both teacher support and resource support are important considerations for distance education programs. Teachers seem to have a critical role in students' perceptions of support. Of the eight questions which elicited mean responses of less than three from the off-campus students, two dealt with accessibility/availability of teachers other than during class. Garrison & Baynton (1987) maintained that the degree of control experienced by a student is heavily dependent upon communication between the teacher
and the student. Communication is affected by several variables including form, quality, immediacy and frequency.

The physical distance separating the teacher and the off-campus students may mean that the distance learners are at a particular disadvantage regarding frequency of communication. This view supports the theory of control which holds that decreased availability/accessibility to the teacher decreases support because the student loses control over the frequency of contact with the teacher (Garrison & Baynton, 1987).

Teachers are in prime positions to increase the perceived support for off-campus students by making themselves more available. Increased availability of teachers might be achieved by ensuring that the off-campus students are aware of the teachers' office hours. Moreover, office hours set aside specifically for the distance learners may be helpful. Additionally, it may be beneficial for teachers to periodically travel to the distance sites to provide increased opportunity for informal communication with the off-campus students.

Immediacy of communication is another area of consideration for distance education programs. In this study, the adequacy of the Bulletin Board System in obtaining answers to questions rated a mean score of less than three from the off-campus students. Careful planning must be done to ensure that distance learners have the ability to obtain feedback in a timely manner.

The study indicated that adequate orientation for the distance learners was a problem. Although not well defined in the theory of control, adequate
orientation is likely what Garrison & Baynton (1987) termed "quality" of communication. To ensure quality of communication for the distance learners, orientation for the off-campus may need to not only include routine information which is given to all of the students. Adequate orientation may also need to include information specific to the distance learners such as how to access available support and areas of support where difficulties may be encountered.

To further ensure quality of communication, teachers who are involved with distance education classes need to be adept at running the technical equipment smoothly. It may be helpful if technicians were available to run the "mechanics" of the delivery system, thus freeing the teacher to concentrate on the communication process i.e. class content and discussion. Special effort may be required from instructors to ensure that the off-campus students realize that communication from the student is valued.

The study indicated that technical difficulties may be another contributing factor in the off-campus students' decreased perceived support. The theory of control maintains that special attention should be given to the use of technology in the distance education process. More specifically, the limitations of the system should be taken into consideration in the attempt to form a "flexible, interdependent and mutually satisfying learning environment" (Garrison & Baynton, 1987, p. 13).

The technical delivery system in any distance education program should be evaluated to ensure that the communication needs of both the instructors
and the students are met. The delivery system must be free from technical difficulties to ensure that all communications are seen and heard equally at all sites.

Special effort may also be needed to ensure that the distance learners have adequate access to resources such as textbooks, support courses, nursing skills videos and library materials. Also, instructors may need to plan for enough "lead time" to ensure that written materials reach the distance students by classtime. This viewpoint supports the theory of control which states that the accessibility of resources has a large impact on the potential degree of control the distance learners have in the learning process (Garrison & Baynton, 1987).

Limitations

Although the sample of the study was of sufficient size and the response rate was 94.0%, the following factors should be considered:

1. The study's findings cannot be readily generalized to other populations since a non-random convenience sample was used.

2. The questionnaire was designed specifically for the study of the support offered by one college.

3. The questionnaire measured perceived support rather than actual support.
4. The questionnaire was designed to measure support related to academics rather than other sources of support.

Recommendations for Further Study

Distance education is an increasingly attractive way to reach students who are at a distance, especially in a rural state like Montana. However, in view of the paucity of published studies, the results of this study indicate that more research is needed on the support of distance learners.

This study concentrated on the comparison of on-campus and off-campus students' perceptions of institutional support. However, owing to the important role that teachers may play in offering support, teacher's attitudes towards distance education is an area that should be explored.

Additionally, an investigation to determine if there is any link between students' perceptions of institutional support and grades may shed light on the role that institutional support plays in academic success. Finally, a study to determine if a relationship exists between institutional support and professional socialization may be especially pertinent for distance education nursing programs.
LIST OF REFERENCES
REFERENCES


Sweet, R. (1986). Student drop-out in distance education: An application of Tinto's model. Distance Education 7(2), 201-213.


APPENDICES
APPENDIX A
QUESTIONNAIRE
INSTITUTIONAL SUPPORT OF ON-CAMPUS AND OFF-CAMPUS STUDENTS
INSTRUCTIONS:

The purpose of this study is to measure your perceptions of the support you receive during your educational experience. When answering questions, please make your judgements based on what these things mean to you. This questionnaire is anonymous. Please do not use your name on it in any way. The return of this questionnaire constitutes your informed consent. Thank you for your cooperation.

HERE IS HOW TO USE THIS SCALE:

Please put only one answer for each question.

<table>
<thead>
<tr>
<th>STRONGLY AGREE</th>
<th>AGREE</th>
<th>SOMEWHAT AGREE</th>
<th>SOMEWHAT DISAGREE</th>
<th>DISAGREE</th>
<th>STRONGLY DISAGREE</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

PLACE A MARK (X) ON THE LINE UNDER THE STATEMENT (from strongly agree to strongly disagree) THAT BEST DESCRIBES YOUR RESPONSE TO THE QUESTION. DO NOT LEAVE QUESTIONS BLANK. TRUTHFUL ANSWERS ARE IMPORTANT TO THIS STUDY. THERE ARE NO RIGHT OR WRONG ANSWERS.

PLEASE ANSWER EACH OF THE FOLLOWING QUESTIONS AS IT RELATES TO YOUR FEELINGS ABOUT THE SUPPORT YOU RECEIVE FROM MILES COMMUNITY COLLEGE.

INSTITUTIONAL SUPPORT

SECTION I: TEACHER SUPPORT

A. IN-CLASS

1. I can consistently hear the teacher during class time. _____  _____  _____  _____  _____

2. It is often difficult to see the instructor during class time. _____  _____  _____  _____  _____

3. I can easily ask questions during class time. _____  _____  _____  _____  _____

4. It is often difficult for me to hear the comments and questions of other students during class time. _____  _____  _____  _____  _____

Please continue on to the next page...
A. IN-CLASS continued-

5. If I desire, I can easily participate in class discussions. __________ __________ __________ __________ __________ __________

B. OUT-OF-CLASS

6. It is difficult for me to access the teacher at times other than during class. __________ __________ __________ __________ __________ __________

7. I often talk with the teacher at times other than during class. __________ __________ __________ __________ __________ __________

SECTION II: RESOURCE SUPPORT

A. IN-CLASS

8. I find it difficult to hear the videos that are used during class. __________ __________ __________ __________ __________ __________

9. It is easy for me to see the videos which are used during class time. __________ __________ __________ __________ __________ __________

10. I find it difficult to see overheads that are used during class time. __________ __________ __________ __________ __________ __________

11. It is easy for me to obtain in-class handouts. __________ __________ __________ __________ __________ __________

12. If the teacher makes out a study guide for a test, I find it difficult to obtain a copy. __________ __________ __________ __________ __________ __________

13. It is easy for me to find out my test scores. __________ __________ __________ __________ __________ __________

Please continue on to the next page...
### A. IN-CLASS

<table>
<thead>
<tr>
<th></th>
<th>STRONGLY AGREE</th>
<th>AGREE</th>
<th>SOMEWHAT AGREE</th>
<th>SOMEWHAT DISAGREE</th>
<th>DISAGREE</th>
<th>STRONGLY DISAGREE</th>
</tr>
</thead>
<tbody>
<tr>
<td>14.</td>
<td>It was difficult for me to obtain the textbooks that I need for this course.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### B. OUT-OF-CLASS

15. I feel I received sufficient orientation to all aspects of the nursing program.  
16. It is difficult for me to access a counselor for any personal problems I may encounter.  
17. I feel an advisor is readily available in order for me to obtain advice about classes.  
18. It was difficult for me to register for nursing classes.  
19. Paying tuition is a relatively easy process.  
20. Student nurse uniforms are readily available if I need to purchase one.  
21. It is difficult for me to access assistance in obtaining financial aid.  
22. It is easy for me to access all of the classes I need to complete the nursing program.  
23. It is difficult for me to access library materials in order to complete nursing assignments.  

Please continue on to the next page...
B. OUT-OF-CLASS continued-

24. If there are required readings in professional journals, I find the articles are readily accessible. _______ _______ _______ _______ _______

25. I find there are very few nursing skills videos available in the library. _______ _______ _______ _______ _______

26. The Pioneer bulletin board system is readily available if I need to use it for communication purposes. _______ _______ _______ _______ _______

27. The Pioneer bulletin board system is a good way to obtain answers to my questions. _______ _______ _______ _______ _______

28. It is difficult for me to access a computer in order to complete assignments. _______ _______ _______ _______ _______

SECTION III: OTHER

29. Overall, I feel supported by the MCC college in my efforts to complete the nursing program. _______ _______ _______ _______ _______

30. I don't feel that the support I receive is equal to that of students at the other two campuses. _______ _______ _______ _______ _______
PLEASE ANSWER THE FOLLOWING QUESTIONS. CHECK THE APPROPRIATE
RESPONSES IF INDICATED.

AGE: ______

SEX: MALE ___
      FEMALE ___

MARITAL STATUS:
      SINGLE ___
      MARRIED ___
      WIDOWED ___
      DIVORCED ___

WHICH CAMPUS DO YOU CURRENTLY ATTEND?
      SIDNEY ___
      GLENDIVE ___
      MILES CITY ___

WHICH CLASS ARE YOU IN THE NURSING PROGRAM?
      FRESHMEN ___
      SOPHOMORE ___

ANY ADDITIONAL COMMENTS ON INSTITUTIONAL SUPPORT AND/OR DISTANCE
EDUCATION:

Please return this questionnaire to the designated student at your
site. Thank you for your assistance and cooperation!
APPENDIX B

COVER LETTER TO CLINICAL INSTRUCTORS
Dear (clinical instructor):

Enclosed are the questionnaires for my research study on institutional support in distance education. Also included is a self-addressed stamped envelope to be used for returning the completed questionnaires. As we talked about in our telephone conversation two weeks ago, I am requesting your assistance in distributing the questionnaires to the students on (date).

I will be "on-line" from the Miles City campus at the beginning of both the freshmen and sophomore lecture periods on that day at 1:00 P.M. and 2:00 P.M. respectively.

For your part, I am asking that you bring the questionnaires and the return manila envelope to the (freshmen or sophomore) class at your site on (date and time). At that time, I will ask you to distribute the questionnaires, leave the envelope at the front of the room and exit to ensure the students' privacy. A designated student volunteer will be responsible for collecting and mailing the questionnaires back to me.

If you have any questions or concerns, please get in touch. I will be sending a copy of my study to your site after final grades are issued in May. My sincere thanks ahead of time for your cooperation and assistance in my thesis research.

Sincerely,

Kathleen K. Wankel
APPENDIX C

COVER STATEMENT FOR QUESTIONNAIRE
Today I am asking that you fill out a short questionnaire that should take about 15 minutes to complete. The questionnaire deals with institutional support. By "institutional support" I mean the things that Miles Community College (MCC) does to help you achieve your educational goals.

Because you are the students with a working knowledge of distance education and institutional support, you have valuable insights that can help make the MCC nursing program better. A benefit to participating in this survey is that you will be contributing to research. The results of this survey will be useful for the MCC Nursing Program as well as distance education programs at other schools. The risks for you participating in this study are minimal other than the amount of time it will take to complete the questionnaire, or that you may find some of the statements uncomfortable.

The questionnaire is divided into the following areas: 1) demographic data 2) in-class teacher support 3) out-of-class teacher support 4) in-class resource support 5) out-of-class resource support and 6) other. The questionnaire contains positive and negative statements. I am asking that you mark, with an "X", the degree to which you agree or disagree with the statement. Please answer all of the questions. There are no right or wrong answers. It is your opinion that is important. Please mark only one spot for each statement.

Your participation in this study is totally voluntary. Participation or non-participation will in no way affect your grade. Returning a completed questionnaire implies your consent to participate. If you choose not to participate simply return the questionnaire unanswered. I will need a volunteer from each site who will be responsible for collecting and mailing the questionnaires back in the self-addressed stamped manilla envelope. The student volunteer from the Miles City campus will need to seal the envelope and return it directly to me after class.

Your answers are completely anonymous and confidential. The questionnaires are identified by an identification number only. PLEASE DO NOT PUT YOUR NAME ON THE QUESTIONNAIRE IN ANY FORM. The completed questionnaires will be held in a locked secure place at the Montana State University in Bozeman for five years. Final results of the questionnaires will be available to the MCC administration after final grades are issued Spring Semester. A copy of the results will be available at each of the sites at that time. Are there any questions? Thank you for your time and cooperation.
APPENDIX D

APPROVAL FOR STUDY AT M.C.C.
December 13, 1993

Mrs. Kathy Wankel
MCC, Division of Nursing
2715 Dickinson St.
Miles City, Mt. 59301

re: Distance Learning Questionnaire

Dear Mrs. Wankel,

I have discussed your request to implement a questionnaire with the distance learners in the nursing classes at the Miles City, Glendive and Sidney sites with Dr. Judson H. Flower, President of MCC. We have received your proposal with enthusiasm. Since there is not a formal ethics committee for research purposes in our institution, which is appropriate to the community college mission, administrative approval is all that is required for implementation of a project such as yours.

Dr. Flower and I both agree that this is an appropriate and meaningful project and that approval is granted for implementation. We encourage you to disseminate the results institutionally in order that we may use the information to continue to improve the applications of distance education at MCC.

If you are required by MSU to review this proposal with the ethics committee, we will abide by whatever requirements they may deem necessary.

Sincerely,

Laura Lenau, RN, MS
Chair, Division of Nursing
and Allied Health Programs

cc: JF
APPENDIX E

M.S.U. COLLEGE OF NURSING

HUMAN SUBJECTS REVIEW COMMITTEE APPROVAL
November 9, 1994

Ms. Kathleen K. Wanel, RN
P.O. Box 175
Angela, MT 59312

Dear Ms. Wanel:

Your research proposal, “Institutional Support of On-Campus and Off-Campus Nursing Students”, was reviewed and approved for protection of human subjects on October 31, 1994. You are now able to proceed with your data collection.

All consent forms will be secured and held in a locked file in this office for five years. Best wishes for a successful study.

Sincerely,

Kathleen H. Chafey, PhD, RN
Associate Dean (Acting)

KHC/it