

A STUDY OF THE ATTITUDES OF EIGHTY-EIGHT NURSE
EDUCATORS TOWARD TELEVISED INSTRUCTION

by

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e. s. b. m.

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CHAPTER I

INTRODUCTION

Introduction to the Problem

Of the myriad problems facing schools of nursing, two appear to be of primary concern: (1) increasing numbers of students are being admitted to basic programs and (2) instructors for these students are in short supply. (42, 11) Moreover, as Brong points out the instructors who are available too often do not even meet the minimum qualifications for faculty appointment. (7)

There are no easy solutions to the problem of alleviating the shortage of qualified faculty members for schools of nursing. No doubt, the current practice of offering traineeships to nurses who wish to prepare for teaching careers will help to some extent. Schools of nursing also would do well to examine their courses with a view toward eliminating unnecessary units for the purpose of making better use of each faculty member's time. Yet another possible solution to the teacher shortage is for schools of nursing to take advantage of the various labor-saving instructional tools now available for use.

As of the present, the labor-saving instructional tool with the

greatest potential for alleviating the instructor shortage in schools of nursing is probably closed-circuit television. Using this method, an instructor can reach an unlimited number of students either gathered together or distributed throughout various rooms. In addition, several schools of nursing can also be linked together by coaxial cable, further increasing the number of students an instructor can teach via closed-circuit television.

The usefulness of closed-circuit television as a means of alleviating the instructor shortage can be further enhanced by the videotape recorder. Brought to a high degree of perfection during the past ten years, this device allows for a given television presentation to be permanently recorded on videotape for playback at a later time. In this manner, the best lectures or demonstrations given by the most qualified instructors can be used repeatedly until dated. Moreover, as Belcher states, the best videotapes can be stored in regional centers and drawn upon for use by many schools. (4)

Of course, closed-circuit television is more than a device which may contribute to the alleviation of the teacher shortage. Actually, even if there were no such shortage, closed-circuit television would still be a valuable instructional tool. Among other things, if a sufficient number of monitors are used, each student in a class can be provided with an unobstructed view of a demonstration when presented on television. Closed-circuit television is capable of

bringing to the students that subject matter which is frequently unobtainable, or transitory in nature, such as surgical interventions or the process of birth. In the latter connection, Liberman states that "television is rivaled only by the motion picture in being able to get on-the-spot coverage and to transmit the scene to a mass audience." (29)

The instructional potentialities of closed-circuit television, both as a means of alleviating the teacher shortage and of improving the general quality of the instructional process, has already been recognized by various schools of nursing. At the Ohio State University, units taught by closed-circuit television have included the principles of aseptic technique, catheterization, and the administration of medications. (11) The faculty at Mercy Hospital in Pittsburgh has used closed-circuit television to demonstrate the procedures for bed making, bed baths, and assisting the physician during physical examinations. (24) At the University of Wisconsin, the entire course in "Fundamentals of Nursing" has been offered on closed-circuit television with the classroom instructor serving mainly in a supplementary role. (42)

Other schools of nursing which have made use of closed-circuit television include the University of Michigan, the University of North Carolina, the University of Mississippi, and St. Petersburg Junior College. (34, 33, 22, 24)

Purpose of the Study

The primary purpose of the study was to identify and to analyze what the instructors in schools of nursing perceive to be the advantages and the limitations of closed-circuit television when used as a teaching tool.

It was proposed to assess the relationship(s) of four pre-determined background variables to:

1. The attitudes of nurse educators toward potential advantages of closed-circuit television instruction.
2. The attitudes of nurse educators toward potential limitations of closed-circuit television instruction.

The variables thought to be significant were: (1) type of education program in which teaching occurs, (2) most advanced degree held, (3) years of teaching experience, and (4) present teaching assignment.

It was hypothesized that:

1. Nurse educators ordered according to type of education program in which teaching occurs show no differences with regard to their attitudes toward the potential advantages of instruction via closed-circuit television.
2. Nurse educators ordered according to type of education program in which teaching occurs show no differences with regard to their attitudes toward the potential limitations of instruction via closed-circuit television.
3. Nurse educators ordered according to most advanced degree held show no differences with regard to their attitudes toward the potential advantages of instruction via closed-circuit television.

4. Nurse educators ordered according to most advanced degree held show no differences with regard to their attitudes toward the potential limitations of instruction via closed-circuit television.
5. Nurse educators ordered according to years of teaching experience show no differences with regard to their attitudes toward the potential advantages of instruction via closed-circuit television.
6. Nurse educators ordered according to years of teaching experience show no differences with regard to their attitudes toward the potential limitations of instruction via closed-circuit television.
7. Nurse educators ordered according to teaching assignments show no differences with regard to their attitudes toward the potential advantages of instruction via closed-circuit television.
8. Nurse educators ordered according to teaching assignments show no differences with regard to their attitudes toward the potential limitations of instruction via closed-circuit television.

In addition to the above hypotheses, the study attempted to answer the following questions:

1. Would nurse educators be willing to teach their own courses via closed-circuit television?
2. To what extent are nurse educators interested in each of five different uses which can be made of closed-circuit television?
3. What do nurse educators perceive to be the potential advantages of a regional videotape exchange center?
4. What do nurse educators perceive to be the potential limitations of a regional videotape exchange center?

Justification of the Study

According to Belcher, televised instruction is most likely to be introduced and used in a school of nursing where the faculty members know about its appropriate functions, are convinced of its value, and are committed to the use of televised instruction. (4)

Erickson (17) points out that when faculty members in institutions of higher learning are not committed to the use of televised instruction, they can, by raising an eyebrow or by making a casual derogatory remark, destroy the effectiveness of the television lesson. "Actually," Erickson states, "the negative attitude of the classroom teacher can destroy the effectiveness of a whole course of televised instruction."

Carpenter states that "the introduction of closed-circuit television, however effective, appropriate, and justifiable, may fail or succeed depending on the attitudes of the faculty." (9) Therefore, he argues, relevant issues and arguments regarding acceptability of this method should be defined and measured. Then, to the extent that these factors are related to reasoned considerations and relevant evidence, it should be possible to resolve the issues. In contrast, Carpenter concludes, "irrational reactions are difficult to modify and hence may have to be tolerated as a part of the price paid for introducing changes into conventional educational institutions."

It is further suggested by Carpenter that attitudinal measurements of the type he suggests must be undertaken separately for each of the professional fields, of which nursing education, of course, is an important one. (9)

Steps of the Study

Steps in the development of the study were as follows:

1. A review of the literature on the use of closed-circuit televised instruction in schools of nursing and in related fields was made.
2. The problem was identified, and the purposes of the study formulated.
3. A questionnaire was constructed for the study, with the primary emphasis being on a list of advantages and limitations of closed-circuit television to be judged by the selected respondents (Part II and III). These two sections of the questionnaire were adapted from a study conducted by Carpenter over several years, with the results obtained in his study generally showing a high degree of reliability. (9)
The various other sections of the questionnaire were designed to elicit information consistent with the purposes of the study.
4. Fifty-four schools of nursing in Region IV were invited to

participate in the study (Appendix B). Twelve of these schools did not respond even after a follow-up card was sent. Three of those responding were in the process of closing, and nine more indicated that they were not interested in participating in the study.

5. Thirty schools were sent the questionnaire during December, 1967 (Appendix A). In each of the schools, an attempt was made to get at least three instructors to complete the questionnaire.
6. A further attempt was made to have the questionnaires completed only by those instructors who had made little or no use of television in their own teaching. It was known that such instructors were in the overwhelming majority, and that any attempt to introduce TV into the mainstream of nursing education would have to be made through them.
7. The completed questionnaires were all returned by mail before March 1, 1968. Five schools did not respond even after a follow-up card was sent (Appendix B). The remaining 25 schools returned a total of 88 completed questionnaires.
8. The information on the completed questionnaires was analyzed, interpreted, and presented in this report.
9. The study was summarized, conclusions drawn, and recommendations made for further study.

Overview of the Study

Chapter I includes an introduction to the problem, a statement of the problem, the purposes of the study, and the steps in the development of the study.

A review of the current literature and related studies concerned with the use of televised instruction in schools of nursing and in certain related fields is presented in Chapter II. Chapter III contains the methodology and findings of the study. Included in this chapter are an introduction, development of the questionnaire, selection of the sample, steps in the collection of data, and a report of the findings.

A summary, conclusions, and recommendations for further study are included in Chapter IV of this report.

CHAPTER II

SURVEY OF RELATED LITERATURE

Background Factors

According to Gordon (20), closed-circuit television is being used for instructional purposes by 400-500 colleges and universities in the United States. In addition, it is being used in many other college-level educational programs, such as those developed by the Armed Forces, medical schools, dental schools, nursing schools and teaching hospitals.

The spread of closed-circuit television on the college level has been accompanied by an ever-increasing body of literature. Along with reporting on how television may be used for purposes of instruction, much of the literature also is concerned with the results of research studies. In this chapter, the literature will be considered as it pertains to the use of closed-circuit instructional television in connection with (1) the Armed Forces, (2) general institutions of higher learning, (3) medical and dental schools, (4) teaching hospitals and (5) schools of nursing.

The Use of Television by the Armed Forces

The Armed Forces have made a considerable number of studies on the use of closed-circuit television. The most significant of these were conducted by Desiderato and others (10), and Kanner (28), and Runyon (38) during 1954 and 1955. In these studies, about 12,000 basic trainees were used in experiments which compared television teaching with conventional instruction. The investigators found that TV instruction was (1) equally as effective as conventional instruction, (2) more effective for lower-aptitude groups, and (3) retained in memory as well as conventional or regular instruction.

In studies conducted by Rock (37) in the U. S. Navy, it was discovered that the least effective type of program was drama without narration.

Other studies for the Armed Forces were conducted by Boehm (6), Allen (1) and Frank (19), and in all cases it was found that TV instruction was at least as effective as regular classroom instruction in the teaching of military-training subjects.

The Use of Television in Institutions of Higher Education

Institutions of higher education have done considerable experimenting with television as a means of instructing students in such subjects as psychology, chemistry, philosophy and history. The

pressure to conduct such experimentation has come in part from administrators, who are constantly facing the problems of an acute shortage of qualified instructors or lack of financing to staff classes. Additionally, colleges and universities harbor researchers in psychology and education who are interested in testing hypotheses concerned with new means of instructing students.

Findings from experiments with television conducted in institutions of higher education are especially pertinent for schools of nursing, which in themselves may be associated with a college or university.

Television Compared with Conventional Classes

In 1954, the Pennsylvania State University received a grant from the Ford Foundation to study the effectiveness of regular courses taught for a full semester over closed-circuit television as compared with the same instruction taught in the usual manner in so-called conventional classes. With the funds provided by the Ford Foundation, a program of research was initiated on the courses in General Chemistry, General Psychology and Psychology of Marriage. Three years later, the research program was expanded to (1) extend the project to other courses; (2) study instructional variables; and (3) work on ways of improving instruction via television.

The results from the Pennsylvania State University study

suggest that televised instruction is about as effective as face-to-face instruction. For example, in the chemistry course the differences between the TV and conventional methods were not significant. In the psychology course, the conventional classes did prove to be slightly superior to the television class, but the superiority was not exceedingly significant. (9)

Macomber and Siegel (30), in another major project, compared closed-circuit televised instruction with both large lecture classes and small discussion classes at Miami University, and studied the possible differential effect of the various types of instruction upon students of different abilities and attitudes. Each method was used at its best, with professional directors available for the TV courses and audio-visual specialists assisting in both the television and other classes.

In the first phase of the experiment at Miami University, the main measure of achievement was the final examination in each course, and the TV classes held up well on this criterion. In fact, the television students scored higher than conventional classes in a human biology course. So-called "live teaching," however, tended to produce better results than TV teaching during the second year of telecasting. Results of third-year experiments were more favorable to television. In general, student ability did not make a difference in the relative effectiveness of television. Low-ability students in

Foundations of Human Behavior and Government did better in conventional classes than in television classes, but in physiology and zoology, the opposite was true.

Studies conducted at Purdue University by Seibert (39) suggested that television classes were significantly inferior to conventional classes for purposes of teaching students the art of composition. This held true even though television was used for only two of the three instruction periods per week, and the students were given a good deal of practice in writing themes.

In contrast, studies conducted at Iowa State College, and at the University of Houston (18) showed that TV instruction was as effective as conventional classroom instruction. Pasewark (35) also found TV groups did better than conventional groups in a course in typing, while Driscals (14) found that TV groups did better than conventional groups in a course on "Introduction to Education."

Factors Involved in the Effective Use of Television

Recognizing that instructor-student interaction is important, the researchers at Pennsylvania State University installed two-way microphones in certain receiving rooms, thus allowing students to ask questions of the instructors on the screen. (9) This approach did not appear to be more effective than one-way TV communication insofar as final test scores were concerned.

Television, however, can have certain advantages in promoting interaction. On many college campuses, students have few common educational experiences. Since their common experiences tend to involve social or athletic events, these are likely to be the usual topics of conversation. At Stephens College, therefore, a course on Ideas and Living Today was developed for presentation on closed-circuit TV. The format consisted of brief television lectures viewed by students in small faculty-led discussion groups. The course was scheduled just before lunch so that discussions would spill over into the dining halls. (41)

It is sometimes argued that television increases student identification with the instructor; that it helps him to feel closer to the instructor because he can observe facial expressions and eye movements not clearly observable in a large lecture hall. Although this may be true, it is interesting to note that the television students at Pennsylvania State did not often come in to talk with their instructors out of class.

Interestingly, it is difficult to prove the value of visual aids in the television presentation. Both at Pennsylvania State University and at New York University, adapting a course for TV by adding supplementary visual aids did not prove to be more effective than televised lecture-blackboard presentations. This result is in part explained by the fact that the criterion for judging the relative

effectiveness of TV and conventional classes is usually based on a verbal-content test. It is, however, also possible that poor visual aids may have been selected for use on TV. Yet another possibility is that visual relationships are not significant factors in many fields.

The Pennsylvania State University study does suggest that television's effectiveness may lie in giving the students a good view. (9) Students who had three weeks of instruction were given a choice of finishing the course in TV classrooms or of moving to the originating room. The students who chose television were predominantly those who would have been given a rear seat if they moved to the originating room (or lecture hall).

Attitudes of Students and Faculty Toward TV

At Pennsylvania State University, students were asked to rate the amount of learning which they felt they had received from televised and classroom instruction. (9) In general, the students rated the amount of learning the same for both types of instruction, although students in a non-TV class rated psychology as a subject higher than did TV students. Continued measurement of student attitudes toward TV at Pennsylvania State University over a period of seven years indicates a gradual change toward a higher level of acceptance.

At Miami University, only two student attitude comparisons in ten were favorable to TV, and only one of these was significant. In

contrast, three comparisons were significant in the direction of classroom teaching. (30)

Students in five Oregon colleges and universities felt that their televised chemistry course was in general superior to classroom instruction in stimulating their learning, but that a course in literature was about the same in that respect as classroom teaching. (40)

At San Francisco State College, both classroom-TV and home-TV students were asked whether they preferred TV or non-TV sections of three courses. (13) In general, the home-TV group was more favorably inclined toward the TV medium than the students residing on campus.

Studies in four Oregon universities and colleges suggest that there was considerable resistance to televised instruction by individual professors. In spite of their resistance, however, faculty attitudes were more favorable than unfavorable. For example, only a very small percentage of the instructors stated that TV definitely should not be used for instruction, and less than 20 percent felt the medium was a "rather poor approach" to be used in limited situations. Over 40 percent of the faculty in each of the four colleges and universities stated that TV was a "pretty good approach" and should have some use. (40)

Instructors at Pennsylvania State University were asked by researchers how they would feel about regularly teaching courses by

closed-circuit television. Slightly over 50 percent of the instructors stated that they would have no strong objections to going on TV, and less than 10 percent said they would "dislike it very much."

The researchers at Pennsylvania State University (9) also attempted to get statements which described in fairly specific terms the beliefs of faculty members who had not taught on TV about the advantages and limitations of televised instruction. Among the reasons given by the instructors in favor of TV were that it would result in better instruction for more students, eliminate large classes, offer teachers a challenge, provide for good close-ups, and save time and expense. Among the limitations given were that screens were too small, too much preparation would be required, and less attention would be given to individual student needs. In general, the main reservation in the statements relates to lack of student-teacher interaction when TV is used.

The statements referred to above were collected by Carpenter under the direction and guidance of Lester A. Guest, a specialist in public opinion survey techniques. Every attempt was made to insure anonymity of replies, and to avoid any biases which might be introduced by those associated with the television project being conducted by Pennsylvania State University, and who presumably would be favorable toward the use of TV. Collected over a two-year period (1955-56 and 1956-57), the results obtained were highly consistent

from year to year. With few exceptions, the advantages and limitations mentioned most often by faculty members in 1955-56 were also mentioned by them most frequently in 1956-57. Conversely, the advantages and limitations mentioned least often in 1955-56 were also least mentioned in the next year.

The Use of Television in Medical and Dental Education

Woolsey et al. (43) reported on the use being made of televised instruction in five medical schools. At Temple University School of Medicine, TV was used as an extension of a fluoroscopic image amplifier. The School of Medicine of Louisiana State University used television to show laboratory demonstrations on animals. At Kansas University Medical Center, television was used as an aid in achieving motivation toward clinical medicine in freshmen separated geographically from the hospital and clinical facility. At the University of Chicago, School of Medicine, television has allowed for demonstrations in surgery being done with less disturbance to the operating room routine and with superior visibility and accommodation of greater numbers of students. The Albany Medical College of Union University has also made use of TV to enlarge the field involved in surgical operations.

The Medical School of the University of Michigan has made extensive use of closed-circuit television. The Department of

Obstetrics and Gynecology, for example, has used television as a means of demonstrating gynecological surgery, and, according to Gosling (21) the field of vision available to the TV audience has been fully as good as that available to the surgeon himself. Similarly, TV has been used to bring demonstrations of delivery room techniques into the classroom without major interruption of the teaching schedules.

Judge (27) states that the quality of magnification turned out to be the most valuable advantage of television when used by the University of Michigan Medical Center in the medical-dental-nursing program. Because of the magnification factor, high levels of realism can be attained. Thus the instructor no longer needs to project a diagram or a picture of a tonometer, gastroscope, or spirometer, but rather, can demonstrate the instruments themselves in every detail on the television screen directly, and, in addition, demonstrate its use directly. Moreover, by means of fiberoptic devices, it is possible to broadcast an endoscope image with almost perfect fidelity.

In clinical demonstrations, Judge (27) continues, TV preserves a sense of privacy for the patient. The examining room atmosphere created in a professional studio is less embarrassing than a classroom setting. Still another advantage of TV is its versatility. Through this flexible funnel, the instructors at the University of Michigan Medical Center were able to pour a rapid succession of visual aids without distracting the attention of their audience. They

could move rapidly from patient to slide to model; from chart to x-ray film to a clip of a motion picture film; from a heart lung preparation to the data recorder.

Robertson (36) reports on the use of broadcast television to foster the continuing education of the physician. With the support of the Bingham Associates Fund, a philanthropic organization with headquarters at Boston's Tufts-New England Medical Center, 12 medical programs directed toward the general practitioner were presented over the Maine Educational Television network. Each program was one-half hour long, followed by a ten-minute question-and-answer period using questions submitted in advance by Maine physicians. Reactions from the audience were in general favorable. The same series was presented later in Massachusetts.

The Use of Televised Instruction Within the Hospital Setting

Extensive use of closed-circuit TV has been made by the Nebraska Psychiatric Institute, a teaching, service and research hospital on the campus of the University of Nebraska College of Medicine, and the Norfolk State Hospital, a 1,100-bed mental hospital located 112 miles from the medical center. (26)

Through means of two-way closed-circuit TV equipment, the Psychiatric Institute and the Norfolk State Hospital are linked together. Programs can be originated at either location, and seen

simultaneously at both the Institute and the hospital. A videotape recorder at the Institute plays back recorded material to groups at both locations, and the tape can be stopped at any time for group discussion of significant points. In effect, the two-way TV system provides for "face-to-face" communication between the two institutions 24 hours a day, every day.

According to Benschoter (5) the two-way TV system has been used to provide in-service education for the social service, nursing, and vocational rehabilitation staffs. With staffs at both institutions in attendance, programs have dealt with such topics as depression, schizophrenia, personality disorders and the adolescent psychiatric patient. Sometimes, three to five programs have been devoted to a single topic. A program on chemotherapy was done by the two hospitals jointly; it included a talk by a biochemist on the staff of the Nebraska Psychiatric Institute, and a talk by a psychiatrist at Norfolk State Hospital.

Psychiatrists at the Nebraska Psychiatric Institute have also used two-way television to talk and work with the personnel in a given ward. The goals of the psychiatrists were to achieve better patient management by adequate medication and to change the attitudes and orientation of the ward personnel.

According to Hospital Topics (16), an extensive network linking together hospitals throughout the nation was to go into operation in

1966. The network is called "MTC" by Medical Communications, Inc., the privately-owned company which produced the programs. The purpose of the network was to transmit refresher courses, lectures, symposia, colloquia, and coverage on significant medical and nursing meetings, clinical and pathological conferences and medical news.

Unlike other proposed medical networks, MTC planned to carry commercials. These would be messages from ethical pharmaceutical companies on products of interest to the medical and nursing professions. Charter sponsors on the network are William S. Merrell Co., Cincinnati, and G. D. Searle and Company, Chicago. No further information regarding this project has been noted.

The Use of Television in Schools of Nursing

In 1956, Muller and Scholder (31) reported one of the early attempts to use televised instruction in the field of nursing education. These two psychiatric nurse educators reported on how the medium was used to present subject matter that could not be readily communicated by the written or spoken word, such as how verbal communications were modified by the tone of one's voice or by bodily mannerisms. In addition, they also reported on the use of the TV medium to demonstrate electroconvulsive therapy and neurological examinations.

It was not until the early 1960's, however, that the use of televised instruction in schools of nursing began on a relatively broader scale. In general, the leadership role in this area was taken by schools affiliated with colleges and universities, although some use of the medium has been made in diploma schools.

Experimentation by Individual Schools

At the University of Michigan, Okamoto and her colleagues (34) conducted an experiment to test the use of closed-circuit TV in teaching concepts on "interpersonal relations." The sophomore class was divided into three groups: an experimental group and two control groups. The control groups were taught by the "conventional" tools of role playing and discussion; the experimental group by television. The primary emphasis in all groups was on establishing rapport with a patient who had just been admitted to the hospital. The groups were selected at random, and a pre-test and a post-test on interpersonal relations were given to all students.

In general, Okamoto (34) reports, the test responses indicated that there was no significant difference in the ability of students in the experimental and control groups to establish desirable relationships with patients. It was admitted that there were many limitations to the type of study conducted; the primary one was in the test instrument itself. But subjective evaluations in observing students led to

the conclusion that television was "as efficient and as effective a teaching device as role playing and discussions in this particular situation."

At the University of Wisconsin School of Nursing, the faculty explored the use of videotape recordings in demonstrating nursing procedures in a course entitled "Fundamentals of Nursing." (42) More specifically, a study was conducted to determine whether or not procedures taught in "Fundamentals of Nursing" were learned by students as effectively through videotaped television demonstration as through conventional face-to-face demonstration.

Four nursing procedures were selected for study: (1) making the unoccupied bed, (2) taking vital signs, (3) bandaging, and (4) insertion of the nasal catheter. Demonstrations of these procedures were pre-recorded on videotapes to be played back by the University of Wisconsin's TV station, WHA-TV, according to a prearranged schedule. The televised lessons were received on three monitors with 21-inch screens using a closed-circuit system.

A skill test was administered to students in both the TV and face-to-face groups to determine how well they had mastered the four procedures. On the basis of the test results, it was concluded that there was no significant difference in favor of either of the methods, although a reliable measure of effectiveness had been used. To the researchers this meant that basic skills in nursing may be taught by

videotapes, and, thus, a course which usually had to be taught in small groups because close observation is necessary, could now be taught to larger groups of students without increasing the demands made on the faculty.

Griffin and his colleagues (23) report a rather ingenious use made of closed-circuit TV for teaching clinical nursing. Fixed focus television cameras were installed in patients' rooms where students would be learning nursing skills. The cameras were set to send both pictures and sound from the rooms to an instructor at a monitoring station. The instructor could then analyze how students in the rooms were performing and she was able to talk to the students on an inter-communications system.

The use of the fixed focus cameras to teach clinical nursing turned out to be highly successful and Griffin and his colleagues conclude that under optimum conditions the number of students that existing nursing faculties can teach might be more than doubled if closed-circuit television were generally employed for clinical instruction.

At the University of North Carolina, the School of Nursing has used television equipment borrowed from the School of Dentistry to test the students' observational abilities and knowledge of patient environment. (33) The Division of Nursing Education at St. Petersburg Junior College has a bank of videotapes in various manual skills. (24)

These tapes are available to the students, who can arrange for a special showing of them with or without the instructor present.

At the University of Mississippi School of Nursing, Jackson Campus, a student can arrange to make a videotape in which she is shown interacting with a psychiatric patient. (22) After a student has reviewed the tape, she is at liberty to ask anyone she feels can give her constructive criticism and suggestions to view the tape with her.

In a wide-ranging study, Hays (25) first identified the following five purposes for which television might be used in schools of nursing: (1) to assist the nurse educator to correlate medical theory with nursing care, (2) to assist the nurse educator in teaching principles and techniques of communication, (3) to correlate surgical procedures with nursing care, (4) to observe different clinical situations or agencies to increase total understanding of patient care and (5) to present scientific laboratory experiments.

Within each of the five broad categories of purpose, Hays next identified certain specific purposes. For example, within the first broad category, "to assist the nurse educator to correlate medical theory with nursing care," were such specific purposes as these: (1) to illustrate some of the rare clinical syndromes, (2) to demonstrate fluoroscopy and x-ray examinations, (3) to demonstrate a nursing procedure, and (4) to demonstrate a specific area deep in a body cavity at the moment of examination or treatment.

Hays then contacted 56 nurse educators who had used television to teach. Through means of a check-list submitted to, completed and returned by these nurse educators, Hays determined that the majority of respondents, 38 of the 56, had used television to correlate medical theory with nursing care. Within this broad category, there was a considerable range in the number of nurse educators who had used TV for a specific purpose. For example, 34 of the instructors had used TV to demonstrate a nursing procedure, while only two had used the medium to illustrate some of the rare clinical syndromes.

Twenty-two of the 56 respondents indicated that they had made use of closed-circuit TV to assist them in teaching the principles and techniques of communication, and approximately the same number had used the medium to correlate surgical procedures with nursing care. Only 12 of the 56 respondents had used closed-circuit television to observe different clinical situations, and an even smaller number, seven, had used the medium to present scientific laboratory experiments.

Cooperative Endeavors

Browne (8) points out that no institutions should be required to use anything but the best that television has to offer, but that many must do without television unless a way is found to supply first-rate instructional materials with a reasonable commitment of faculty time

and production money. What he then proposed is a pooling of the resources of several institutions to produce videotaped courses or units which all can use. Just such a cooperative project, with Browne as director, has been undertaken by the 60 institutions of higher education within the 16-state area served by the Southern Regional Educational Board.

The television project being undertaken by the SREB is based on the premise that if institutions are to share in the use of recorded materials, they must participate fully in the development of the materials. Their responsibility must begin with planning of the content, and then proceed through the production stages.

Meeting first in regional conferences, and then in follow-up planning sessions, faculty members representing various disciplines and professions as well as various institutions affiliated with the SREB have identified critical areas in which instructional television is needed, and have taken steps to develop course content. This cooperative activity is proceeding in the fields of nursing education, teacher education, communications, architecture, and psychiatric education.

There is much yet to be learned in developing this regional approach, Browne (8) points out. Pilot work must continue in devising means for handling the mechanics of interinstitutional effort--in actually producing, distributing, and storing the materials, and in

providing for their revision as needed. Toward this end, the SREB is establishing what might be called a "regional educational television center." It would be staffed with people knowledgeable about planning, producing and using television for instructional purposes. Later, research and high-level personnel training would become an integral part of the center's responsibility to the region.

In the Twin City area (St. Paul and Minneapolis), five diploma schools of nursing found it difficult to obtain instructors from local colleges and universities in such basic courses as psychology, anatomy, and communication. Consequently, these schools arranged for instructors in these various fields to teach their courses over KTCA-TV, an educational station that broadcasts signals over the air. Arrangements were also made for the TV instructors to hold biweekly meetings with the students in all but one of the schools.

Anderson (2) reports that the students taking the TV courses did as well as the matched control groups. For example, the students in the TV and control groups did equally as well on the National League for Nursing achievement examination in anatomy and physiology. The same result was obtained when the two groups were compared on the basis of the Psychological Corporation Nursing Achievement Test. In another test of comparison--the class mean--the television group in one school actually did better than the control group.

Attitudes of Faculty Members

The literature contains a number of statements in which reference is made to the attitudes of faculty members in schools of nursing toward instructional TV.

Okamoto (34), for example, states that the faculty at the University of Michigan School of Nursing was quite pleased with its experience in using closed-circuit TV to teach the personal aspects of the nurse-patient relationship. The instructors involved in the use of television found that the medium helped save time and was a valuable adjunct to their teaching.

In the Twin City experiment reported by Anderson (3), none of the instructors involved had taught by television previously. At first, they were apprehensive, but later, according to Anderson, they found that teaching on TV was challenging. They believed that television was likely to be used increasingly in higher education, and, therefore, they were interested in gaining experience with the medium. Of equal importance, they felt that teaching on television had already helped to improve their teaching in the college classroom--they had been forced to organize and prepare to a much greater extent than is generally true for conventional classroom teaching.

Griffin (23) reports that the instructors who participated in the experiment to teach clinical nursing with fixed focus cameras

generally were agreed that television is an excellent medium, and that "the benefits to be derived from this system of teaching should be made available to nursing education programs nationally. "

Dilley reports that the faculty in the School of Nursing at the Ohio State University has shown "tremendous enthusiasm" for televised instruction.

We have been able to eliminate many hours of laboratory class, easing the problem of classroom shortage. The teaching staff has more time to invest in lesson preparation and individualized instruction. Students feel that it is better than the traditional demonstration because each of them has a front seat. (11)

The preceding statements are typical of those appearing in the literature. Just how valid are these statements is not known since the authors of the articles in which the statements appeared were themselves enthusiastic about television, and, in general, their impressions of how faculty members felt about instructional TV may not have been based on objective evidence. Still, it is likely that the statements do contain a certain amount of truth, and that those faculty members who became involved in using TV became devotees of the medium.

Summary of the Literature

In this chapter the literature has been considered as it pertained to the use of closed-circuit instructional television in

connection with (1) the Armed Forces, (2) general institutions of higher learning, (3) medical and dental schools, (4) teaching hospitals and (5) schools of nursing.

The Armed Forces have made considerable use of televised instruction, and studies conducted by the Army, Navy and Air Force suggest that televised instruction is at least equally as good as regular classroom instruction.

Considerable use of televised instruction has also been made by institutions of higher education, and in numerous courses students enrolled in TV courses have done at least as well as those who were conventionally taught. Other studies carried on in institutions of higher education have attempted to determine the value of visual aids by the TV teacher, and the attitudes of both students and instructors toward TV when used as an instructional tool.

Medical schools have found that television is an excellent means of instruction, and have used it in connection with such courses as surgery, gynecology and pharmacy. Extensive use also has been made of televised instruction within the hospital setting itself.

Schools of nursing have used televised instruction for such purposes as teaching principles of communication or correlating surgical procedures with nursing care. Additionally, fixed focus cameras have been used to allow a single instructor to monitor the behavior of students alone with a patient in a room.

In a number of localities, schools of nursing have joined together to produce television programs for instructional purposes. In this connection, both closed-circuit and broadcast TV have been used.

A number of studies indicate that students in schools of nursing can learn from televised instruction. The literature also indicates that nurse educators involved in televised instruction generally agree that it is a useful instructional tool.

CHAPTER III

METHODOLOGY AND FINDINGS

Introduction

This study was undertaken primarily to measure the attitudes of nurse educators toward the potential advantages and limitations of closed-circuit television when used as an instructional tool. The need for a study of this type has been noted by Carpenter, among others, who suggested that the attitudes of the instructional staff must be taken into consideration by those who would introduce televised instruction into a given professional field. (9)

The study followed the steps outlined in Chapter I. Background variables of the nurse educators were identified, and comparisons made to assess their relationship to:

1. The attitudes of nurse educators toward potential advantages of closed-circuit television instruction.
2. The attitudes of nurse educators toward potential limitations of closed-circuit television instruction.

The background variables were: (1) type of education program in which teaching occurs, (2) most advanced degree held, (3) years of teaching experience, and (4) present teaching assignment.

It was hypothesized that:

1. Nurse educators ordered according to type of education program in which teaching occurs show no differences with regard to their attitudes toward the potential advantages of instruction via closed-circuit television.
2. Nurse educators ordered according to type of education program in which teaching occurs show no differences with regard to their attitudes toward the potential limitations of instruction via closed-circuit television.
3. Nurse educators ordered according to most advanced degree held show no differences with regard to their attitudes toward the potential advantages of instruction via closed-circuit television.
4. Nurse educators ordered according to most advanced degree held show no differences with regard to their attitudes toward the potential limitations of instruction via closed-circuit television.
5. Nurse educators ordered according to years of teaching experience show no differences with regard to their attitudes toward the potential advantages of instruction via closed-circuit television.
6. Nurse educators ordered according to years of teaching experience show no differences with regard to their attitudes toward the potential limitations of instruction via closed-circuit television.
7. Nurse educators ordered according to teaching assignments show no differences with regard to their attitudes toward the potential advantages of instruction via closed-circuit television.
8. Nurse educators ordered according to teaching assignments show no differences with regard to their attitudes toward the potential limitations of instruction via closed-circuit television.

In addition to the above hypotheses, the study attempted to answer the following questions:

1. Would nurse educators be willing to teach their own courses via closed-circuit television?
2. To what extent are nurse educators interested in each of five different uses which can be made of closed-circuit television?
3. What do nurse educators perceive to be the potential advantages of a regional videotape exchange center?
4. What do nurse educators perceive to be the potential limitations of a regional videotape exchange center?

Report of the Study

Development of the Study Instrument

The study was undertaken through means of a six-part questionnaire.

Section I of the questionnaire was designed to identify the background variables of the nurse educators.

Section II of the questionnaire was designed to elicit from the respondents the extent to which they were impressed with each of a number of arguments often cited in favor of teaching via closed-circuit television. In contrast, Section III was designed to determine how concerned the respondents were with each of a number of limitations often ascribed to the medium of closed-circuit television when used as a teaching tool.

As indicated in Chapter II, Sections II and III were adapted from findings reported in a study by Carpenter. To compile these

findings he requested a group of 177 college level instructors to state what they thought were the advantages and limitations of instructional TV, and one year later requested the same information from the instructors. (9) The correlation coefficient between the percentages of instructors putting forth each advantage and limitation in each of the two years was $+ .82$. According to Downie (12), a correlation coefficient of this magnitude would be very useful for such purposes as used in this study. Sections II and III provided the information needed to test Hypotheses 1-8.

Section IV consisted of a single question and was designed to determine how instructors in schools of nursing would feel about teaching one or more of their own courses on closed-circuit television.

Five major uses to which closed-circuit television could be put were listed in Section V, with the respondents given an opportunity to indicate the extent to which each of the uses would be of interest to them. The checklist in Section V was adapted from the findings in Hays. (25)

Section VI of the questionnaire was designed to determine what potential advantages and limitations the respondents associated with videotape exchange centers. Unlike the previous sections which contained checklists, Section VI was open-ended in nature.

An initial form of the questionnaire was submitted to 12

graduate students in the University of Oregon School of Nursing during the winter quarter, 1967. Based upon an analysis of the responses and comments of these 12 students, it was decided to make some slight changes in various sections of the directions. Apart from these changes, however, it appeared from the comments of the students that the questionnaire was meaningful and could be answered without difficulty.

Steps in the Selection of the Sample

The study was limited to schools of nursing within the 13 western states and the territory of Guam, which comprise Region IV as defined by the National League for Nursing. (32)

Six of the states within Region IV contained six or more schools of nursing. In each of these states, six schools were selected by choosing the first three and last three schools as they appeared on the National League for Nursing's master list. Six states and the territory of Guam each had six or fewer schools of nursing, and in each of these states and the one territory all schools of nursing were selected for participation in the study.

One state in Region IV, Alaska, did not have a school of nursing in operation at the time the study was organized.

The initial contact was made with the chief administrator in each of the schools during November, 1967. A form letter sent to

the administrators advised them of the scope of the study and invited their cooperation (Appendix B).

Postcards were returned by 42 of the schools during December, 1967. Thirty of the schools expressed a willingness to participate in the study, but of this group only 25 schools later returned the questionnaires.

Steps in the Collection of the Data

During the winter term, 1968, the 30 administrators who had agreed to have their schools participate in the study were again contacted by mail. Each administrator was reminded by cover letter of the initial survey contact, and of her stated willingness to cooperate with the investigator in the study. (See Appendix B).

Along with the cover letter, each administrator was sent three questionnaires for distribution except for those few cases where another number had been specifically requested on the postcard returned by the schools during the initial contact in November, 1967.

A short letter addressed to the individual instructor was prefixed to each questionnaire (see Appendix A). This letter delineated the purpose of the study and requested the respondent to return the completed questionnaire to the administrator in her school who had passed it on to her. The administrator, in turn, was requested to collect all questionnaires and return them to this investigator at her

earliest convenience.

Within six weeks of the mailing, 23 of the schools had returned the completed questionnaires. A follow-up card brought returns from two additional schools (Appendix B). March, 1968, was selected as the cut-off date, at which time 25 schools, which included 7 university programs, 13 associate degree programs, and 5 diploma programs, had returned 88 completed questionnaires from as many nurse educators.

The Study Participants

The 88 nurse educators who participated in the study were identified according to four background variables: type of education program in which their teaching occurs, years of teaching experience, highest degree attained, and present teaching assignment.

Table 1 shows the number of nurse educators in each of three types of educational programs: diploma, associate degree, or university.

Table 1. Distribution by Number and Percent of 88 Nurse Educators According to Type of Education Program in which Teaching Occurs

Type of Program	Number	Percent
University	33	37.5
Associate Degree	41	46.6
Diploma	14	15.9

Table 2 shows the distribution of nurse educators according to most advanced degree held.

Table 2. Distribution by Number and Percent of 88 Nurse Educators According to Most Advanced Degree Held

Degree	Number	Percent
Master's	62	70.4
Baccalaureate	22	25.0
Other*	4	4.5

*Other = 1 Ph. D. , 1 A. D. , 2 Diploma

In Table 3, the nurse educators participating in the study are distributed according to years of teaching experience. The range of experience was from 0 to 30 years, with the median being 7 years.

Table 3. Distribution by Number and Percent of 88 Nurse Educators According to Number of Years of Teaching Experience

Years of Teaching Experience	Number	Percent
Under 5	38	43.1
6 - 10	28	31.8
11 - 15	15	17.0
16 and over	7	8.0

Table 4 shows the distribution of nurse educators according to present teaching assignments. Approximately 85 percent of the participants were assigned to either fundamentals, medical-surgical or

maternal-child-health courses. The "miscellaneous" category in Table 4 includes such other teaching assignments as psychiatry and pharmacology.

It may also be noted that 13 of the 88 respondents reported having been taught by TV while attending a school of nursing. Three respondents had used TV in their own teaching in a very limited manner.

Table 4. Distribution by Number and Percent of 88 Nurse Educators According to Present Teaching Position

Present Position	Number	Percent
Medical-Surgical	30	34.1
Fundamentals	28	31.8
Maternal-Child-Health	17	19.3
Miscellaneous	13	14.7

Analysis of Data

The Advantages and Limitations of Teaching Via Closed-Circuit Television

Testing Hypotheses 1-8. Section II was made up of 18 arguments often cited in favor of closed-circuit television when used as an instructional tool. The nurse educator responding to the questionnaire was requested to read each argument (or advantage), and then check an appropriate column to indicate the extent to which she was impressed with it.

In tabulating the results, a weighted number was assigned to each of the three columns as follows: "very much impressed," 3 points; "moderately impressed," 2 points; "hardly impressed," 1 point; no response, 0 points. For each advantage (or argument), the nurse educator responding was assigned 0-3 points, depending upon the column checked, and a total was computed for her responses to all the statements.

A participant who scored a total of 54 points would, in effect, be one who held a highly favorable attitude toward the instructional potential of closed-circuit television. In contrast, a participant who did not look with favor upon instructional television would score a lower number of points. Scores falling somewhere between the extreme high and extreme low would reflect a mixed attitude toward the use of the TV medium.

Table 5 shows the number of nurse educators responding to Section II when arranged according to various categories (or variables), and the mean score or number of points obtained by the participants within each category.

Section III of the questionnaire contained a list of 20 potential limitations of instructional television. The respondent was requested to read each of the potential limitations and to check the appropriate column to indicate the extent to which it was of concern to her. As in Section II, weighted numbers were assigned to each of

Table 5. The Number of Nurse Educators Responding to Section II When Arranged According to Variables, and the Mean Score or Number of Points Obtained by the Participants within Each Category

Variable	Number of Nurse Educators	Mean Score
<u>Type of Program</u>		
University	33	35.9
Associate Degree	41	36.0
Diploma	14	34.8
<u>Degree</u>		
Master's	62	35.7
Baccalaureate	22	35.7
(Other --not included)	4	
<u>Years of Teaching Experience</u>		
Under 5	38	34.8
6 - 10	28	35.8
11 - 15	15	36.7
16 and over	7	38.1
<u>Present Position</u>		
Medical-Surgical	30	34.8
Fundamentals	28	36.2
Maternal-Child-Health	17	35.6
Miscellaneous	13	36.0

the columns in Section III as follows: "very much concerned," 3 points; "somewhat concerned," 2 points; "hardly concerned," 1 point; no response, 0 points. For each limitation, the respondent was assigned 0-3 points, depending upon the column checked, and a

total was computed for her responses to all 20 of the statements.

In Section III, a high number of total points would mean, in effect, that the participant had serious reservations about the use of closed-circuit television for instructional purposes. In contrast, a lower score would suggest that the participant was rather favorably inclined toward the use of the medium in education. Scores falling between the extreme highs and lows would, as in Section II, reflect a rather mixed attitude toward the use of the TV medium.

Table 6 shows the number of nurse educators responding to Section III when arranged according to various categories (or variables), and the mean score or number of points obtained by the participants within each category.

As weighted and totaled, the items in Sections II and III were tested against the variables in Section I by means of analyses of variance. With this statistical technique, the concern was for the between group and the within group variance. A general null hypothesis of no difference among the various groups was tested.

More specifically, eight different hypotheses were tested as follows:

The type of educational program in which the participant did her teaching was tested against her attitude with respect to the potential advantages of instruction via closed-circuit television.

Statistical analysis revealed that there was no evidence of differences among nurse educators at the .01 level of significance. Therefore,

Table 6. The Number of Nurse Educators Responding to Section III When Arranged According to Variables, and the Mean Score or Number of Points Obtained by the Participants within Each Category

Variable	Number of Nurse Educators	Mean Score
<u>Type of Program</u>		
University	33	34.2
Associate Degree	41	31.8
Diploma	14	35.1
<u>Degree</u>		
Master's	62	33.4
Baccalaureate	22	31.7
(Other -- not included)	4	
<u>Years of Teaching Experience</u>		
Under 5	38	32.5
6 - 10	28	34.9
11 - 15	15	30.8
16 and over	7	36.6
<u>Present Position</u>		
Medical-Surgical	30	33.0
Fundamentals	28	33.3
Maternal-Child-Health	17	31.2
Miscellaneous	13	36.5

the null hypothesis was accepted that:

Nurse educators ordered according to type of education program in which teaching occurs show no differences with respect to their attitudes toward the potential advantages of instruction via closed-circuit television.

The findings are depicted in Table 7.

Table 7. Analysis of Variance Summary Table for Differences Among 88 Nurse Educators According to Type of Education Program with Regard to what they Perceive to be the Potential Advantages of Instruction Via Closed-Circuit Television

SUMMARY OF ANALYSIS OF VARIANCE				
Source of Variation	Sum of Squares	df	Mean Square	F
Between Groups	13.78	2	6.89	<1.00
Within Groups	2420.26	85	28.47	
Total	2434.04	87		

The type of education program in which the participant did her teaching was tested against her attitude with respect to the potential limitations of instruction via closed-circuit television. Statistical analysis revealed that there was no evidence of differences among nurse educators at the .01 level of significance. Therefore, the null hypothesis was accepted that:

Nurse educators ordered according to the type of education program in which teaching occurs show no differences with respect to their attitudes toward the potential limitations of instruction via closed circuit television.

The findings are depicted in Table 8.

Table 8. Analysis of Variance Summary Table for Differences Among 88 Nurse Educators According to Type of Education Program with Regard to what they Perceive to be the Potential Limitations of Instruction Via Closed-Circuit Television

SUMMARY OF ANALYSIS OF VARIANCE				
Source of Variation	Sum of Squares	df	Mean Square	F
Between Groups	161.13	2	80.50	2.38
Within Groups	2871.45	85	33.78	
Total	3032.58	87		

The most advanced degree held by each participant was tested against her attitude with respect to the potential advantages of instruction via closed-circuit television. Statistical analysis revealed that there was no evidence of differences among nurse educators at the .01 level of significance. Therefore, the null hypothesis was accepted that:

Nurse educators ordered according to the most advanced degree held show no differences with respect to their attitudes toward the potential advantages of instruction via closed-circuit television.

The findings are depicted in Table 9.

Table 9. Analysis of Variance Summary Table for Differences Among 88 Nurse Educators According to Most Advanced Degree Held with Regard to what they Perceive to be the Potential Advantages of Instruction Via Closed-Circuit Television.

SUMMARY OF ANALYSIS OF VARIANCE				
Source of Variation	Sum of Squares	df	Mean Square	F
Between Groups	4.10	1	4.10	< 1.00
Within Groups	2319.09	82	28.27	
Total	2323.19	83		

The most advanced degree held by each participant was tested against her attitude with respect to the potential limitations of instruction via closed-circuit television. Statistical analysis revealed that there was no evidence of differences among nurse educators at the .01 level of significance. Therefore, the null hypothesis was accepted that:

Nurse educators ordered according to the most advanced degree held show no differences with respect to their attitudes toward the potential limitations of instruction via closed-circuit television.

The findings are depicted in Table 10.

Table 10. Analysis of Variance Summary Table for Differences Among 88 Nurse Educators According to Most Advanced Degree Held with Regard to what they Perceive to be the Potential Limitations of Instruction Via Closed-Circuit Television

SUMMARY OF ANALYSIS OF VARIANCE				
Source of Variation	Sum of Squares	df	Mean Square	F
Between Groups	58.05	1	58.05	1.74
Within Groups	2766.55	82	33.75	
Total	2834.60	83		

The number of years of teaching experience for each participant was tested against her attitude with respect to the potential advantages of instruction via closed-circuit television. Statistical analysis revealed that there were no differences among nurse educators at the .01 level of significance. Therefore, the null hypothesis was accepted that:

Nurse educators ordered according to years of teaching experience show no differences with respect to their attitudes toward the potential advantages of instruction via closed-circuit television.

The findings are depicted in Table 11.

Table 11. Analysis of Variance Summary Table for Differences Among 88 Nurse Educators According to Years of Teaching Experience with Regard to what they Perceive to be the Potential Advantages of Instruction Via Closed-Circuit Television

SUMMARY OF ANALYSIS OF VARIANCE				
Source of Variation	Sum of Squares	df	Mean Square	F
Between Groups	88.21	3	29.40	1.06
Within Groups	2345.46	84	27.92	
Total	2433.67	87		

The number of years of teaching experience for each participant was tested against her attitude with respect to the potential limitations of instruction via closed-circuit television. Statistical analysis revealed that there were no differences among nurse educators at the .01 level of significance. Therefore, the null hypothesis was accepted that:

Nurse educators ordered according to years of teaching experience show no differences with respect to their attitudes toward the potential limitations of instruction via closed-circuit television.

The findings are depicted in Table 12.

Table 12. Analysis of Variance Summary Table for Differences Among 88 Nurse Educators According to Years of Teaching Experience with Regard to what they Perceive to be the Potential Limitations of Instruction Via Closed-Circuit Television

SUMMARY OF ANALYSIS OF VARIANCE				
Source of Variation	Sum of Squares	df	Mean Square	F
Between Groups	242.72	3	80.90	2.43
Within Groups	2793.31	84	33.25	
Total	3036.03	87		

The teaching assignment of each participant was tested against her attitude with respect to the potential advantages of instruction via closed-circuit television. Statistical analysis revealed that there were no differences among nurse educators at the .01 level of significance. Therefore, the null hypothesis was accepted that:

Nurse educators ordered according to teaching assignments show no differences with respect to their attitudes toward the potential advantages of instruction via closed-circuit television.

The findings are depicted in Table 13.

Table 13. Analysis of Variance Summary Table for Differences Among 88 Nurse Educators According to Teaching Assignments with Regard to what they Perceive to be the Potential Advantages of Instruction Via Closed-Circuit Television

SUMMARY OF ANALYSIS OF VARIANCE				
Source of Variation	Sum of Squares	df	Mean Square	F
Between Groups	32.11	3	10.69	< 1.00
Within Groups	2514.55	84	29.89	
Total	2546.66	87		

The teaching assignment of each participant was tested against her attitude with respect to the potential limitations of instruction via closed-circuit television. Statistical analysis revealed that there were no differences among nurse educators at the .01 level of significance. Therefore, the null hypothesis was accepted that:

Nurse educators ordered according to teaching assignments show no differences with respect to their attitudes toward the potential limitations of instruction via closed-circuit television.

The findings are depicted in Table 14.

Table 14. Analysis of Variance Summary Table for Differences Among 88 Nurse Educators According to Teaching Assignments with Regard to what they Perceive to be the Potential Limitations of Instruction Via Closed-Circuit Television

SUMMARY OF ANALYSIS OF VARIANCE				
Source of Variation	Sum of Squares	df	Mean Square	F
Between Groups	216.08	3	72.02	2.14
Within Groups	2819.85	84	33.57	
Total	2035.93	87		

In summary then, eight separate tests revealed no significant differences. It would appear that the background variables presented in Section I do not influence the attitudes of nurse educators toward the potential advantages and limitations of closed-circuit television instruction. Put somewhat differently, the population in this study may be thought of as a statistically homogeneous group.

Item Analysis of Section II: Advantages

It was deemed appropriate to make an item analysis of the individual advantages for instructional TV which were listed in Section II. This was done by tabulating the number of all 88 participants who were "very much impressed," "moderately impressed" or "hardly impressed" with each of the advantages. Table 15 shows

these numbers as expressed in percentages. The data show that 84 percent of the respondents were very much or at least moderately impressed with the arguments that "TV results in better instruction for more students" (Item 1). Likewise, 92 percent of those responding were either very much or moderately impressed with the statement that TV is a "good education communication medium (Item 3).

A substantial majority of the respondents were either very much or moderately impressed with the arguments that "TV is conducive to better teacher preparation" (Item 2) or "offers the teacher a challenge" (Item 7). In contrast, the instructors were not impressed with the arguments that "teachers like to try new methods" (Item 18) or that "students prefer TV" (Item 13). Nor were they generally impressed with the arguments that TV would result in "fewer student distractions" (Item 11), or that is "easier to teach with TV" (Item 16).

The data strongly suggest that in general the respondents were aware of the inherent qualities of closed-circuit TV when used as an instructional tool. More specifically, they tended to agree with the arguments that televised instruction can "supplement present methods" (Item 6), "provide variation" (Item 4), "allow for close-ups" (Item 9), "result in better hearing" (Item 10) and "result in uniformity" of instruction" (Item 12). Those responding, however,

Table 15. Percentage of the 88 Instructors Very Much, Moderately, or Hardly Impressed with each of 18 Arguments Cited in Favor of Closed-Circuit Television

Item	Very Much Impressed	Moderately Impressed	Hardly Impressed
1. TV results in better instruction for more students	31	53	16
2. Conducive to better teacher preparation	45	39	16
3. TV good education communication medium	36	56	8
4. More variable situation with visual aids	48	42	10
5. Teach great numbers with TV	60	24	16
6. Supplement present methods	66	31	3
7. Offers teachers a challenge	42	42	16
8. Eliminate large classes	3	45	52
9. Allows for close-ups	68	24	8
10. Results in better hearing	34	42	24
11. Fewer student distractions	22	42	36
12. Uniformity of instruction	46	37	17
13. Students prefer TV	8	31	61
14. Reduce the teacher shortage	12	44	44
15. To save time and expense	7	32	61
16. Easier to teach with TV	5	26	69
17. Allows less abstraction	10	43	47
18. Teachers like to try new methods	8	45	47

did not agree with the argument that TV allows for "less abstraction" (Item 17).

The 88 instructors generally were impressed with the argument that "great numbers of students could be taught via TV" (Item 5). This did not mean, however, that they necessarily looked favorably upon TV as a labor-saving device. To the contrary, a substantial majority of the instructors were only moderately or hardly impressed with the arguments that TV could "eliminate large classes" (Item 8), "reduce the teacher shortage" (Item 14), or "save time and expense" (Item 15).

Item Analysis of Section III: Limitations

As with the items in Section II, it was deemed appropriate to make an item analysis of the individual limitations of instructional television which were listed in Section III. This was done by tabulating the number of all 88 participants who were "very much," "moderately," or "hardly" concerned with each of the 20 limitations. Table 16 shows numbers as expressed in percentages. Thus 73 percent of the instructors were hardly concerned with the possibility of appearing on TV or that they might be required to "change their teaching methods" and another 22 percent were only somewhat concerned (Item 13). In the same vein, only a small percentage of the instructors were concerned with the possibility that appearing on TV

would call for "extra study on their part" (Item 4). Moreover, the majority of the instructors were not very much concerned about the "mechanics of the medium" (Item 16), nor were they very much concerned about "feeling self-conscious" if they had to appear on TV (Item 14).

The limited size of the screen and the lack of color (on most present classroom sets) did not disturb the respondents (Items 6, 19). Neither did they generally feel that TV might result in "non-permanent learning" (Item 12), or that there was a danger of the picture "replacing actuality" (Item 2).

Generally, the instructors did not view the introduction of TV as constituting a threat to their professional status (Item 10), nor of being "damaging to higher education" (Item 18).

The data, however, do strongly suggest that the respondents were in general concerned with the possibility of closed-circuit TV interfering with the instructional process by intruding between the teacher and her students. For example, 50 percent of the respondents were very much concerned with the possibility of TV resulting in "lack of contact" between teacher and students, and another 36 percent were somewhat concerned (Item 1). Likewise, 81 percent of the instructors were very much or somewhat concerned with the possibility that TV might result in a loss of "personal relationships" (Items 5, 17), thus submerging the students in a sea of "anonymity"

Table 16. Percentage of 88 Instructors Very Much, Somewhat, or Hardly Concerned with each of 20 Potential Limitations of Closed-Circuit Television

Item	Very Much Concerned	Somewhat Concerned	Hardly Concerned
1. Lack of contact and individual attention	50	36	14
2. See only pictures not actuality	6	46	48
3. No feedback	45	50	5
4. Extra training (for teacher) necessary	10	50	40
5. Impersonal	35	45	20
6. Screens too small	10	36	54
7. No student questions	45	43	12
8. Poor student attitudes toward TV	16	39	45
9. Not applicable to most courses	1	35	64
10. Detrimental to teachers' status	1	12	87
11. Limits teaching techniques	3	30	67
12. Non-permanent learning by TV	3	29	68
13. Would require me to change teaching methods	5	22	73
14. Teachers feel self-conscious on TV	3	39	58
15. Anonymity of students	43	32	25
16. Mechanics of TV disturbing	5	44	51
17. Lose personal relationships	43	39	18
18. Would damage higher education	3	11	86
19. No color (on present sets)	13	15	72
20. Creates discipline problem	1	25	74

(Item 15). The respondents also viewed with considerable concern the possibility that the use of televised instruction would lead to a cut-off of student questions (Items 3, 7).

In general, the respondents did not feel that television would limit their teaching techniques (Item 11), result in discipline problems (Item 20), or that it should be restricted only to a small number of courses (Item 10). Nor did the respondents seem to be particularly concerned with the possibility that students do not like to be taught via TV (Item 8).

Reactions of the Instructors Toward Regularly Teaching a Course by Closed-Circuit Television

In Section IV, the respondents were given five choices with respect to teaching their own courses via closed-circuit TV on a regular basis: (A) Like it very much; (B) Probably like it but reserve judgment; (C) Don't care one way or another; (D) Probably dislike it but reserve judgment; and (E) Dislike it very much. The number of instructors checking either A, B, C, D, or E was tabulated and converted into percentages (Table 17).

As shown in Table 17, 17 percent of the respondents would "probably dislike" regularly teaching one or more courses on TV (D), and only a few would "dislike it very much" (E). In contrast, 26 percent of the respondents indicated that they would "very much like"

to teach one or more of their own courses on TV (A), and another 51 percent indicated that they would "probably like it" but wished to reserve judgment (B). Only several instructors did not "care one way or another" (C).

Table 17. Reactions of 88 Instructors toward Teaching their Own Courses via Closed-Circuit Television as Expressed in Percentages

Reaction	Percent
A. Like it very much	26
B. Probably like it but reserve judgment	51
C. Don't care one way or the other	3
D. Probably dislike it but reserve judgment	17
E. Dislike it very much	3

The Interest Shown by the Instructors Toward Five Major Uses of Closed-Circuit Television

Section V listed five different uses to which television could be put. These uses were adapted from findings in Hays (9), and are given in the first column in Table 18.

Analysis of the five uses listed in Table 18 suggests that Uses 2 and 5 would necessarily involve bringing to the TV screen what might be called relatively concrete experiences, e. g. , a laboratory experiment in progress. Uses 1, 3 and 4 might also entail bringing to the screen a relatively concrete experience, but it is likely that each of these three uses would, in addition, feature a nurse educator

giving a lecture. In all five cases, however, the episode, or program, could be produced by a school of nursing with its own television equipment, although in the case of Use 5, at least, the equipment might have to be taken into the field.

Table 18 shows the number of respondents (as expressed in percentages) who were very much interested, somewhat interested or only slightly interested in each of the five uses put forth in the left-hand column.

Analysis of Table 18 suggests that of the various uses put forth, the instructors were most interested in Number 5, "to observe clinical situations or agencies so as to increase understanding of total patient care." More specifically, 80 percent of the respondents were very much interested in Number 5, while another 12 percent were somewhat interested.

Not far behind Use 5, in terms of instructor interest, was Use 1, "to assist the nurse educator to correlate medical theory with nursing care."

The majority of the respondents were either very much or somewhat interested in Uses 2, 3, and 4, although 24 percent of the instructors did indicate only a slight interest in Use 2, the presentation of laboratory experiments on TV.

Table 18. Percentage of 88 Instructors Very Much, Somewhat, or Only Slightly Interested in Each of Five Uses of Closed-Circuit Television

Use	Very Much Interested	Somewhat Interested	Only Slightly Interested
1. To assist the nurse educator to correlate medical theory with nursing care and increase understanding of the rationale for medical treatment of patients.	68	23	9
2. To present scientific laboratory experiments.	44	32	24
3. To assist the nurse educator in teaching principles and techniques of communication	63	30	7
4. To correlate surgical procedures with nursing care and to increase understanding of the rationale for surgical intervention	57	38	5
5. To observe clinical situations or agencies so as to increase understanding of total patient care	80	12	8

The Advantages and Limitations of Videotape Exchanges as Perceived by the Respondents

Section VI of the questionnaire called upon the 88 instructors to state what, in their judgment, would be the advantages and limitations of storing videotapes in a central exchange, where they could be

drawn upon by any number of schools in a given region.

Advantages of Videotape Exchange. The instructors made approximately 150 statements regarding the advantages of a central videotape exchange. As might be expected, many of the statements referred to the same or similar advantages. A list of these advantages with the number of times each was mentioned is given below:

<u>Advantages</u>	<u>Number of Times Mentioned</u>
To reduce costs	28
To avoid duplication of effort	18
To allow schools to share creative materials	14
To provide experiences not available locally	12
To give schools the use of master teachers-- clinical specialists	12
To provide variety	11
To provide master lessons	10
To improve courses	9
To promote the teaching of principles and to help standardize nursing practices	9
To promote the teaching of principles	6
To provide students with enriched experiences	6
To reach larger number of students	4
To allow for flexibility--instant replays, individual viewing	4

<u>Advantages</u>	<u>Number of Times Mentioned</u>
To provide for better viewing	2
To teach fundamentals--skills	2
To allow instructors to give more individual attention to students	1
To replace (instead of supplement) the instructor	1

An analysis of the compilation suggests that the instructors generally were aware of the cost-saving aspects of central exchanges. Additionally, they recognized that a central exchange might provide them with a higher quality videotape than could be produced in their own schools. More specifically, they recognized that videotapes drawn from a central exchange might feature the best instructor in a given region or otherwise provide the viewer with stimulating "master" lessons.

Limitations of Videotape Exchanges. The instructors made approximately 130 statements regarding the limitations of a central videotape exchange. As in the case of the advantages, the respondents used a great variety of language in their statements on the limitations of videotapes and exchange centers. In spite of the variations in language, however, it was obvious once again that many of the statements had a reference to the same or a similar limitation. A list of these limitations, with the number of times each was

mentioned, is given below:

<u>Limitations</u>	<u>Number of Times Mentioned</u>
Problems of scheduling and availability of videotapes	42
Videotapes may be dated	15
Need for duplicate copies run up cost	15
Cost of equipment in center	14
Philosophic differences among schools may render tapes useless	9
Problems related to accuracy and filling orders in shipping	9
Need to order too far in advance	7
Procedures of nursing vary too much for schools to use the same tape	5
Require too many highly skilled persons to produce tapes	3
May have lack of adequate equipment in nursing division	3
Academic freedom involved when required to use the same tape	2
Discourage creativity	1
May need tape for longer than center will allow	1
Experts do not always have the best answers	1

From the analysis of the above compilation, it is obvious that the respondents generally were concerned with the mechanics involved in ordering from a central exchange. Moreover, they

recognized that central exchanges do not always have sufficient copies of materials available for use. Several respondents stated that in putting forth limitations of central videotape exchanges, they were drawing upon their previous experiences in attempting to obtain motion pictures from film libraries.

Summary

The responses of 88 instructors in 25 schools of nursing to a six-part questionnaire on closed-circuit television instruction were analyzed and presented in this chapter.

Section I of the questionnaire required the participants to provide information about their professional and educational backgrounds. In Sections II and III, the participants were provided with an opportunity to express their attitudes with respect to various advantages and limitations of instruction TV. As weighted and totaled, the items in Sections II and III were tested against the variables in Section I by organizing the data in analysis of variance tables. Based upon these tests, it would appear that the background variables in Section I do not influence the attitudes of nurse educators toward the potential advantages and potential limitations of instruction via closed-circuit television.

An item analysis of the responses made in Section II, showed that a majority of the participants were impressed with the argument

that TV is a good communication medium. The data also strongly suggest that in general, the participants were aware of the inherent qualities of closed-circuit TV, recognizing its potential for showing close-ups, and for providing variation in teaching methodology.

An item analysis of Section III revealed that the participants generally were not concerned with such possible limitations of closed-circuit TV as the small size of the screen or the lack of color in present sets. Nor were they concerned with the possibility that the introduction of TV in their own schools would require extra work and training on their part. However, the data do suggest that the respondents were deeply concerned that students being taught via TV would have little opportunity to ask questions or otherwise interact in class, and would not be accorded individualized attention by their instructors.

In Section IV, the participants were asked to express their feelings about regularly teaching one or more of their own courses via TV. A substantial majority of the participants stated that they would like this very much, or would probably like it.

The data in Section V showed that considerable interest was expressed by the respondents in making use of TV to correlate medical theory with nursing care, to present scientific laboratory experiments, to assist the nurse educator in teaching the principles of communication, to correlate surgical procedures with nursing care,

and to give students an opportunity to observe pertinent clinical situations.

As revealed by the responses made in Section VI, the respondents felt that a central videotape exchange center would allow schools to share the expense of producing videotapes, and would minimize duplication of effort. Other advantages for the exchanges as given by the instructors were that schools making use of videotapes could draw upon a pool of master teachers and provide experiences not available locally.

When asked to state possible limitations of a central videotape exchange center, many instructors referred to problems related to scheduling and availability of the materials. Reference was also made to the possibility of the videotapes becoming dated, and not fitting in with the curricula of various schools.

CHAPTER IV

SUMMARY, FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

Summary of the Study

The primary purpose of this study was to identify and to analyze what instructors in schools of nursing perceive to be the advantages and the limitations of closed-circuit television when used as a teaching tool. Background variables of the nurse educators were identified, and comparisons made to assess their relationship to: (1) the attitudes of nurse educators toward potential advantages of teaching via closed-circuit television, and (2) the attitudes of nurse educators toward potential limitations of teaching via closed-circuit television. The background variables were (1) type of education program in which teaching occurs, (2) most advanced degree held, (3) years of teaching experience, (4) present teaching assignment.

The study was conducted in 25 schools of nursing in Region IV which is made up primarily of the Northwest section of the United States. Data were collected by means of a six-part questionnaire to which 88 nursing instructors were requested to respond. Section I of the questionnaire provided the background variables, while Sections II and III dealt with the potential advantages and limitations of

closed-circuit television, respectively. Section IV of the questionnaire was designed to elicit information pertaining to the instructors' willingness to teach their own courses via TV, while Section V dealt with the interest which the instructors had in various uses of closed-circuit television. Section VI requested the respondents to state what they perceived to be the advantages and limitations of a regional videotape exchange center.

Findings

The findings were summarized as follows:

1. There were no significant differences among nurse educators ordered according to type of education program in which teaching occurs with regard to their attitudes toward the potential advantages and the potential limitations of instruction via closed-circuit television.
2. There were no significant differences among nurse educators ordered according to most advanced degree held with regard to their attitudes toward the potential advantages or potential limitations of instruction via closed-circuit television.
3. There were no significant differences among nurse educators ordered according to years of teaching experience with regard to their attitudes toward the potential advantages or

potential limitations of instruction via closed-circuit television.

4. There were no significant differences among nurse educators ordered according to teaching assignments with regard to their attitudes toward the potential advantages or potential limitations of instruction via closed-circuit television.
5. An item analysis of Section II suggests that substantial majorities of all participants were either very much or moderately impressed with the arguments that television "results in better instruction for more students" and "is a good communication medium."
6. The respondents also were generally impressed with the arguments that "great numbers of students could be taught via TV," but they did not accept the arguments that TV somehow could eliminate large classes or reduce the teacher shortage. An item analysis of the data in Section III suggests that the respondents generally were concerned with the possibility that the use of closed-circuit TV might intrude between them and their students, resulting in a loss of personal relationships.
7. A substantial majority of the respondents were favorably inclined toward teaching one or more of their own courses on closed-circuit television.

8. Eighty percent of the respondents indicated that they would be very much interested in using the medium of closed-circuit TV for purposes of allowing students to observe clinical situations so as to increase student understanding of total patient care. High interest was also expressed in the use of television for purposes of assisting the nurse educator to correlate theory with both medical and surgical procedures, and in the teaching of the principles of communication.
9. Nearly all the nurse educators expressed an awareness of the cost-saving aspects of a regional videotape exchange center. They expressed the belief that this type of an exchange may feature master lessons prepared by clinical specialists. There was general concern that securing tapes on schedule could become a problem, and that the tapes might become dated.

Conclusions

On the basis of the data collected from participants in this study, no widespread generalizations can be made; the findings, however, do suggest the following:

1. There appears to be no relationship between the nurse educator's present position, degree held, number

of years of teaching experience, or present teaching assignment as to what she perceives to be the potential advantages and potential limitations of closed-circuit television instruction.

2. A majority of the instructors did not believe that closed-circuit television should be used to reduce the teacher shortage in the field of nursing.
3. The respondents were greatly concerned that the use of closed-circuit television might result in a loss of personal contact between the teacher and her students. This, of course, is a serious limitation.
4. A substantial majority of the instructors were willing to teach one or more of their own courses on closed-circuit television.
5. The respondents showed the highest interest in using closed-circuit television for purposes of allowing students to observe clinical situations so as to increase understanding of total patient care; considerable interest was also shown in the use of television for purposes of assisting the nurse educator to correlate theory with medical and surgical procedures, and in the teaching of the principles of communication.
6. The instructors considered the cost-saving factors to be a

principal advantage of a regional videotape exchange center. Another important consideration was that videotapes drawn from the exchange might provide an experience not available locally.

7. In the opinion of the instructors, the major problems associated with regional videotape exchange centers would be those of obtaining materials on schedule. Other possible limitations were that the videotapes might be dated, the high cost of duplicate tapes, and the initial cost of equipment centers.

Recommendations for Further Studies

Based upon findings of this study, it is recommended that the following studies be made:

1. A study be undertaken to determine whether or not nurse educators separated into teaching and administrative categories show any differences with respect to their attitudes toward the potential advantages of closed-circuit television when used as an instructional tool.
2. A study be undertaken to determine whether or not nurse educators separated into teaching and administrative categories show any differences with respect to their attitudes toward the potential limitations of closed-circuit television

when used as an instructional tool.

3. A study be undertaken to determine the extent to which nurse educators prefer to use closed-circuit television as a means of providing students with relatively concrete experiences, e. g. , a surgical operation in progress, and the extent to which they prefer to appear on television themselves in a lecture or demonstration role.
4. In addition to being used within a classroom, closed-circuit television can be put to various uses such as allowing students to see themselves in action with the help of videotapes, or allowing clinical instructors to monitor students as they perform in the patient's room. A study should be conducted to determine the extent to which nurse educators would be interested in these various non-classroom uses of closed-circuit television.
5. Instructors in schools of nursing should be surveyed to determine the precise amount of time in any given course they would be willing to devote to closed-circuit television instruction.

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APPENDIX A
QUESTIONNAIRE

CLOSED-CIRCUIT TELEVISION STUDY

To Whom It May Concern:

Thank you for agreeing to complete this questionnaire.

As you may know, I have attempted to locate staff members in Region IV schools of nursing who have made little or no use of closed-circuit TV in their teaching. Through means of this questionnaire, I am attempting to determine from these staff members (a) their general reactions to the use of instructional TV and (b) how they would like to see the TV medium used in schools of nursing.

Upon completing this questionnaire, please return it to the individual in your school who passed it on to you.

SECTION I

1. School _____
2. Most advanced degree held _____
3. Number of years teaching experience _____
4. As a student in a school of nursing, were you ever taught via television? _____ yes _____ no
5. As an instructor in a school of nursing, have you made any use of closed-circuit TV in your teaching? _____ yes _____ no
6. If "yes" to "5", approximately how long (no. of years) did you make use of TV? _____
7. Your present teaching (or other) assignment(s) _____

SECTION II

Directions: Listed below are arguments often cited to support the use of television for teaching lecture-type (classroom-type) courses. As you read each argument, how impressed are you with it? Very much impressed--the type of argument which might have been foremost in your own mind as being a good reason for making use of instructional TV? Moderately (or only somewhat) impressed? Hardly (not very) impressed--the argument being, in your judgment, either untrue or, in any event, a rather weak one? Please indicate how impressed you are with each of the arguments by checking (x or ✓) one of the three columns to its right:

	<u>Very much</u> <u>impressed</u>	<u>Moderately</u> <u>impressed</u>	<u>Hardly</u> <u>impressed</u>
1. TV results in better instruction for more students.	_____	_____	_____
2. Conducive to better teacher preparation	_____	_____	_____
3. TV good education-communication medium	_____	_____	_____
4. More variable situation with visual aids	_____	_____	_____
5. Teach great numbers with TV	_____	_____	_____
6. Supplement present methods	_____	_____	_____
7. Offers teachers a challenge	_____	_____	_____
8. Eliminate large classes	_____	_____	_____
9. Allows for close-ups	_____	_____	_____
10. Results in better hearing	_____	_____	_____
11. Fewer student distractions	_____	_____	_____
12. Uniformity of instruction	_____	_____	_____
13. Students prefer TV	_____	_____	_____

SECTION II - Continued

	<u>Very much impressed</u>	<u>Moderately impressed</u>	<u>Hardly impressed</u>
14. Reduce the teacher shortage	_____	_____	_____
15. To save time and expense	_____	_____	_____
16. Easier to teach with TV	_____	_____	_____
17. Allows less abstraction	_____	_____	_____
18. Teachers like to try new methods	_____	_____	_____

SECTION III

Directions: Listed below are what many educators consider to be the limitations of instructional TV. How concerned might you be with each limitation if you were asked to decide whether or not your own school should make use of TV to teach lecture-type (classroom-type) courses? Very much concerned--the limitation being, in your judgment, so serious that it might almost be best not to use TV? Moderately (or somewhat) concerned? Hardly (not very) concerned--the limitation, even assuming that it is one in fact, being at most a minor drawback? Please indicate how concerned you might be with each limitation by checking (x or ✓) one of the three columns to the right:

	<u>Very much concerned</u>	<u>Somewhat concerned</u>	<u>Hardly concerned</u>
1. Lack of contact and individual attention	_____	_____	_____
2. See only pictures not actuality	_____	_____	_____
3. No feedback	_____	_____	_____
4. Extra training (for teacher) necessary	_____	_____	_____

SECTION III - Continued

	<u>Very much concerned</u>	<u>Somewhat concerned</u>	<u>Hardly concerned</u>
5. Impersonal	_____	_____	_____
6. Screens too small	_____	_____	_____
7. No student questions	_____	_____	_____
8. Poor student attitudes toward TV	_____	_____	_____
9. Not applicable to most courses	_____	_____	_____
10. Detrimental to teachers' status	_____	_____	_____
11. Limits teaching techniques	_____	_____	_____
12. Non-permanent learning by TV	_____	_____	_____
13. Would require me to change teaching methods	_____	_____	_____
14. Teachers feel self-conscious on TV	_____	_____	_____
15. Anonymity of students	_____	_____	_____
16. Mechanics of TV disturbing	_____	_____	_____
17. Lose personal relationship	_____	_____	_____
18. Would damage higher education	_____	_____	_____
19. No color (on present sets)	_____	_____	_____
20. Creates discipline problem	_____	_____	_____

SECTION IV

Directions: How would you feel personally about regularly teaching one or more of your courses by closed-circuit television? Please check:

- A. _____ Like it very much.
 B. _____ Probably like it but reserve judgment.
 C. _____ Don't care one way or the other.
 D. _____ Probably dislike it but reserve judgment.
 E. _____ Dislike it very much.

SECTION V

Directions: Below are five major uses of which closed-circuit TV can be put in a school of nursing. How interested would you personally be in each of these uses if a closed-circuit TV system were placed in operation in your school? For each of the uses, please check one of the three columns to its right:

	<u>Very much</u> <u>interested</u>	<u>Somewhat</u> <u>interested</u>	<u>Only</u> <u>slightly</u> <u>interested</u>
1. To assist the nurse educator to correlate medical theory with nursing care and increase understanding of the rationale for medical treatment of patients.	_____	_____	_____
2. To present scientific laboratory experiments	_____	_____	_____
3. To assist the nurse educator in teaching principles and techniques of communication	_____	_____	_____
4. To correlate surgical procedures with nursing care and increase understanding of the rationale for surgical intervention.	_____	_____	_____
5. To observe clinical situations or agencies so as to increase understanding of total patient care.	_____	_____	_____

SECTION VI

Through the use of videotape recorders, it is possible to make a permanent record of a television program produced in a given school of nursing. There is today increasing talk of storing these permanent recordings (videotapes) in central exchanges where they can be drawn upon by any number of schools in the region.

1. In your judgment what would be the advantages of such central exchanges?

2. In your judgment what would be the limitations of such central exchanges?

APPENDIX B

CORRESPONDENCE

5200 S. W. Richardson Drive
Portland, Oregon 97201

Dear

In partial fulfillment of requirements for a Master of Science degree at the University of Oregon School of Nursing, I am undertaking a study of how closed-circuit television can be most effectively used as an instructional tool in schools of nursing.

The study has been designed to locate staff members in schools of nursing who have made little or no use of television in their teaching, and to determine from them how they would prefer to see the medium used. Data will be collected by means of a simple questionnaire which lists in part various ways in which television has already been used in schools of nursing, and requests those completing the questionnaire to check their own preferences with respect to use, and can be completed in approximately fifteen minutes.

Enclosed is a return card which is being sent to all schools in the National League for Nursing Region IV. Your completion and return of the card will be greatly appreciated, since it will help me to establish the present use being made of closed-circuit television in Region IV, and will also help me to locate instructors who would be willing to participate in the study.

Upon completion of the study, copies of the report will be placed in the library of the University of Oregon Medical School.

Yours sincerely,

Sue Malter

Mrs. Malter is a regularly enrolled graduate student at the University of Oregon School of Nursing. Any assistance you can offer Mrs. Malter will be greatly appreciated.

Lucile Gregerson
Thesis Adviser

SM:
Enclosure

SURVEY CARD

1. Our school is presently making use of closed-circuit television in our basic education program:
 _____ yes _____ no
- (If "Yes" to 1, please list the number of years TV has been used: _____)
2. There are members of our basic education staff (preferably three) who have made no (or very little) use of television as a teaching tool, and who would be willing to respond to the questionnaire: _____ yes
 _____ no
3. Person returning this card:
 Name _____
 Position _____
 School _____
 Address _____
 City _____ State _____
4. If "Yes" to 2, please indicate to whom the questionnaires should be sent for distribution in your school:
- A. Person returning this card.

- B. _____
 Other person (please designate)

5200 S. W. Richardson Drive
Portland, Oregon 97201

Dear

I very much appreciate your willingness to cooperate with me in my study on closed-circuit TV.

Enclosed are the questionnaires to be completed by members of your staff (preferable three) who have made little or no use of television in their teaching. It would be helpful to me if the completed questionnaires were returned as soon as possible, and a stamped, return envelope is enclosed for your convenience.

Again, thanks for your cooperation, and as I stated in my first letter, copies of the report will be placed in the library of the University of Oregon Medical School upon completion of my study.

Sincerely,

Sue Malter
Graduate Student
University of Oregon
School of Nursing

SM:
Enclosures

5200 S. W. Richardson Drive
Portland, Oregon 97201

Dear

I recently sent to your office a letter requesting the cooperation of your school in a study on televised instruction which I am undertaking in partial fulfillment for a MS degree at the University of Oregon School of Nursing.

A postcard accompanying the letter was to be returned by your office to indicate whether or not (a) your school is presently making use of televised instruction and (b) there are members of your basic education staff who have made little or no use of closed-circuit TV as a teaching tool, and who would be willing to respond to a questionnaire which I am using in my study.

I have as yet not received from your office the postcard accompanying my original letter, and would greatly appreciate your returning it at your earliest convenience.

Thanks for any help you can give to me in my study.

Sincerely,

Sue Malter

5200 S. W. Richardson Drive
Portland, Oregon 97201

Dear

Your office recently agreed to distribute on my behalf a number of questionnaires to staff members in your basic education program. The questionnaires dealt with televised instruction, and were being sent in connection with a study which I am undertaking in partial fulfillment of my MS degree at the University of Oregon School of Nursing.

I have as yet not received the completed questionnaires, and would greatly appreciate your returning them at your earliest convenience. As you may recall, the questionnaires were to be returned through your office.

Thank you for any help you can give me in my study.

Sincerely,

Sue Malter

APPENDIX C

SUMMARY OF DATA

SECTION II

Directions: Listed below are arguments often cited to support the use of television for teaching lecture-type (classroom-type) courses. As you read each argument, how impressed are you with it? Very much impressed--the type of argument which might have been foremost in your own mind as being a good reason for making use of instructional TV? Moderately (or only somewhat) impressed? Hardly (not very) impressed--the argument being, in your judgment, either untrue or, in any event, a rather weak one? Please indicate how impressed you are with each of the arguments by checking (x or ✓) one of the three columns to its right:

	Very much impressed	Moderately impressed	Hardly impressed	NR *
1. TV results in better instruction for more students.	<u>27</u>	<u>47</u>	<u>14</u>	<u> </u>
2. Conducive to better teacher preparation	<u>39</u>	<u>34</u>	<u>14</u>	<u>1</u>
3. TV good education-communication medium	<u>32</u>	<u>49</u>	<u>7</u>	<u> </u>
4. More variable situation with visual aids	<u>42</u>	<u>36</u>	<u>8</u>	<u>2</u>
5. Teach great numbers with TV	<u>51</u>	<u>21</u>	<u>14</u>	<u>2</u>
6. Supplement present methods	<u>58</u>	<u>27</u>	<u>3</u>	<u> </u>
7. Offers teachers a challenge	<u>37</u>	<u>37</u>	<u>14</u>	<u> </u>
8. Eliminate large classes	<u>3</u>	<u>39</u>	<u>46</u>	<u> </u>
9. Allows for close-ups	<u>60</u>	<u>21</u>	<u>7</u>	<u> </u>
10. Results in better hearing	<u>30</u>	<u>37</u>	<u>20</u>	<u>1</u>
11. Fewer student distractions	<u>19</u>	<u>37</u>	<u>31</u>	<u>1</u>
12. Uniformity of instruction	<u>40</u>	<u>32</u>	<u>15</u>	<u>1</u>
13. Students prefer TV	<u>7</u>	<u>27</u>	<u>52</u>	<u>2</u>
14. Reduce the teacher shortage	<u>10</u>	<u>39</u>	<u>39</u>	<u> </u>
15. To save time and expense	<u>6</u>	<u>28</u>	<u>54</u>	<u> </u>
16. Easier to teach with TV	<u>4</u>	<u>23</u>	<u>61</u>	<u> </u>

*NR = No Response

SECTION II - Continued

	<u>Very much impressed</u>	<u>Moderately impressed</u>	<u>Hardly impressed</u>	<u>NR</u> *
17. Allows less abstraction	<u>9</u>	<u>38</u>	<u>41</u>	<u> </u>
18. Teachers like to try new methods	<u>7</u>	<u>40</u>	<u>41</u>	<u> </u>

SECTION III

Directions: Listed below are what many educators consider to be the limitations of instructional TV. How concerned might you be with each limitation if you were asked to decide whether or not your own school should make use of TV to teach lecture-type (classroom-type) courses? Very much concerned--the limitation being, in your judgment, so serious that it might almost be best not to use TV? Moderately (or somewhat) concerned? Hardly (not very) concerned--the limitation, even assuming that it is one in fact, being at most a minor drawback? Please indicate how concerned you might be with each limitation by checking (x or ✓) one of the three columns to its right:

	<u>Very much concerned</u>	<u>Somewhat concerned</u>	<u>Hardly concerned</u>	<u>NR</u> *
1. Lack of contact and individual attention	<u>43</u>	<u>31</u>	<u>12</u>	<u>2</u>
2. See only pictures not actuality	<u>5</u>	<u>41</u>	<u>42</u>	<u> </u>
3. No feedback	<u>40</u>	<u>44</u>	<u>4</u>	<u> </u>
4. Extra training (for teacher) necessary	<u>9</u>	<u>44</u>	<u>35</u>	<u> </u>
5. Impersonal	<u>30</u>	<u>39</u>	<u>18</u>	<u>1</u>
6. Screens too small	<u>9</u>	<u>31</u>	<u>48</u>	<u> </u>
7. No student questions	<u>39</u>	<u>37</u>	<u>10</u>	<u>2</u>
8. Poor student attitudes toward TV	<u>14</u>	<u>34</u>	<u>39</u>	<u>1</u>
9. Not applicable to most courses	<u>1</u>	<u>31</u>	<u>56</u>	<u> </u>

*NR = No Response

SECTION III - Continued

	<u>Very much concerned</u>	<u>Somewhat concerned</u>	<u>Hardly concerned</u>	<u>NR</u> [*]
10. Detrimental to teachers' status	<u>1</u>	<u>10</u>	<u>77</u>	<u> </u>
11. Limits teaching techniques	<u>3</u>	<u>26</u>	<u>59</u>	<u> </u>
12. Non-permanent learning by TV	<u>3</u>	<u>25</u>	<u>58</u>	<u>2</u>
13. Would require me to change teaching methods	<u>4</u>	<u>19</u>	<u>65</u>	<u> </u>
14. Teachers feel self-conscious on TV	<u>3</u>	<u>34</u>	<u>51</u>	<u> </u>
15. Anonymity of students	<u>38</u>	<u>28</u>	<u>22</u>	<u> </u>
16. Mechanics of TV disturbing	<u>4</u>	<u>39</u>	<u>45</u>	<u> </u>
17. Lose personal relationship	<u>37</u>	<u>34</u>	<u>16</u>	<u>1</u>
18. Would damage higher education	<u>3</u>	<u>10</u>	<u>74</u>	<u>1</u>
19. No color (on present sets)	<u>11</u>	<u>13</u>	<u>63</u>	<u>1</u>
20. Creates discipline problem	<u>1</u>	<u>22</u>	<u>64</u>	<u>1</u>

*NR = No response

SECTION IV

Directions: How would you feel personally about regularly teaching one or more of your courses by closed-circuit television? Please check:

- A. 23 Like it very much.
- B. 45 Probably like it but reserve judgment.
- C. 2 Don't care one way or the other.
- D. 15 Probably dislike it but reserve judgment.
- E. 3 Dislike it very much.

SECTION V

Directions: Below are five major uses of which closed-circuit TV can be put in a school of nursing. How interested would you personally be in each of these uses if a closed-circuit TV system were placed in operation in your school? For each of the uses, please check one of the three columns to its right:

	<u>Very much interested</u>	<u>Somewhat interested</u>	<u>Only slightly interested</u>
1. To assist the nurse educator to correlate medical theory with nursing care and increase understanding of the rationale for medical treatment of patients.	<u>60</u>	<u>20</u>	<u>8</u>
2. To present scientific laboratory experiments.	<u>39</u>	<u>28</u>	<u>21</u>
3. To assist the nurse educator in teaching principles and techniques of communication	<u>56</u>	<u>26</u>	<u>6</u>
4. To correlate surgical procedures with nursing care and increase understanding of the rationale for surgical intervention.	<u>50</u>	<u>34</u>	<u>4</u>
5. To observe clinical situations or agencies so as to increase understanding of total patient care.	<u>70</u>	<u>13</u>	<u>5</u>

Typed by Barbara Glenn


AN ABSTRACT OF THE THESIS OF

EMMA SUE BELLMER MALTER

For the MASTER OF SCIENCE in NURSING EDUCATION

Date of receiving this degree: June 12, 1970

Title: A STUDY OF THE ATTITUDES OF EIGHTY-EIGHT NURSE
EDUCATORS TOWARD TELEVISED INSTRUCTION

Approved: 

(Associate Professor in Charge of Thesis)

The Problem

Closed-circuit televised instruction is generally recognized as one means of alleviating the shortage of qualified instructors in schools of nursing. It is also recognized that those responsible for introducing televised instruction in a school of nursing are more likely to be successful if they are able to gain the cooperation of the instructional staff. Carpenter and others argue that such cooperation is more likely to be gained by those who know something about the attitudes of instructors toward the use of closed-circuit television

when used as an instructional tool. The general purpose of this study was to probe the attitudes of nurse educators in this connection, including not only what they perceived to be the advantages and limitations of the medium, but the types of programs which they might prefer to use, and their perceptions of the usefulness of videotape exchange centers.

Description of the Procedure

The data for this study were collected by means of a questionnaire filled out by 88 instructors in 25 schools of nursing located in Region IV as defined by the National League for Nursing's master list. Section I of the questionnaire requested the respondents to provide information about their educational and professional background. Section II was designed to determine what the respondents perceived to be the advantages of televised instruction. In Section III, the attitudes of the 88 respondents toward possible limitations of the medium were probed. Section IV elicited information on how the instructors would feel about teaching their own course on TV, and in Section V the respondents were asked to express their attitudes toward various uses to which television might be put. Section VI gave the respondents an opportunity to comment on what they perceived to be the major advantages and limitations of regional videotape exchange centers.

Findings

The findings were summarized as follows:

1. There were no significant differences among nurse educators ordered according to type of education program in which teaching occurs with regard to their attitudes toward the potential advantages or potential limitations of instruction via closed-circuit television.
2. There were no significant differences among nurse educators ordered according to most advanced degree held with regard to their attitudes toward the potential advantages or potential limitations of instruction via closed-circuit television.
3. There were no significant differences among nurse educators ordered according to years of teaching experience with regard to their attitudes toward the potential advantages or potential limitations of instruction via closed-circuit television.
4. There were no significant differences among nurse educators ordered according to teaching assignments with regard to their attitudes toward the potential advantages or potential limitations of instruction via closed-circuit television.
5. The study suggests that a substantial majority of all the

participants were either very much or moderately impressed with the arguments that television "results in better instruction for more students" and "is a good communication medium. "

6. The majority of nurse educators were generally impressed with the arguments that "great numbers of students could be taught via TV, " but they did not accept the idea that TV somehow could eliminate large classes or reduce the teacher shortage.
7. An item analysis of the data in Section III of the study suggests that the respondents generally were concerned about the possibility that the use of closed-circuit TV might intrude between them and their students, resulting in a loss of personal relationships.
8. A substantial majority of the respondents were favorably inclined toward teaching one or more of their own courses on closed-circuit television.
9. Eighty percent of the respondents indicated that they would be very much interested in using the medium of closed-circuit TV for purposes of allowing students to observe clinical situations so as to increase student understanding of total patient care. High interest was also expressed in the use of television for purposes of assisting the nurse

educator to correlate theory with both medical and surgical procedures, and in the teaching of the principles of communication.

10. Nearly all of the nurse educators expressed an awareness of the cost-saving aspects of a regional videotape exchange center. They expressed the belief that this type of exchange might feature master lessons prepared by clinical specialists. There was general concern that securing the tapes on schedule could become a problem, and that the tapes might become dated.

Conclusions

On the basis of the data collected from participants in this study, no widespread generalizations can be made; the findings, however, do suggest the following:

1. There appears to be no relationship between the nurse educator's present position, degree held, number of years of teaching experience, or present teaching assignment as to what she perceives to be the potential advantages or potential limitations of closed-circuit television instruction.
2. A majority of the instructors did not believe that closed-circuit television could be used to reduce the shortage of

teachers in the field of nursing.

3. The respondents were greatly concerned that the use of closed-circuit television for instruction might result in a loss of personal contact between the instructor and the students.
4. A substantial majority of the instructors were willing to teach one or more of their own courses on closed-circuit television.
5. The respondents showed the highest interest in the use of closed-circuit television for purposes of allowing students to observe clinical situations so as to increase understanding of total patient care.
6. The instructors considered the cost-saving factor to be a principal advantage of a regional videotape exchange center. Another important consideration was that videotapes drawn from the exchange might provide an experience not available locally.
7. In the opinion of the instructors, the major problems associated with regional exchange centers would be those of obtaining materials on schedule, and the possibility that videotapes might be dated.
8. Other possible limitations were the high cost of duplicate tapes and the initial cost of the equipment centers.

Recommendations for Further Studies

Based on the findings of this study, it is recommended that the following studies be made:

1. A study be undertaken to determine whether or not nurse educators separated into teaching and administrative categories show any differences with respect to their attitudes toward the potential advantages of closed-circuit television when used as an instructional tool.
2. A study be undertaken to determine whether or not nurse educators separated into teaching and administrative categories show any differences with respect to their attitudes toward the potential limitations of closed-circuit television when used as an instructional tool.
3. A study should be conducted to determine the extent to which nurse educators prefer to use closed-circuit TV as a means of providing students with relatively concrete experiences, e. g. , a surgical operation in progress, and the extent to which they prefer to appear on television themselves in a lecture or demonstration role.
4. In addition to being used within a classroom, closed-circuit television can be put to various other uses such as allowing students to see themselves in action with the help of

videotapes, or allowing clinical instructors to monitor students as they perform in the patient's room. A study should be conducted to determine the extent to which nurse educators would be interested in these various non-classroom uses of closed-circuit television.

5. Instructors in schools of nursing should be surveyed to determine the precise amount of time in any given course which they would be willing to devote to closed-circuit television.