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ECONOMICS METHODS COURSE.

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THE FEASIBILITY OF USING VIDEOTAPE RECORDINGS
AS A SUBSTITUTE FOR DIRECT OBSERVATION
IN A HOME ECONOMICS METHODS COURSE

DISSERTATION

Presented in Partial Fulfillment of the Requirements for
the Degree Doctor of Philosophy in the Graduate
School of The Ohio State University

By

Lena Charles Bailey, B.S., M.S.

The Ohio State University
1969

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CHAPTER I

MATURE OF THE PROBLEM

Introduction to the problem

This is a feasibility study designed to compare the effectiveness of two techniques of observing classroom teaching and learning. The two techniques which are proposed to be used are direct or in-person observation and observation through the medium of videotape recordings. The overall goal of the study is to find an effective, alternative technique of observation to use in improving the education of prospective teachers in the field of home economics.

The education of teachers has been and is of concern to many in the field of education. The forces at work in an attempt to improve the preparation of teachers have been recorded in Improving Teacher Education in the United States, The Education of American Teachers, and in New Horizons for the Teaching Profession.¹ James B. Conant² emphasized


the significance of a sound academic preparation for teachers as follows:

... an even more fundamental issue is the one contention that seems to be universally endorsed: that the breadth and depth of academic achievement of future school teachers could and should be greater than they are at present.

Dr. Conant\textsuperscript{3} indicates that in any educational process there are three elements: those who instruct, those who are instructed, and the program followed. If the educational preparation of teachers is to be improved so that there are more effective teachers, it would then be reasonable to assume that the process by which teachers are educated should be examined.

The need to look closely at the educational process of preparing teachers is applicable to instructors of general methods courses, as well as other courses which are a part of the teacher education curriculum. Each course should be examined in light of its objectives, the content, and the learning experiences.

With a concern for examining a part of the educational process of teacher preparation, therefore, the effectiveness of the educational experiences of prospective teachers in home economics, the observational aspect of the general methods course was examined. The examination revealed that in-person or direct observation has been a part of the general methods course for approximately ten years and that the same observation procedure has been followed during this time. It seems that in light of present day pupil and program needs, proposals for changing

\textsuperscript{3}Ibid., p. 73.
the observation procedure should be considered. Perhaps it is time for a "switch" in observational procedure and technique. Once a critic accused the late Raymond Clapper, a news reporter, of switching his point of view. Mr. Clapper replied by saying, "Yes, I have switched. I try to learn from events. Events are not consistent; therefore, why should I be consistent? Some people go on the rest of their lives defending it, without ever re-examining it to see whether time and the elements have caused it to decay into a worthless handful of dust. In that way, you can be always consistent and often wrong."

Educators often appear hesitant about changing their "tried and true" methods of teaching. Time and events change the amount and kind of knowledge available and, also, the technology available for use. Therefore, all courses should be periodically examined to determine whether there is a need for change in light of new knowledge of appropriate methods, of objectives of learning, and of materials.

Before proceeding to discuss the changes which this study proposes to make in the observational aspect of a general methods course in home economics, it seems appropriate to consider the purposes of an observational program for prospective teachers.

Observational experiences are generally considered essential for helping future teachers correlate educational theory with educational practice. However, the provision of observational situations alone does not guarantee the desired correlation of theory and practice. Andrews\(^4\) emphasized the importance of careful selection and direction.

of the experiences in the following manner:

The value of an observation depends, of course, upon what is seen, but also, to a very great extent, upon the previous experiences of the viewer and his sophistication and ability to perceive the less obvious. Carefully directed observations for which the viewer has been well prepared usually prove more profitable to students than those which are random and undirected.

Andrews' premise is supported by Houston, Blackington, and Southworth,\(^5\) who have indicated that observers will see the performance only if they know what they are supposed to see and by Murphy,\(^6\) who believes that observers must be told what to look for; the sequence of cause, act, and effects.

There appears to be little doubt that observation is a vital part of the education of prospective teachers. However, it seems evident that if observation is to serve its intended purposes, it must be carefully directed by telling the student observers what to look for in the teaching-learning classroom situation and by providing an opportunity to discuss and interpret the aspects of the learning environment which were observed.

Observation plays its part in the preparation of home economics teachers at The Ohio State University. The course, Principles and Methods of Teaching Applied to Home Economics, is taken by home economics education majors at this university one or two quarters prior to student teaching. Major topics considered in this course are


\(^6\)Geraldine Murphy, "The Prospective Teacher as Observer," The Journal of Teacher Education, XXII (June, 1962), 50.
development of new learnings; youth in today's world; ways of learning about pupils, families, and neighborhoods surrounding the school; the home economics curriculum at the secondary level; designing yearly, unit, and daily lesson plans; class control; teaching techniques, instructional materials and resources; evaluating pupil behavior; computing and assigning grades; the professional role of the home economics teacher, and a home economics teaching philosophy.

Classroom observation is an essential part of this course. The students have been assigned to selected junior high schools in the vicinity of the university for the purpose of observing teaching, learning, and classroom management. It is believed that these experiences will help the student to (1) become more aware of the kind of environment which promotes learning, (2) become sensitive to the needs of youth, (3) understand the physical and mental growth of learners, (4) become aware of the various paces at which pupils learn, (5) know the content and sequence of course offerings in home economics at the junior high school level, (6) analyze and evaluate the presentation of lessons, (7) broaden her concept of the various teaching responsibilities, (8) become sensitive to the specific skills needed for successful teaching, (9) grow in self-understanding and awareness of own personal strengths and weaknesses, and (10) identify the elements of the teaching-learning situation which have an effect upon pupil behavior.

The problem

Efforts have been made in this Ohio State University course to make the direct observational experiences as meaningful as possible.
However, there have been several problems. During a year's time the Student Field Experience office of The Ohio State University places approximately 4200 students in the university area schools for observation. As a result the selection of good teaching-learning situations is at a premium. Scheduling problems have emerged. In addition, college instructors are unaware of what is observed, and therefore, can give little or no direction or guidance to the observation experience.

Factors which have detracted from the quality of observations include the failure to follow-up the observations with discussions or in other appropriate ways. Students must sign up for observations at a time permitted by their schedules. Consequently, it is not possible to have scheduled follow-up conferences. Scheduling problems also prevent the prospective teacher from seeing a variety of teaching-learning situations.

Therefore, the problem with which this study is concerned is to find an effective, alternative technique of observation to use in improving the quality of experiences of prospective teachers. To bring about a change in a conventional method of observation and to become a part of the mainstream of modern technology are incentives which may be expected to add to the excitement of this study.

The development of a relatively new technical device permits a type of observational experience never, until recently, possible. The instrument is the instant replay videotape recorder. It is capable of capturing and playing back on demand a sound and visual record of the
teacher's actual classroom performance. In addition, pupil activities can be captured and recorded on tape.

Through videotape recordings, teacher trainees can observe a teaching-learning situation without being physically present in the room. There are several advantages to videotaped observation: (1) large numbers of students can be accommodated at one time, (2) it reduces the pressure upon public schools, many of which have a large number of observers, (3) it relieves the college personnel of time and correspondence used in placement of observers, (4) students' time and cost to and from the school are greatly reduced, (5) all students see the same class, thus concurrent analysis and discussions can be conducted, (6) the college instructor can be present and can serve as commentator, answer questions and direct discussions, (7) the observation can be related to subject matter presented in the corresponding college course, (8) videotape recordings can focus on selected aspects of teaching and learning, (9) viewing can be arranged in a convenient location, (10) operation is comparatively easy, (11) there is a low initial cost and the reuse of one tape for several recordings further reduces the cost, and (12) there is immediate availability of the finished product.

When the medium of motion pictures is used as the means of observation and compared to videotape recordings, the advantages cited in the previous paragraph, one through nine, apply to film as well as videotape. However, the particular advantages of videotape over motion picture are evident in items ten to twelve.
Purposes of the study

In essence, then, this is a feasibility study undertaken to compare the effectiveness of two techniques of observation, video and direct, with regard to three major effects. The first effect to be tested is students' ability to evaluate critically a home economics lesson presentation. Because of the teacher's influence and responsibility in the learning situation, it is believed important that the teacher trainee learn as much as he can about presenting an effective lesson. Furthermore, it is believed that an ability to analyze a lesson presentation of another teacher will lead to an improved understanding of the key parts of a lesson; therefore, hopefully, it may be expected to improve teaching on the part of the prospective teacher.

For this study, the key or principal parts considered essential to a lesson presentation and assumed relevant to the teaching act are (1) the introduction, (2) the content or teaching-learning points, (3) the methods and materials, (4) the summary or lesson closure.

The second effect to be evaluated is the student observers' opinions about the usefulness of their respective means of observation, direct or video, as a learning experience. It is assumed that the successful use of any new method or medium depends to a great extent upon the student's interest in it and acceptance of it. In addition, it is thought that an awareness of how students assess the usefulness of each technique of observation according to a given set of criteria will be helpful in evaluating the observational program and in offering proposals for change.
The third effect to be evaluated in this study is with regard to the amount of time, cost, and travel inherent in the utilization of each technique of observation. These factors are usually of concern administratively to the personnel involved. The amount of time and money available for both students and staff involved in the application of direct and video techniques is not ad infinitum. Therefore, an answer is sought to the question, "How much does it cost in terms of time and money to use the two means of observation, video and direct?"

Hypotheses

Three major effects are to be evaluated: students' ability to evaluate critically a home economics lesson presentation; student observers' opinions about the usefulness of their respective technique of observation, video and direct; the amount of time, travel, and money involved in the application of each technique of observation. The following statements appear as null hypotheses, hopefully to be disproven:

1. The directed viewing of selected videotaped recordings to classroom situations will not increase the students' ability to evaluate critically a home economics lesson presentation to a greater degree than this same ability will be increased on the part of students who directly observe classroom situations.

2. The video observers' opinions about the usefulness of their particular method of observation will not differ significantly from the direct observers' opinions concerning the usefulness of their particular method of observation.
3. The time, travel, and cost involved in application of the video method will not be greater than the time, travel, and cost involved in the application of the direct method of observation.

Definition of terms

Observation has been described in the literature in conjunction with qualifying words such as, direct, live, in-person, vicarious, and so forth. Two techniques of observation are defined in this study as follows:

1. Video Observation—Observation made by viewing teaching-learning situations which have been recorded on videotape.
2. Direct Observation—In-person observation within a classroom setting.

Assumptions

In planning this study and in stating the hypotheses, certain assumptions are made. It is assumed that classroom observations are an essential part of the program for education of teachers. It is also assumed that learning can take place through vicarious as well as real experiences. In addition, the assumption is made that the videotapes used in this study provide some of the kinds of activities the prospective teachers need to observe. It is further assumed that certain key behaviors of teachers may be observed and identified and that these key behaviors are related to the type and quality of teaching desired in prospective teachers. Finally, it is assumed that instruments can be designed which will measure students' gain in learning and in evaluating student opinions about the two techniques of observation, video and
direct. Furthermore, it is assumed that the data from such instruments can be statistically analyzed.

Limitations

Efforts will be made by this writer to meet conditions vital to systematic comparison of the two techniques of observation but unfortunately it is not feasible to meet all of such conditions.

The hypotheses stated previously requires a comparison of video and direct observation. The question of whether or not these two techniques of observation are superior to the situation in which there is no formal observation is not included in this study. Therefore, there will be no basis for evaluating differences in learning by observation compared with learning in the absence of observational experiences.

The novelty effect of a new and different technique of observation for both student observers and college instructors may be expected to affect the results. In addition, there may be variations in the college instructors' enthusiasm in the two compared situations.

A follow-up appraisal after a considerable period of time will not be made to determine whether or not gain in learning, if any, is temporary or stable.

Finally, the relative crudeness of the instrument for measuring students' ability to evaluate a home economics lesson presentation may affect the results of the study.
A plain bar of iron is worth $5.00, made into horseshoes it is worth $10.50; into needles $4285; into balance wheels for watches it is worth $250,000. The same might be said of new technology in education--its value will be determined by what we make of it.

The above statement made by Cecil J. Hannon, Assistant Secretary for Professional Development and Welfare of the National Education Association, while speaking at the 1966 annual meeting of the Council of Chief State School Officers is relevant to the use of the videotape recorder. Its value will be determined by uses that are made of it.

The purpose of this review of literature is to determine ways in which the videotape recorder has been used in the education of prospective teachers and whether or not it was used effectively. The literature in this area is sparse. Only a few studies indicated in the search are actually available in print. In general these reports dealt with three primary uses of videotape recorders: (1) to record student teacher performance, (2) to record and present episodes of model teacher behaviors or of teaching skills, and (3) as a substitute for classroom observation.

Some teacher training institutions have used what one might call "bit teaching" prior to the regular student teaching experience.
Illinois State University\textsuperscript{7} desired to provide a context within which teaching theory and teaching practice could be united just prior to the student teaching experience. This study was not conducted in the sense that controls were applied, variables identified and statistical analysis made; yet evidence was obtained which indicated that the project was of value to the students involved.

The study involved the use of closed-circuit television observation as part of a teaching assignment for junior-senior participants. There were forty-five girls enrolled in Nursery-Kindergarten Education who volunteered to take part in the study. As a part of this course, the students were required to spend at least two hours a week observing and teaching four and five year old children at the laboratory school. For the study each student planned two short lessons, fifteen to twenty minutes in length, which was presented to a group of four or five children from the laboratory school. The lesson was taught in a closed-circuit television studio in a setting devoid of easily available assistance from the supervisor. Little assistance was provided to each student in hope of eliciting from her a high degree of creativity and responsibility. The student's lesson plan was not turned in for approval; it was never graded.

As each student executed her carefully prepared lesson plan to a small group of children seated on a rug in the television studio, thirteen or fourteen of her student friends and her college supervisor

\textsuperscript{7}Ethel Wooley and Ralph R. Smith, "Studio Teaching before Student Teaching," \textit{The Journal of Teacher Education}, XII (September, 1962), 333-39.
seated in a viewing room down the corridor from the studio observed and evaluated her presentation. An evaluation session took place at the next class session at which time the student teacher was given accumulated evidence from each student observer and the college instructor. In addition, the student teacher and the student observers were given an opportunity to relate educational theory and practice.

A second lesson with another group of four or five kindergarten children was taught three weeks later. Most students felt that their second presentation was an improvement over the first from the standpoint of better organization, greater self-confidence, and more successful teaching. According to each student's report the experience was valuable in that it helped to observe her friends as they taught and it provided a boost to their self-confidence. One student summed it up in this manner:

I feel there is a great deal of value in observing our friends on T.V. In the first place, I think it helps us build confidence in ourselves. We see others teaching with apparent ease and confidence. For the most part they seemed poised and sure of themselves. They don't appear to be at all scared. If they can do it, why can't the rest of us? The girls who taught seemed to enjoy what they were doing.

Of the forty-five participants in the studio-teaching experiment, only one expressed a reluctance to teach in a studio before having an opportunity to practice first. All the students reported they were nervous but that even if the lesson presentation had not been successful the project was worthwhile. Several listed the experience as the most valuable part of the course.

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8Ibid., p. 338.
An overall evaluation of the project at Illinois State University indicated that it met some of the needs of college students in that enthusiasm, creativity, disciplined preparation and careful observation were elicited from them. It also provided an opportunity for students to observe the marriage of teaching theory and teaching practice. There was no planned follow-up to determine the effect of the experiment on the quality of the students' performance during the regular student teaching period.

In a Hunter College experiment video recordings were used as a means of observing and evaluating student teacher performances. The research design involved three supervisory methods: (1) supervision by personal visitation, (2) supervision by the use of kinescope recordings alone, and (3) supervision by a combination of in-person visitation and kinescope recordings.

In supervision by personal visitation, the college supervisor made five separate observations during one semester in the elementary classrooms where the student teacher was teaching. Following each visit, a conference was held at which time the student teacher and the college supervisor discussed the lesson and/or other activities and experiences of the student teacher. Often the content or subject of the conference depended upon the questions asked by the student teacher.

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In supervision by kinescope recordings, the college supervisor did not visit the student teacher in person but observed from a television control room and directed the technician in selecting the views for the recordings. Five kinescope recordings were made of each student teacher and these served as the basis for discussion between the college supervisor and the student teacher.

In supervision using a combination of in-person visitation and kinescope recordings, the college supervisor visited the classroom five times during which the student teacher taught a lesson. As the student teacher taught a kinescope recording was made of the presentation. This recording as well as the college supervisor's notes served as a basis for discussion during the postperformance conference.

Sixty student teachers participated in the study over a three-semester period. Six of these could not be used in the research report because of conditions arising out of equipment problems.

The findings supported the belief that videotape recordings of classrooms can provide a suitable record of teacher and pupil behavior. In addition they provided a permanent record for evaluation purposes. An analysis of the kinescope recordings using an observation schedule especially prepared for the study indicated improvement of student teachers in general but did not indicate important differences among the supervisory methods employed in the study. By contrast, subjective reactions of supervisors and student teachers strongly supported the use of kinescope recordings in teacher education. Student teachers who experienced in-person supervision felt that they did not benefit as much
as those who were supervised using kinescope recordings. The college supervisors preferred a combination of in-person supervision plus kinescope. All supervisors indicated that the use of kinescope recordings sharpened their perception of the teaching process and assisted in their recall of the lesson presentation.

The University of Nebraska\(^{10}\) has been using instant replay portable videotape recorders in a study focused on learning about teaching processes. More specifically, in this study the videotape recorder served seven teaching functions: (1) to present short episodes which are good examples of each of six teaching skills selected to be studied in the project, (2) to present longer teaching episodes which show combinations of skills which demonstrate a style of teaching, (3) to present to the students a number of simulated problems commonly found in working with high school students, (4) to present a variety of teaching episodes to use in training the students how to use Flander's Interaction Analysis, (5) to be used as a feedback device in peer group practice teaching sessions where students attempt to use certain interaction patterns or to use a particular teaching skill, (6) to serve as a feedback system during student teaching in public schools, and (7) as a way of preserving records of student teaching performances from which data could be collected and used.

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\(^{10}\) Alan T. Seagren, "A Project on Techniques of Learning Teaching Processes," University of Nebraska, Lincoln, Nebraska, 1967. (Mimeographed.)
The teaching skills studied in this project were identified as visualization, reinforcement, obtaining feedback, questioning, obtaining attending behavior, and control of student participation. The selection of these teaching skills was based on the premise that there are certain kinds of teaching behaviors which every teacher should know about and be capable of performing. Each student that participated in the study was given several opportunities for practice of the selected skill or skills before actual classroom teaching. An analysis of each skill which had been recorded on videotape was made by using a skill guide sheet and specifically designed subjective evaluation sheets. At the time mimeographed material describing this study was made available, exploratory work in interpreting the data collected from the skill guide sheets and other evaluative devices was in progress. Therefore, final results of the study were not available.

The use of the videotape recorder as a means of learning how to apply selected skills in teaching has been under way at Stanford University¹¹ for some time. The program is now in its sixth year, and is concerned with short teaching episodes. Micro-teaching is a scaled-down technique which allows teachers to apply teaching skills to prepared lessons in a planned series of five- to ten-minute encounters with a small group of students, often with an opportunity to observe the results on videotape. It is scaled down not only in time, five to ten minutes, but also in class size, one to five students. Its unique

characteristic is in the opportunity for immediate evaluation of the teaching performance.

After a lesson has been taught and evaluated by colleagues, supervisors, and participating students, the teacher trainee is, then, provided with an opportunity to reteach. Thus, it becomes a teach-evaluate-reteach cycle.

Teaching a small group of students for a short period of time allows the teacher trainee to focus his attention on mastering a specific skill. As of 1966, the teaching skills with which the Stanford micro-teaching project has been concerned are (1) reinforcement techniques, (2) varying the stimulus situation, (3) three presentation skills—set induction, lecturing and use of audio-visuals, achieving closure, (4) illustrating and use of examples, and (5) student initiated questions. An appraisal guide which has been used in this project has proven to be unsatisfactory because it was designed to measure overall teaching competency rather than a specific teaching skill. However, evaluative instruments to measure progress in each of the identified teaching skills have been recently constructed. They need to be validated and reliability needs to be established prior to their use in the micro-teaching sessions.

Several studies have emerged from the Stanford micro-teaching project since its onset in 1963. Results of clinical studies in 1963, 1964, and 1965 tend to be consistent. Micro-teaching has been effective in producing an improvement in teacher trainees' ability to perform certain teaching skills.
Videotape recordings have been a part of many of the micro-teaching studies. It has been indicated that videotapes are not required in order to carry on a micro-teaching session. Nevertheless, when used, they serve a very functional purpose. The teacher trainee and others evaluating his teaching skill(s) can play back a videotape recording of his performance and thus do a more thorough job of evaluation. The teacher trainee is provided with an opportunity to "see" his strengths and weaknesses. A personal assessment would be much more difficult without video recordings.

Can the videotape recorder be used effectively in the supervision of student teachers? James L. Oliverio's study in which video recordings were used as a substitute for live observation in the supervision of student teachers is representative of the studies conducted to date. The major purpose of his study was to find an answer to the following question: "Does feedback from supervisors who observe video recordings produce more change in trainee's behavior than feedback from supervisors who observe the lesson taught in the classroom?" "Change in behavior" was defined as the degree of change in selected teacher behaviors from one teaching trial session to a subsequent trial session.

The teacher trainees participating in this study were forty-five members of the Stanford University intern program and forty-five student teachers in the secondary education program. These trainees were evaluated by their university supervisors on the following aspects of a

lesson presentation: aims, content, method, and evaluation. The aims of the lesson were evaluated in terms of the degree to which they were developed and understood; the content in terms of its organization and meaningfulness. Method was defined as teacher-pupil communication and evaluation as review and reinforcement.

The experimental treatment required the trainee to have four practice teaching opportunities, two at one session and two at a second session scheduled one week after the first. The complete experimental treatment for one weekly session took about an hour. Each trainee was required to prepare a five-minute lesson on any topic in his major teaching area. He presented his lesson to a group of five high school students who came to the university on the days the teaching demonstrations were held. After the teaching performance, each trainee was provided one of nine different supervisory treatments. These treatments were (1) verbal and videotape feedback from a university supervisor who was not present during the performance, but who observed a videotape of the performance, (2) verbal and videotape feedback from a university supervisor who was present in the classroom when the trainee taught, (3) verbal feedback only from a university supervisor who observed a videotape of the performance, (4) verbal feedback only from a university supervisor who was present in the classroom when the trainee taught, (5) verbal and videotape feedback from a school supervisor who observed a videotape of the performance (school supervisor was a high school cooperating teacher), (6) verbal and videotape feedback from school supervisor who was present in the classroom when the trainee taught,
(7) verbal feedback only from a school supervisor who observed a videotape of the performance, (8) verbal feedback only from school supervisor who was present in the classroom when the trainee taught, and (9) no feedback from a supervisor, trainee analyzed own performance.

With the exception of trainees who received no feedback but analyzed their own performance, each trainee was given thirty minutes to think about the points that the supervisor made during the supervisor-trainee conference; trainees who analyzed their own performance were also given thirty minutes to reflect upon their analysis. Following the thirty minutes of "thinking" time, the trainees then taught the same five minute lesson to a different group of five high school students. The first session was followed by a second session, one week later. Data were collected and analyzed in terms of the change that took place in the trainees' performance between the first teaching attempt and the fourth one. As was noted previously, the following aspects of a lesson presentation were analyzed: aims, content, method, and evaluation.

Results of the study revealed that trainees need to have feedback to change. Verbal plus video feedback was superior to verbal feedback only, and university supervisors seemed to be more effective than school supervisors. Trainees who received feedback from supervisors who observed videotape recordings did not change significantly more than trainees who received feedback from supervisors who observed the lessons in person in the classroom. Mr. Oliverio\textsuperscript{13} reported that the results do not indicate conclusively that video recordings can be

\footnote{\textit{Ibid.}, p. 84.}
substituted for live observation in the supervision of teacher trainees. The results did indicate, however, that certain selected behaviors seemed to be changed as a result of various feedback treatments.

Brigham Young University\(^{14}\) has begun to identify and test a number of abilities which an effective teacher should possess. Videotape recording which will demonstrate the identified abilities have been and are continuing to be made. Two have been produced. The first contains eight teaching episodes, each episode illustrating one or more teaching abilities. The second tape contains a description of various ways of critiquing micro-teaching sessions. In addition, this university has experimented with the production of teaching episodes on 8 mm sound film loops. The episodes were first recorded on videotape, transferred to 16 mm kinescope and finally to 8 mm sound film which was put into a cartridge for loop presentation. These films along with the videotapes will become part of a bank of model teacher tapes and films. The literature provided only a description of the production and possible uses of these videotapes and films, no results of experimental studies were included.

The University of Missouri\(^{15}\) at Columbia, Missouri, has put together a mobile recording unit for use in the student teacher program.

\(^{14}\)The Use of Video Processes in Teacher Education, Vere A. McHenry, Utah Coordinator of the Multi-Teacher Education Project (Salt Lake City, Utah: The Utah State Board of Education, 1968), pp. 3-28.

\(^{15}\)Dixie A. Kohn and Ron J. Turner, The University of Missouri Laboratory School and Office of Instructional Television Co-operative Program: A Description of Roles and Objectives (Columbia, Missouri: University of Missouri, 1968).
On the day a videotape is to be made of a student teacher's performance, the recording engineer drives the mobile unit to the Laboratory school and parks it outside the window of the room in which the recording is to be made. He positions two remotely controlled cameras, one to focus on the student teacher and the other on the pupils, in the classroom along with two wireless microphones. One microphone is placed over the pupils' desks and the other is given to the student teacher. The supervising teacher joins the engineer in the van. The supervisor can give the recording engineer direct instructions and "call the shots." The equipment is sufficiently sophisticated to the point of the use of a split-screen for the purpose of being able to view the student teacher and her pupils simultaneously either at close-up, medium or long range. The supervising teacher is free to take notes as the lesson is recorded. The notes may be used for reference later in a critique session with the student teacher. It is during this session that the videotape recordings are viewed and the student teacher's lesson presentation evaluated. As of December, 1967, seventy-six per cent of the student teachers were videotaped. These recordings have been used primarily for evaluation of student teachers' skills and competencies.

What does research evidence indicate about the differences among observational methods in their capabilities of providing meaningful experiences for observing classroom teaching and learning? In the search for an answer to this question, research which indicated an overall comparative value of varying amounts of direct observation, television, and film was examined. Very few studies which dealt specifically with videotape recordings as a means of observation are
available in the literature. Consequently, relevant research in the use of television, kinescope, and film for observational purposes was reviewed and analyzed because of the similarities in the potential technical performances of each device to that of videotape recordings.

The Esther Jenkins study was based on the premise that guided viewing of selected classroom behavior recorded on videotapes would not only provide a common observation experience for all students but that the observational acuity of the students would improve; that a combination of large screen viewing and direct observation would be superior to direct observation alone; that viewing of videotapes for the development of observational skill prior to direct observation would be superior to viewing of videotapes subsequent to direct observation.

The results of comparisons failed to support the hypotheses. However, when the third and last effect was evaluated, it was determined that viewing of videotapes subsequent to direct observation produced more observational acuity than did the reverse procedure.

Painter's study of the comparison of film and direct observation provided interesting results. The hypothesis underlying his study was that the use of film of classroom activities would contribute as much to student learning in a professional education course as would having students do in-person observation in public school classrooms.


17 W. I. Painter, Production and Use of Classroom on Film versus Traditional Observation in Teacher Education (Akron, Ohio: University of Akron, 1961).
The hypothesis was supported by the results of the initial and final tests which had been designed to measure progress toward the objectives of the course, Human Development and Learning.

During the initial period of Painter's study the results were slightly in favor of the use of films; during the second period the differences were statistically significant in favor of films; and during the final period there was no difference between the achievement of the two groups, film and in-person observation. The differences which appeared in the initial and second periods, disappeared in the final period of the study. In other words, the outcomes were different each time the experimental variables were tried out with a group of students. The results of comparing test scores during the first application of the two methods of observation revealed that the students who observed films achieved slightly higher scores. During the second application of the two methods, those who observed by films made statistically greater achievement on test scores. However, during the third and final application there was no significant differences between the achievement of the two groups, film and in-person.

The reasons the outcomes were different during each of three applications were not determined. Perhaps this was due to a "halo" effect, dwindling enthusiasm by students and faculty members, an evaluation instrument which failed to assess consistently, inappropriate statistical procedure, or due to a combination of these factors and/or others not mentioned here.
Patrick hypothesized that viewing of documentary films would increase the understanding of the teaching process and that they would be considered advantageous by the students when compared to direct or live observations used in the general methods course.

Three objective type evaluation instruments were constructed to test the understanding of methods, attitudes, and psychological implication of secondary education. These were used as pretests and posttests. An essay type of examination was used as a posttest to assess the advantages of the film method of observation. Several criteria were used to determine the success of student teachers: (1) interviews of student teachers by college supervisors, (2) comparison of planning, and (3) performance profile completed by a master teacher.

The test results and comparisons revealed no significant difference in the understanding of the teaching process between those students participating in live observations and those viewing the documentary films. The film group obtained significantly greater value from the film observations than did the control group from the live observation. On an essay examination, the film group gave greater evidence of understanding teaching processes. Results of assessing student teacher success indicated that those trained by the film method performed significantly better in their student teaching than those trained through live classroom observation.

When Painter's and Patrick's studies are compared, there is evident, at least, one similar outcome. In Painter's final application of the two methods of observation, film and live, there was no significant difference in the achievement of the two groups on an objective type test. This was also the result of the same kind of treatment in Patrick's study. However, the latter's study goes beyond this to the use of an essay examination and to a follow-up study of the participants in student teaching. Here the results indicated that students in the film observation group achieved significantly greater success than those in the live observation group.

Desmond Wedberg used a combination of sound motion pictures, soundstrips, soundslides, and audio tape recordings as a means of observing teaching and learning. These methods of observation were compared with direct observation using three different procedures with three comparable groups of students. One group observed a minimum of thirty hours in elementary and secondary public school classrooms; a second group observed a minimum of ten hours in public elementary and secondary school classrooms following ten hours of on-campus programmed observation experiences consisting of the audio-visual techniques previously mentioned in this paragraph; a third group was provided ten hours of on-campus observation experiences consisting of the audio-visual devices mentioned for group two, but they did not engage in direct or live classroom observation.

When the three groups were compared in terms of gain on a sixty-item multiple choice test based on factual information presented during classroom observation, the experimental groups showed greater gains than did the control group. This group had received thirty hours of direct or live classroom observation.

The researcher in this study indicated that neither of the three groups gained a great deal from the observational experiences. In addition, he concluded that the minimal-cost instructional materials proved feasible for the intended purposes, and that instructional efficiency is not necessarily correlative to technical proficiency. The researcher indicated further that problems had been encountered in capturing on film a classroom in operation and in recording intelligible sound from the teacher and all the students at the same time.

Fulton and Rupiper sought an answer to the question, "Would the viewing of film and slide sequences which depict educational principles be as effective as direct classroom observational experiences of similar situations?"

Participants in the study were students enrolled in three professional education courses. This was a sequence of courses required of students enrolled in the College of Education at the University of Oklahoma. Each course required that the students enrolled attend three hours of lecture and one hour of observation per week. The observations

were made at the University school and other selected public schools in the university area. For observations, either direct or vicariously by film and slide sequence, the students were randomly assigned to the various sections. Approximately forty-five students were in each section of the three courses.

To determine the effectiveness of each of the observational techniques, a series of instruments were selected and used: The Cooperative School and College Ability Tests, Minnesota Teacher Attitude Inventory, Sims SCI Occupational Rates, and especially designed achievement tests. The first three tests were given as a basis for isolating such factors as scholastic aptitude, attitudes toward teaching, and identification with a particular socio-economic level which might bias the results of the study.21

The achievement tests for each course consisted of one hundred multiple-choice items with four possible responses. These tests were given at the onset of the study and again as the final examination in each of the three courses. When the two methods of observation were compared with respect to achievement in the three courses as measured by the multiple-choice tests, only one statistically significant was found. This difference occurred with students in the first course of the professional sequence, The School in American Culture. Those who observed by the film and slide sequence achieved significantly better scores on the achievement test. No statistically significant differences were found in the other two courses in the required sequence.

21 Ibid., p. 43.
This study is similar to others previously mentioned in this review of related literature. It is similar in relation to the use of two different methods of classroom observation, in the use of a multiple-choice test to measure course achievement, and in the results of the test, which have shown no statistically significant differences in the achievement of the two groups involved in the studies.

A similar technique, except television was used instead of film, was tried by Rogers and Woodward\textsuperscript{22} at the San Jose State College, San Jose, California. Students enrolled in Education 104--Elementary Curriculum and Observation, took part in a research project which extended over a period of five semesters. Three groups engaged in television observation of school classroom activities plus varying amounts of in-person observation. These students were compared with two control groups who received no television observation but made in-person observations. The results of this experiment revealed no significant difference in course achievement among the five groups--three experimental, two controlled, or between combined experimental and combined controlled. Television was as effective as the total estimated amount of in-person observation.

At this point it should be recognized that several of the studies have revealed "no statistically significant differences." It also should be noted that the San Jose State College findings indicated

\textsuperscript{22}W. R. Rogers, \textit{Television Utilization in the Observation Program for Teacher Education} (San Jose, California: San Jose College, 1962); John C. Woodward, "The Use of Television in Teacher Education," \textit{The Journal of Teacher Education}, XV (March, 1964), 56-60.
that television was as effective as the total estimated amount of in-person observation. This is a more positive way of stating the results. If the two methods of observation, vicarious (film, video recordings, or television) and direct, are equally effective in terms of course achievement as revealed by a multiple-choice test, what, then, are the strengths and limitations of the two methods? The studies reviewed have provided limited information with regard to the logistics of applying various methods of observation and in identifying the kinds of learnings acquired by various methods of observation.

A study by Stoller, Lesser, and Freedman\(^2\) in which direct observation, television, and film were compared revealed results which are similar to other studies with the exception of one aspect of the study which was different. These researchers hypothesized that kinescope recordings would provide a more effective medium of observation than closed-circuit television, and that closed-circuit television would be, in turn, more effective than the traditional procedure of direct observation in elementary classrooms. Participants in this study were 288 female students enrolled in the undergraduate teacher-training program at Hunter College. All were juniors having no practical teaching experiences in classrooms. An objective multiple-choice test of knowledge about teaching methods failed to show any differences in the observational conditions. However, an essay examination assessing an ability to evaluate an observed classroom lesson revealed that film

provided a more effective medium of observation than did closed-circuit television and closed-circuit television, in turn, was more effective than direct observation in school classrooms.

In summary, the review of related literature indicated that videotape recordings have been used primarily in three ways: (1) to record student teaching performances, (2) to present episodes of model teacher behavior, and (3) as a means of observing classroom teaching and learning.

The results of the studies reviewed are fairly consistent. It appears that one method of observation is as effective as another in terms of course achievement as measured by an objective, multiple-choice test. However, when essay examinations have been used to assess one particular part of an observation program, such as an evaluation of a lesson presentation, the results have indicated that those who observed by film, closed-circuit television, or videotape recordings have performed better on the test.

With this as a frame of reference, an assumption which seems probable to make is that controlled viewing as in film and/or video recordings, aids the learner in acquiring certain kinds of knowledge or competencies not acquired as effectively in the direct observation experiences. Since the learner's viewing is controlled and directed, he is able to concentrate without being distracted by noise, movement and other things such as would be evident in direct observation.

Based on the results of the studies using essay examinations to assess specific learnings, it seems safe to assume that video
recordings could be used effectively as a means of learning competencies needed in teaching, such as questioning, demonstrating, using generalizations, and many others.
CHAPTER III

METHOD AND MATERIALS

As previously noted, this study is concerned with the observa-
tion part of a general methods course in home economics. The study was
conducted during the winter quarter of the academic year 1967-68 and
repeated again during the following spring quarter of the same academic
year. The decision to extend the study for an additional quarter was
made on the basis of the size of the sample. There were twenty-eight
students enrolled in the class during the winter quarter and this was a
relatively small number from which to collect data. Consequently, the
study was repeated with twenty-two students during the spring quarter.
Therefore, the total number involved was fifty.

All students taking part in the study were in their senior
year having only one or two quarters of study remaining prior to gradu-
atation. One of the remaining quarters would be devoted to student
teaching.

During each of the experimental quarters the students involved
that quarter attended lecture-discussion sessions three days a week but
for observational experiences, they were divided into two groups. One
group was referred to as the direct observation group and the other, the
videotape group. Equal numbers were maintained in each group.
To divide the students into two groups, the following procedure was used:

1. The cumulative point-hour ratio of each student for all college and university work was secured from her personal record in the college guidance office.

2. The numbers representing the cumulative point-hour ratio were arranged in order from the highest to the lowest. Then, they were divided into two groups so that the spread of cumulative point-hour ratios, and the average cumulative point-hour ratio for each group were approximately the same.

3. The two groups were arbitrarily designated as direct observation group and videotape group.

The observation experiences for both the video and the direct observation groups began during the fourth week of the quarter and were concluded the eighth week. A total of five observations were made per quarter. A quarter is composed of approximately ten weeks.

**Direct observation procedure**

On the day of the first class meeting of both the winter and spring quarters, the class and work schedules for each student were obtained. After the class had been divided into two groups for observational purposes, the schedules were examined to determine the time each student had set aside for observation. Working with the Student Field Experience Office in the College of Education, students in the direct observation group were assigned to observe in selected local junior high schools.
The observers were assigned to two home economics classes in the seventh, eighth, or ninth grades. Each class met for two periods. Observers spent four consecutive class periods in the school. The class periods were approximately forty minutes in length, amounting to about 160 minutes of observation time. There were two observers assigned to a school. Each such session of four consecutive class periods constituted an observation.

Prior to observing the junior high school home economics classes, the observers met with the college instructor. In an attempt to maximize the value of each direct observation experience the students were prepared for viewing in terms of (1) location of the school, (2) background information about the home economics program in the school, (3) time to report, (4) procedure to follow upon arriving at the school, (5) objectives of the observation program, (6) activities which might be carried out during the experience, and (7) filling in and returning observation report forms. In addition to this information, details regarding the observation of specific lessons were discussed. A basis for viewing was established. This included the lesson objectives, introduction, content, teaching strategies and instructional materials, and the closing or summary.

A weekly follow-up session for the purpose of discussing the observation experience was not feasible because of scheduling problems. Since time had to be spent to get to and from the school plus time for observation at the school, no remaining period of time was available at which all students could get together with their college instructor for follow-up discussions and/or other activities. Therefore, the students
did not meet again, as a group, until the end of the five-week observa-
tion period. This was a time of sharing individual ideas and experi-
ences and evaluating the observation program in general.

The members of each of the two groups were asked to refrain from
discussing their particular means of observation with members of the
other group.

Videotape observation procedure

The observers met once a week at a designated time and place for
five consecutive weeks. The length of each weekly observation session
was about 180 minutes which corresponded somewhat to the amount of time
spent in the public schools by those in the direct observation group.
Thirty to forty minutes of this time was used for viewing a videotape
recording of a secondary classroom situation. The remaining time was
used to discuss the videotaped teaching-learning situation which had
been viewed.

In an attempt to maximize the value of each videotape observa-
tion experience the students were prepared for viewing during the first
observation session. A basis for viewing the lesson in terms of the
(1) objectives, (2) openings or introductions, (3) major teaching-
learning points, (4) teaching techniques, (5) instructional materials,
and (6) closing and/or summary was established and discussed. In
succeeding sessions other factors such as the teacher's personal
competencies, the physical facilities in the classroom, and the pupils
were discussed prior to viewing the videotapes. Each week important
considerations were identified, written on the chalkboard, and discussed
prior to viewing. Written report forms were not used since it was felt that filling in a report form during the viewing would be a detriment to viewing. However, the observers were free to take notes if they so desired.

The videotaped lessons ranged in length from thirty to forty minutes. Only one tape was viewed per observation session. During the viewing, the tape was occasionally stopped so that verbal emphasis could be placed on an important aspect of the lesson or to provide opportunity for the observers to ask questions. After the lesson had been viewed, the tape was on occasion re-run so that an observer could clarify her thinking or ask questions relative to some aspect of the lesson.

Following the viewing of the videotapes, a variety of techniques were used to stimulate discussion and group interaction. Such techniques as buzz sessions, round table discussion, small groups of three or four per group and role playing were used. Interaction during each session was lively and stimulating.

Each week the students dramatized a particular aspect of the lesson observed. For an example, during the second observation session, the opening or introduction of a lesson was acted out in terms of how the observers would do it if they were teaching the same lesson as the one observed via videotape. A discussion followed each role playing activity.

Each observation session closed with the observers responding to the question, "What did this observation session mean to you?" The responses were general statements about the significance of the session.
to them. The statements provided feedback on the kinds of things observed and the perceptiveness of the observer.

Videotape equipment

The videotape recorder used in this study was a one-half inch portable machine. A distinction should be made between the professional and the portable instruments. The professional machine is expensive ranging in price from $25,000 to $80,000 or more. It requires extensive technician support but provides an excellent recording for use in almost any television broadcast situation. By contrast, the portable devices are relatively inexpensive ranging in price from $1200 to $7500. The videotape recorder used in the present study can be operated by inexperienced personnel. It will provide a satisfactory recording for certain specific but rather limited circumstances.

The videotape recorder will record both sound and visual images. This requires a microphone, a camera, and a recorder or tape deck. In addition, it requires television sets or monitors to display the recorded sounds and images. Thus, a video tape recorder can be used as a production system and as a display system. In this study the videotape recorder was used both as a production and as a display system.

To provide a pleasant and convenient arrangement for viewing the videotape recordings, two twenty-one inch television monitors were used. The monitors were mounted on forty-eight and thirty-six inch viewing stands (see Figure 1).
Videotape recordings used in study

Various home economics teachers in the Columbus area were asked to participate in the study by permitting their classes to be recorded. Six teachers and their pupils, with the permission of the students' parents and school administrators, consented to take part.

This writer met with the teachers individually to discuss the lessons. They agreed to take part and were assured that the tapes would not be used unless it met with their approval. Each teacher and her pupils were permitted to view the videotape upon its completion. If the teacher approved, the tape was then reviewed by this writer. Only one tape of the six made was unacceptable. This tape was eliminated because of poor technical qualities.

Prior to each videotaping session this writer met with the home economics teacher to discuss and plan the lesson. This meeting took place in the school, giving this college instructor an opportunity to observe the class; to meet the pupils; to analyze the physical set-up of the classroom.
The pupils were prepared for videotaping the lesson by being told the reasons for taping and by having described to them the step-by-step procedure. The students were permitted to ask questions. Following this, they were given parental permission forms which were to be returned prior to the taping session.

All lessons were taped in the classroom regularly used by the home economics teacher. All lessons were part of the current unit under study by the students. However, in most situations, the length of the lesson was altered because the size of the reel of tape limited the lesson to forty minutes. All videotapes made were of young teachers. The decision to do this was based on the assumption that college students would identify more readily with teachers nearer their own age.

On the day the lesson was videotaped, the students were oriented to the equipment. They were shown how the camera and microphone operated. They were permitted to see themselves on the monitor. The students always responded to the situation quickly and appeared eager to see the playback of the lesson.

The final selection of the five videotape lessons was reviewed several times by this college instructor to determine technical and educational qualities. A representative tape was reviewed by a university seminar group studying in the area of radio and television education. This group included two College of Education professors, one taught a course in methods of teaching social studies, Professor Eugene Gillom, and the other is an authority in the field of educational television, Dr. I. Keith Tyler.
The final selection of videotapes consisted of the following:

1. Illustrated Lecture--The teacher in this lesson presented theory regarding the use of color in clothing to a class of senior high school girls. She used the chalkboard, flannelboard, and bulletin board as teaching aids. Toward the end of the lesson, supervised study was used.

2. General Class Discussion--The teacher introduced a class of seventh grade students to the concept of line. The students were encouraged to participate through the teacher's use of audio-visual materials, through questions, and by a situation analysis.

3. Demonstration--The teacher gave a demonstration to a small group on how to put in a hem. The remainder of the class did work in the laboratory on clothing construction.

4. Group Process--The teacher was not the dominant force in this situation. One of the class members took responsibility for introducing the lesson, keeping the discussion moving, and for summarizing. The lesson topic was on mate selection. The class participants were senior girls with previous courses in home economics.

5. Question and Answer Technique--The concept of reducing fullness in clothing construction was introduced to a mixed group of students in home economics. Some students had previous classes in home economics; others had none. Their ages ranged from fourteen to seventeen. Throughout the presentation, questions were used to stimulate group interaction. Visual aids were used to help to explain difficult concepts.
Although the video observers were able to view five different teaching-learning situations as recorded on videotape, this was not possible for the direct observers. The direct observers were placed in pairs in a school for five weekly observations. These were made at the same time each week for 160 minutes. The observers saw the same group of students each week. They saw usually either a foods preparation class or a clothing construction class. Because of the time, travel, and correspondence involved, it was not possible for the direct observers to view five different teaching-learning situations.

Methods of evaluation used in the study

One of the most difficult but most interesting problems in conducting a study of this kind is that of designing appropriate and effective instruments for evaluating the goals or objectives of the study. An examination was designed with the intent of assessing students' ability to evaluate an observed home economics lesson presentation by responding to essay type questions dealing with various aspects of the lesson. In writing about the essay examination, Frank F. Gorow indicated that when it is used for purposes to which it is suited, when carefully constructed and rigorously scored, it has no equal as a measuring instrument.

The essay form was selected because the ability to supply information was sought rather than the ability to recognize

interpretations and applications of knowledge. In addition, restricted response essay questions were used. It was determined through reading that this type of essay question assesses the outcome previously mentioned better than the extended response questions.25

One of the problems encountered in the use of the essay examination is that of marking and scoring the responses in a consistent manner. To insure consistency and that answers of equal merit were given the same number of points, the following procedure was used in marking the essay test:

1. Before scoring any paper, a list of main points which should be included in every answer was made.

2. A scale of nine for scoring each question was used. "Five" represented satisfactory or average; "nine" the best answer that could be written; and "one" was assigned to an unacceptable answer. The nine point value scale ranged from superb to unacceptable and made provision for varying degrees of performance.

3. A sampling of papers were read to obtain a general idea of the quality of answers to expect.

4. To insure consistency, all answers to the first question were read and scored before proceeding to the next. As the answers were read, the papers were sorted into three piles; average, better-than-average, and below average.

5. Next, the papers were read again and each pile resorted into three smaller piles. The result was nine piles ready to be assigned a

score of one, two, and three for below average; four, five, and six for the average; and seven, eight, and nine for the better-than-average. An unanswered question was marked as zero.

6. After the score was assigned to each of the first questions, the papers were shuffled and the process of scoring repeated until all answered questions had been scored.

The essay examination was administered prior to the beginning of the observational program and again at the end of the observational experiences. To provide all student observers with a live lesson presentation to observe, following which they would evaluate by taking the essay examination, the following procedure was used:

1. Local home economics teachers and classes were used. The teachers were selected on the basis of their teaching performance and on their willingness to participate.

2. The lesson presented was in an area of home economics which did not duplicate the content of any of the observations in the course. The lessons were planned jointly by this college instructor and the home economics teacher.

3. The lesson was taught in a college classroom large enough to accommodate the home economics teacher, pupils, and the college students who were to observe the lesson. The teacher and the pupils occupied the front of the room; the college students sat at tables in the rear of the room. These were the students in the direct observation group; they were to and had observed in local junior high schools (see Figure 2).
4. As the teacher taught the lesson, it was recorded by the videotape recording system previously described in this paper.

5. The lesson was approximately thirty minutes in length.

6. Immediately after the lesson presentation, the home economics teacher and her pupils vacated the classroom. Then, the college students took the essay examination which required them to evaluate the lesson in approximately forty minutes.

7. At a previously designated time and place, the college students assigned to the videotape group viewed the lesson via videotape and then took the essay examination in approximately forty minutes.

The questions which comprised the essay examination were--

1. What appeared to be the objectives of the lesson?

2. What was accomplished through the lesson introduction?

3. What were the major teaching-learning points?

4. Describe the teaching techniques and the instructional materials which led to understanding the major teaching-learning points.
5. What was accomplished through the lesson closure?

6. How did the teacher provide for practical application of the lesson?

7. What technique to motivate pupil participation did the teacher use most?

8. How did you know that the objectives were accomplished?
Cite two examples.

The decision to test each group using its representative means of observation was based upon the need to have each group equally familiar with the testing conditions. It was difficult to control the testing conditions and it is possible that the test and the conditions under which it was administered contained confounding elements. The essay questions were the same for the pre and post measure; the lesson which the students evaluated by the essay test was not the same for the pre and post test situations. The evaluation of different lessons is not completely comparable; therefore, this testing situation may make certain conclusions ambiguous.

To ascertain the students' opinions about the usefulness of the two means of observation, an observation experience questionnaire was developed. Observers filled in the questionnaire following the completion of the observation experience. It was composed of four sections. All four sections were completed by those in the video group; the first three sections by those in the direct observation group.

Section I of the questionnaire asked the observer to indicate her opinions about the usefulness of the experience with regard to
helping her understand more about the learner, the classroom environment, and the responsibilities of the teacher. Section II asked the observer to respond to questions about the physical conditions under which she observed, the number of times observed, and her interest in the observations. Section III asked the observer to indicate the means by which she would prefer to observe in the future along with additional things she liked and did not like about the means of observations as she experienced it. Section IV was completed by the video group only and required each to respond to how much importance was attached to certain factors related to the conditions under which each viewed the videotape recordings.

Students in the direct observation group were asked to keep a record of the mode of travel to and from the school, the number of miles to and from the school, travel time, and the cost involved in getting to and from the school. A form on which to keep the record was provided for each student and it was turned in at the completion of the direct observation experience. This writer kept a record of time, travel, and the cost involved in producing and presenting the videotape recordings.

Other forms used in this study included a permission slip and a class schedule sheet. The permission slip was completed and signed by parents of the students who were videotaped during the recording of the lessons in the local secondary schools. The class schedule sheet was filled in by each student in the college methods course. The information compiled from these schedules was used in assigning students in the
direct observation group to junior high schools and in arranging a time and place for the other group to view videotape recordings.

When each of the instruments or forms was administered, this college instructor was present to provide directions and to answer any questions which the students wanted to ask.

In summary, the evaluative methods used in this study included a sample of teaching followed by an essay examination in which students were assessed on their ability to critically evaluate a home economics lesson presentation, and a questionnaire designed to assess the students' opinions about the usefulness of their respective methods of observation. In addition, other devices used in this study were a class schedule form, time-travel-cost form, and a parental permission slip.
CHAPTER IV

RESULTS OF THE STUDY

This study was designed to investigate the relative effectiveness of two methods of observation of home economics teaching by prospective teachers. One method, video observation, involved the viewing of videotape recordings as a means of observing teaching and learning. The other method, direct observation, required in-person visits to local schools to observe teaching and learning. The direct observation procedure used in this study was the one customarily followed in connection with the general methods course in home economics at The Ohio State University. The video observation procedure was designed by this instructor for the purpose of finding an effective, alternate method of observing classroom teaching and learning.

This chapter will present a description and analysis of the essay test used in this study, followed by the actual achievement scores of the two groups as measured by this test. Additional data are given with regard to student opinions of the two approaches as assessed by a questionnaire and relating to the amount of time, travel, and money which are involved respectively in the application of each of the two methods of observation.

Essay test

Following the student viewing of a sample lesson presentation, an essay test, designed to determine students' ability to evaluate a
home economics lesson presentation, was administered prior to the beginning of the observation experiences and again five weeks later at the conclusion of the experiences.

The test required the observers to evaluate the sample lesson presentation by (1) identifying the objectives of the lesson; (2) identifying and describing the accomplishments of the introduction; (3) describing the major teaching-learning points; (4) describing the teaching techniques and instructional materials used to develop an understanding of the major teaching-learning points; (5) describing the accomplishments of the lesson closure; (6) describing how the teacher provided for practical application of the lesson; (7) identifying the techniques used to motivate pupil participation; and (8) describing how they (the observers) knew that the objectives were accomplished (Appendix, p. 99).

The test was composed of seven items which were assigned a value or weight of "nine" except item three which had two parts; each part was given a value of "nine." Thus, seventy-two was the total score possible for the test.

The essay test was deemed an appropriate measuring device for this study because of the kind and level of the objective being measured. The objective for which a measurement was sought was--to determine students' ability to evaluate a home economics lesson presentation.

Frank F. Gorow26 indicates an essay test can be used effectively in the measurement of interpretation, application, and analysis and

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26 Gorow, Better Classroom Testing, p. 86.
evaluation. In addition, he indicates that the essay test can be used to put emphasis upon problem solving. In some aspects, the essay test, as used in this study, is similar to a problem solving situation. The students involved in the study observed a sample lesson presentation (the problem situation), then took an essay test which required them to respond to questions about the presentation (make interpretations and applications).

To measure the objective previously stated, it was thought that it would be important to have students being tested to supply knowledge and interpretations rather than to recall or recognize the information. Norman E. Gronlund\textsuperscript{27} has pointed out that the essay test can be used effectively in this manner. The essay type questions used in this study were stated in such a manner that the responses would be restricted rather than extended. Again, Mr. Gronlund has indicated that the restricted response essay test can be used effectively in assessing the ability to supply interpretations.

One of the serious objections to the use of the essay is the unreliability of scoring. A number of studies have shown that teachers cannot agree with each other in scoring essay tests. Furthermore, there are studies which show that an individual teacher's rating will vary on a second rating of the same set of answers to essay questions. Therefore, one of the main problems in scoring essay tests is to maintain consistency. Provisions for maintaining consistency, thereby increasing

\textsuperscript{27}Gronlund, Measurement and Evaluation in Teaching, p. 193.
the reliability, in scoring has been suggested by Stanley,\textsuperscript{28} Gronlund,\textsuperscript{29} and Gorow.\textsuperscript{30} The system as suggested by the latter was followed in scoring the essay tests used in this study.

Before scoring any test paper, a list was made of the main ideas which should be included in each of the answers. A possible weight of nine, as previously mentioned, was assigned to each of the test items. "Nine" represented the best answer that could be written; "five" an average or satisfactory answer; "one" was assigned to an unacceptable answer. A sample of the papers were read to determine the quality of answers to expect. Then the following steps were taken in grading and assigning a score to the answers of each of the test items: (1) all answers to the first question were read and scored before proceeding to the next and as the answers were read the papers were placed in one of three piles--average, better-than-average, and below average, (2) the papers were read again and each pile resorted into three smaller piles: the result was nine piles ready to be assigned a score of one, two, or three for below average; four, five, or six for average; seven, eight, or nine for better-than-average, (3) after a score was assigned to each of the first questions, the papers were shuffled and the process of scoring repeated until all answered questions had been evaluated and scored.


\textsuperscript{29} Gronlund, \textit{Measurement and Evaluation in Teaching}, p. 190.

\textsuperscript{30} Gorow, \textit{Better Classroom Testing}, p. 94.
The pre-test scores for the winter quarter direct observation group ranged from 25 to 43 and they ranged from 28 to 41 for the spring quarter group. The combined winter and spring quarter direct observation group pre-test scores ranged from 25 to 43. The range of pre-test scores for the video observation group for the combined quarters was almost the same as the direct group, 25 to 40. The pre-test scores for the winter quarter group ranged from 28 to 40; for the spring quarter they ranged from 25 to 36.

The post-test scores for the winter quarter observation group ranged from 29 to 43 and they ranged from 25 to 45 for the spring quarter group. The scores ranged from 25 to 45 for the combined winter and spring quarter direct observation groups. The post-test scores for the winter quarter video observation group ranged from 25 to 65 and the spring quarter from 38 to 50. The combined winter and spring quarter video observation groups had post-test scores which ranged from 25 to 65. These were raw test scores before any statistical process had been applied.

Statistical treatment of data

As has been indicated previously, this study was conducted during the winter quarter of the academic year 1967-68 and repeated during the following spring quarter of the same academic year. There were twenty-eight students enrolled in the methods course during the winter quarter. Since this was a relatively small number from which to collect data, the study was repeated with twenty-two students enrolled in the spring quarter methods course. Even with the combined numbers, a
total of fifty students, the sample size was considered small. Therefore, the decision was made to combine the data collected from the four groups, two winter (video and direct) and two spring (video and direct), and treat it statistically as two groups, video and direct.

In comparing the achievement of the two groups, it is necessary to determine whether differences, if any, between the two groups are due to the method of observation or are due to the known differences, such as intelligence, between the groups of students before they started the observation experiences. By use of the analysis of covariance statistical process, these known differences or variables can be held in covariance or constant making it possible to compare the two groups as though they were equal. In essence, in studies where it is impossible to make groups equal before applying the experimental or dependent variable, the use of analysis of covariance makes it possible to eliminate the effects of some important variables which cause initial differences in groups. Since the groups used in this study were unequal, analysis of covariance was used to equate the differences between the groups in order to compare the two groups as though they were equal.

The results of this method of statistical analysis are displayed in Tables 1 and 2. As indicated in Table 1, the winter quarter groups, combined video and direct, had a pre-test mean of 35.1 and an adjusted post-test mean of 36.6. The spring quarter groups, combined video and direct, had a pre-test mean of 32.1 and an adjusted post-test mean of 42.8. ("Adjusted" indicates that the mean scores were adjusted for the effect of the covariant.) There is a significant difference between the
### TABLE 1

**MEANS OF PRE-TEST AND UNADJUSTED AND ADJUSTED POST-TEST SCORES BY QUARTERS AND GROUPS**

<table>
<thead>
<tr>
<th></th>
<th>Post</th>
<th>Pre</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Unadjusted</td>
<td>Adjusted</td>
</tr>
<tr>
<td>Winter Quarter</td>
<td>38.1</td>
<td>36.6</td>
</tr>
<tr>
<td>Spring Quarter</td>
<td>40.5</td>
<td>42.8</td>
</tr>
<tr>
<td>Video Group</td>
<td>42.7</td>
<td>43.0</td>
</tr>
<tr>
<td>Direct Group</td>
<td>35.0</td>
<td>34.7</td>
</tr>
</tbody>
</table>

### TABLE 2

**ANALYSIS OF COVARIANCE FOR TESTING THE EFFECTS OF TIME AND METHODS OF OBSERVATION ON POST-TEST SCORES AFTER ADJUSTING FOR PRE-TEST SCORES**

<table>
<thead>
<tr>
<th>Source</th>
<th>df</th>
<th>Sum of Squares</th>
<th>Mean Squares</th>
<th>F Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quarters</td>
<td>1</td>
<td>300.4357</td>
<td>300.4357</td>
<td>14.669**</td>
</tr>
<tr>
<td>Groups</td>
<td>1</td>
<td>724.0780</td>
<td>724.0780</td>
<td>35.354**</td>
</tr>
<tr>
<td>Quarters by Groups</td>
<td>1</td>
<td>167.8971</td>
<td>167.8971</td>
<td>8.198</td>
</tr>
<tr>
<td>Error</td>
<td>41</td>
<td>839.7034</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>44</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Critical value at 1% significance level.** $(1.40) = 7.31$. 
two adjusted post-test means, 36.6 for the winter quarter groups and 42.8 for the spring quarter groups, as revealed by a F ratio of 14.699 (Table 2). A probability of .01 (one per cent level) was chosen as the level of significance. The critical value of the F statistic with (1,40) degrees of freedom at .01 (one per cent) is 7.31.

There was a significant effect for the time or quarter of observation on the amount of gain on the essay test. In other words, the spring quarter groups, combined direct and video, showed significantly greater gains on the essay test than did the winter quarter groups, combined video and direct.

Following this same rationale, a comparison is made of the two methods of observation. Table 1 shows that the pre-test mean for the video observation group was 33.7 and the adjusted post-test mean was 43.0. This same table indicates that the pre-test mean for the direct observation group was 34.2 and the adjusted post-test mean was 34.7. There is a significant difference between the adjusted post-test mean of the video observation group and the adjusted post-test mean of the direct observation group as revealed by a F statistic of 35.354 (Table 2). There was a significant effect for the method of observation on the amount of gain on the essay test. This is to say that the students who observed by the video method of observation made significantly greater gains on the essay test than the students did who observed by the direct method.

Table 2 reveals a F ratio of 8.198 for quarter of observation by method of observation. This means that there is some interaction between quarter of observation and method of observation. With the data
available from this study it is not possible to determine the point of interaction.

In summary, Table 2 indicates there is a significant effect for quarter or time of observation on the adjusted post-test mean and similarly for method of observation on the adjusted post-test mean. In addition, there is a significant effect for interaction between quarter of observation and method of observation.

Results of student observer questionnaires

In any teaching-learning situation, the student is the raison d'etre. As a result of teaching a methods course for several quarters, this college instructor realizes the relationship between how students feel about an educational experience and the success of that experience. Ultimately, the success of any educational endeavor depends upon the students' acceptance of it. Therefore, the student observers were asked to give their reactions to observation either by the video method or the direct method. Their reactions were secured by means of a questionnaire composed of four parts (Appendix, pp. 95-97).

The questionnaire was composed of items considered significant to a successful observational experience. For several quarters prior to this study, a record was kept of the various kinds of things the students observed during their observational experiences; likes and dislikes; problems encountered, and so forth. This record of past observational experiences served as a basis for selecting the items included in the questionnaire used in this study. The results of the student observers'
responses to each of the items in the questionnaire are discussed in the following paragraphs.

The first part of the student questionnaire was composed of eighteen functions of observation. Four major concepts were selected and used as a framework for developing this part of the questionnaire. These concepts were learning, the learning environment, planning, and implementation of plans. These particular concepts were used because knowledge and understanding of them is generally considered essential to preparation for teaching and success in teaching. Many college general methods texts have been written in light of these learnings. In addition, these concepts were among those used in planning and developing the general methods course in home economics at The Ohio State University. It was felt that there was a need to determine the extent, if any, to which the observational experiences contributed to developing and expanding an understanding of these concepts.

The student observers were asked to evaluate the eighteen functions by rating each one as very useful (3), useful (2), and somewhat useful (1), uncertain (0) or not useful (-1). The numbers in the parentheses indicate the weight or score assigned to each rating and were used as a means of identifying the relative importance of each level of rating. The weighted responses from the members of the two groups were tallied. From the data collected, a mean score was determined (a) for each function of observation and (b) for each of the two groups, video and direct. A t-test of significance was applied to the mean scores to determine whether or not a statistically significant
difference could be evidenced in each of the mean scores of the two groups. A probability of .01 and/or .02 respectively was chosen as the levels of confidence or significance. Table 3 provides the results of this statistical procedure.

According to the results of the t-test of significance as used in this study, there was no statistically significant difference in the mean scores of the two groups, video and direct on the following seven functions of observation: (1) the kind of environment which promotes learning, (2) ways of identifying pupil problems in learning, (3) ways of gaining class control, (4) understanding the elements of the teaching-learning situation, (5) the content of course offerings in home economics, (6) the role of the teacher in the classroom, and (7) the atmosphere or tone of the classrooms. In other words, on seven or approximately 39 per cent of the eighteen functions of observation as rated by the two groups, a statistically significant difference was not evident.

In some ways, it is surprising that no significant differences on these seven functions of observation were evident. Video observation is controlled observation. The observer's view of the classroom is limited to the range of the camera. However, video observers apparently felt that a sufficient amount of the classroom, the pupils, and the teacher could be seen through the eye of the camera. At least, sufficient enough to be able to determine the kind of environment which promotes learning and ways of identifying pupil problems, the teacher's role and others mentioned in the preceding paragraph. Perhaps the most surprising outcome was that the observers felt that they could sense the
<table>
<thead>
<tr>
<th>Observation Function</th>
<th>Mean Scores</th>
<th>t</th>
<th>Level of Confidence</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Video</td>
<td>Direct</td>
<td></td>
</tr>
<tr>
<td>Usefulness of the observation in helping to understand:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. The kind of environment which promotes</td>
<td>2.375</td>
<td>2.227</td>
<td>-0.592</td>
</tr>
<tr>
<td>2. Differences in mental abilities among learners</td>
<td>0.292</td>
<td>2.318</td>
<td>6.458</td>
</tr>
<tr>
<td>3. The different paces at which pupils learn</td>
<td>0.750</td>
<td>1.864</td>
<td>3.151</td>
</tr>
<tr>
<td>4. Differences in the interests of pupils</td>
<td>1.417</td>
<td>2.318</td>
<td>2.521</td>
</tr>
<tr>
<td>5. Differences in the emotional development of learners</td>
<td>0.750</td>
<td>1.864</td>
<td>3.256</td>
</tr>
<tr>
<td>6. Differences in the physical growth and development of learners</td>
<td>0.542</td>
<td>2.409</td>
<td>6.237</td>
</tr>
<tr>
<td>7. Ways of identifying pupil problems in learning</td>
<td>1.348</td>
<td>1.182</td>
<td>-0.455</td>
</tr>
<tr>
<td>8. Ways of gaining class control</td>
<td>1.917</td>
<td>1.773</td>
<td>-0.419</td>
</tr>
<tr>
<td>9. The elements of the teaching-learning situation which have an effect upon pupil behavior</td>
<td>2.458</td>
<td>2.364</td>
<td>-0.341</td>
</tr>
<tr>
<td>10. The content of course offerings in home economics</td>
<td>1.500</td>
<td>1.364</td>
<td>-0.456</td>
</tr>
<tr>
<td>Observation Function</td>
<td>Mean Scores</td>
<td>t</td>
<td>Level of Confidence*</td>
</tr>
<tr>
<td>----------------------</td>
<td>-------------</td>
<td>-----</td>
<td>---------------------</td>
</tr>
<tr>
<td></td>
<td>Video</td>
<td>Direct</td>
<td></td>
</tr>
<tr>
<td>11. The specific skills needed for successful teaching of home economics</td>
<td>2.750</td>
<td>1.667</td>
<td>-4.561</td>
</tr>
<tr>
<td>12. The importance of each part of the lesson plan to a successful lesson presentation</td>
<td>2.958</td>
<td>1.722</td>
<td>-4.529</td>
</tr>
<tr>
<td>13. The influence of planning upon effective lesson presentation and pupil learning</td>
<td>2.913</td>
<td>2.182</td>
<td>-2.981</td>
</tr>
<tr>
<td>14. How to use effectively a variety of teaching techniques</td>
<td>2.542</td>
<td>1.364</td>
<td>-4.237</td>
</tr>
<tr>
<td>15. How to use instructional materials in a way that promotes learning</td>
<td>2.500</td>
<td>1.364</td>
<td>-5.097</td>
</tr>
<tr>
<td>16. The role of the teacher in the classroom</td>
<td>2.542</td>
<td>2.364</td>
<td>-0.676</td>
</tr>
<tr>
<td>17. The various responsibilities of the home economics teacher</td>
<td>1.000</td>
<td>2.045</td>
<td>2.611</td>
</tr>
<tr>
<td>18. The atmosphere or &quot;tone&quot; of the classroom</td>
<td>2.375</td>
<td>2.545</td>
<td>0.736</td>
</tr>
</tbody>
</table>

*Critical values .10 .05 .02 .01

1.680 2.015 2.414 2.692
atmosphere or tone of the classroom. On the other hand, mankind has been able to "feel" from viewing pictures, still or motion, since the first camera was invented.

The direct observation group had significantly greater mean scores than did the video group on six functions of observation. Five of the six functions were concerned with differences in mental abilities of learners, paces at which pupils learn, the interests of pupils, the emotional development of learners, and the physical growth and development of learners. The other function dealt with the various roles of the home economics teacher.

The video observation group had significantly greater mean scores than did the direct observation group on five functions of observation. These functions were concerned with various aspects of presenting lessons. They were—skills needed for successful teaching of home economics, the importance of each part of the lesson plan to a successful lesson presentation, the influence of planning upon effective lesson presentation and pupil learning, how to use effectively a variety of teaching techniques and how to use instructional materials in a way that promotes learning.

In summary, eighteen functions of observation were rated as very useful, useful, somewhat useful, uncertain or not useful by the members of the two groups, video and direct. Each of the ratings had a corresponding score or weight which indicated the relative importance attached to the rating. These scores which represented the ratings from the students were tallied and then a mean score was calculated for each of the functions of observation. Then, a t-test of significance was
applied to the mean scores to determine whether or not a statistically significant difference was evident. The results of this test indicated that no statistically significant differences in the mean scores of the two groups were evident on seven functions of observation. However, there were statistically significant differences in the mean scores of the two groups on eleven functions of observation. Six of the functions of observation had mean scores significantly greater for the direct observation group. Five functions of observation had mean scores significantly greater for the video observation group.

Further to assess student observers' opinions pertinent to the study, they were asked to give their reactions to ten questions which constituted the second part of the questionnaire. The observers responded to the questions by checking yes, no, or uncertain. Table 4 is a tabulation of their responses. The responses are presented in percentages for ease in understanding, rather than in actual numbers of students who responded to the question in one of the three ways possible.

The responses to the questions in this study will be discussed as being markedly different (differences of 25 to 50 per cent between the two groups), somewhat different (15 to 23 per cent) and very slightly different (3 per cent or less).

Questions seven and nine were the ones noted showing only a slight difference in the responses of the two groups. Question seven was concerned with the number of times the students observed. Fifteen or 68 per cent of the direct observation group felt that they had observed approximately the right number of times. It is noteworthy that seven members of each of the two groups (29 and 32 per cent respectively)
<table>
<thead>
<tr>
<th>Question</th>
<th>Total Responses</th>
<th>Yes</th>
<th>No</th>
<th>Uncertain</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Did you look forward to the observation experience each week?</td>
<td>22a 24b</td>
<td>14</td>
<td>3</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>19  13</td>
<td>79</td>
<td>13</td>
<td>5</td>
</tr>
<tr>
<td>2. Do you feel that you had adequate preparation for observation?</td>
<td>22  24</td>
<td>15</td>
<td>2</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>21  11</td>
<td>68</td>
<td>9</td>
<td>2</td>
</tr>
<tr>
<td>3. Did you do the things that you thought you would do when you first</td>
<td>21  24</td>
<td>17</td>
<td>4</td>
<td>-</td>
</tr>
<tr>
<td>began the observation experience?</td>
<td></td>
<td>81</td>
<td>19</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>11  7</td>
<td>46</td>
<td>29</td>
<td>6</td>
</tr>
<tr>
<td>4. Could you hear what was taking place in the classroom?</td>
<td>20  24</td>
<td>18</td>
<td>-</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>10  5</td>
<td>90</td>
<td>-</td>
<td>9</td>
</tr>
<tr>
<td>5. Could you see what was taking place in the classroom?</td>
<td>21  24</td>
<td>21</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>13  3</td>
<td>100</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td></td>
<td>55</td>
<td>12</td>
<td>8</td>
</tr>
<tr>
<td>6. Did you feel that you spent more time each week observing than you</td>
<td>22  24</td>
<td>4</td>
<td>17</td>
<td>1</td>
</tr>
<tr>
<td>should?</td>
<td></td>
<td>18</td>
<td>77</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td></td>
<td>--</td>
<td>24</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td></td>
<td>100</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>7. Did you feel that the number of times you observed was about right?</td>
<td>22  24</td>
<td>15</td>
<td>7</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>17  7</td>
<td>68</td>
<td>32</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td></td>
<td>71</td>
<td>29</td>
<td>-</td>
</tr>
<tr>
<td>Question</td>
<td>Total Responses</td>
<td>Yes</td>
<td>No</td>
<td>Uncertain</td>
</tr>
<tr>
<td>----------------------------------------------------</td>
<td>-----------------</td>
<td>-----</td>
<td>----</td>
<td>-----------</td>
</tr>
<tr>
<td></td>
<td></td>
<td>No.</td>
<td>Perc</td>
<td>No.</td>
</tr>
<tr>
<td>8. Do you feel that you gradually lost interest in the observation experience?</td>
<td>22 24</td>
<td>8</td>
<td>36</td>
<td>14</td>
</tr>
<tr>
<td>9. Do you feel that the observation experience contributed to your preparation for student teaching?</td>
<td>22 24</td>
<td>21</td>
<td>95</td>
<td>1</td>
</tr>
<tr>
<td>10. Do you feel that the post observation discussion was helpful?</td>
<td>22 24</td>
<td>16</td>
<td>72</td>
<td>5</td>
</tr>
</tbody>
</table>

^aUpper level numbers indicate ratings by direct observation group.

^bLower level numbers indicate ratings by video observation group.
indicated a negative response to this question. Since the students provided a written explanation for the negative response, it is significant that in each situation the observers indicated that they would like to have observed more times rather than a lesser number of times.

Question nine was concerned with the student's opinions of the contribution of the observation experience to her preparation for student teaching. Ninety-five per cent of each of the two groups indicated that they felt the observation experience made a contribution to their preparation for student teaching. One member of the direct observation group indicated a negative response and one member of the video group indicated an "uncertain" response.

The responses to questions four and five concerned with the observer's ability to see and hear during the observation experiences were among the ones which revealed marked differences between the two groups. It is evident that members of the direct group felt that they could hear and see satisfactorily since the affirmative responses were 90 per cent and 100 per cent respectively. By comparison only 42 per cent of the video group indicated that they could hear what was taking place in the classroom and 55 per cent indicated that they could see what was taking place in the classroom. It should be kept in mind that by virtue of the technical qualities of the videotape recorder, seeing and hearing is limited. For the most part, the videotape recordings used in the study were made with the focus on the teacher. Her activities could be seen clearly and her voice heard clearly. On the other hand, the camera was focused a limited amount of time on the pupils. The voices of the pupils could not be heard distinctly because the sound
system of the portable videotape recorder used in this study was not adequate.

Question ten was another question in which the responses were markedly different in the two groups. It was concerned with the post-observation discussions. One hundred per cent of the video group felt that the post-viewing discussions were helpful. Seventy-two per cent of the direct observation group felt that their post-observation discussion was helpful. It seems important to point out that the latter group had only one discussion session which was held at the end of the five in-person visits to local schools. Therefore, the members of this group had a very limited basis upon which to make judgments about the post-observation discussion sessions.

A tabulation of the responses to question eight revealed a marked difference in the responses of the two groups. Eight or 36 per cent of the direct observation group felt that they gradually lost interest in the observation experience. Since interest is a key factor in learning, it seems that this bit of information should be taken into consideration when planning future direct observational experiences.

Finally, there was a marked difference in responses of the two groups to question three. Eighty-one per cent of the members of the direct observation group indicated that they did the things they thought they would do when they first began the observation experience. It would seem that the direct observers were more familiar with what to expect from their method of observation. However, this was not true of
the video observers since more than half of the latter group responded negatively or uncertain to this question.

In summary, five questions had responses which were markedly different in the ratings of the two groups; three questions were noted as having responses that were somewhat different; two questions were noted as having reactions from the two groups that were very slightly different.

The third part of the student observer questionnaire required the observers to respond to the question: "If a course you needed next quarter required observation, with which of the following methods do you think you would prefer to observe?" The students were provided with four responses from which they were to check one: direct observation, videotape, combination of direct observation and videotape, no preference. The results of their responses have been plotted in Figures 3 and 4.

![Figure 3](image)

**Fig. 3.--Direct Observers' Preference of Observational Methods**
Fig. 4.--Video Observers' Preference of Observational Methods

Information collected from the student observers during the initial stages of this study revealed that sixty-four per cent of each of the two groups had made in-person or direct classroom observations prior to this study. This may have had some influence on the observer's preference of a method of observation. It seems to indicate that the video observers had a better basis on which to indicate a preference since sixty-four per cent of that group had had some direct observation experience in addition to their video observation experience. The direct observers, on the other hand, had had no video observational experience. Therefore, their preference was made on a more limited basis. However, all observers had been exposed to television classes at some time during their college experiences which may have helped them to become aware of the potential of videotape for observational purposes.

Figures 3 and 4 indicate a majority of both (50 per cent or more) groups, video and direct, preferred a combination of video and direct for future observation experiences. It is interesting to note that none of the video observers wanted to observe solely by the direct
method but that 31.8 per cent (or seven) direct observers indicated they preferred to observe by that method.

The fourth and final part of the student observer questionnaire was directed only to members of the video observation group. These observers were asked to rate five conditions of observation as very important, important, questionable importance, uncertain, or unimportant.

Each of these ratings were assigned a score of 3, 2, 1, 0, and -1 respectively. These scores were used to indicate the relative degrees of importance attached to each of the five conditions of observation. After the student observers had responded to each item, the corresponding scores were tallied and then a mean score was calculated for each one. Table 5 reveals the results of the responses of the members of this group.

It appears that these observers felt it to be very important to be provided with an opportunity to share opinions and ideas with someone immediately following a video observation. In addition, they thought it important that the college instructor be present with the class during the observation sessions and that she be able to call attention to aspects of the class situation while the videotape is in progress. However, these same observers indicated that it is of questionable importance to have all members of a video section present during the observation period and that it is of questionable importance that the observation take place on campus.
TABLE 5

RELATIVE IMPORTANCE OF CERTAIN CONDITIONS OF OBSERVATION AS RATED BY TWENTY-THREE VIDEO OBSERVERS

<table>
<thead>
<tr>
<th>Conditions of Observation</th>
<th>Mean Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>How much importance did you attach to the fact that—</td>
<td></td>
</tr>
<tr>
<td>1. Your college instructor was present with the class during observation session?</td>
<td>2.26</td>
</tr>
<tr>
<td>2. All members of your section were present during the observation?</td>
<td>1.52</td>
</tr>
<tr>
<td>3. Your college instructor was able to call attention to aspects of the class situation while the videotape was in progress?</td>
<td>2.52</td>
</tr>
<tr>
<td>4. Your observation took place on campus?</td>
<td>1.43</td>
</tr>
<tr>
<td>5. You had an opportunity to share your opinions and ideas with someone immediately following the observation?</td>
<td>3.00</td>
</tr>
</tbody>
</table>

^3.00 Very important 0.00 Uncertain
2.00 Important -1.00 Unimportant
1.00 Questionable importance

Evaluation of time, travel, and cost

The third and final aspect of this study is concerned with the amount of time, travel, and money involved for the student observer in the application of the direct and video methods of classroom observation. To determine the amount of time involved, the student observers were asked to keep a record of the amount of time used in traveling to and from the local schools. All other time records were maintained by this writer.

Table 6 provides some information about the amount of time expended in various aspects of the observational methods. The figure
TABLE 6

A COMPARISON OF THE AMOUNT OF TIME USED BY STUDENT OBSERVERS IN THE VIDEO AND DIRECT METHODS OF OBSERVATION

<table>
<thead>
<tr>
<th>Activity</th>
<th>Average Time in Hours</th>
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<tbody>
<tr>
<td></td>
<td>Video</td>
</tr>
<tr>
<td>Observation</td>
<td>2.5</td>
</tr>
<tr>
<td>Follow-up Discussion</td>
<td>12.5</td>
</tr>
<tr>
<td>Travel</td>
<td>--</td>
</tr>
<tr>
<td>Total Average Hours Per Student</td>
<td>15.0</td>
</tr>
</tbody>
</table>

representing the amount of time spent in observing classroom teaching-learning situations was determined (1) by the length of the videotapes and (2) by the length of the class periods of the local schools. The direct observers spent four class periods, each one forty-two minutes in length, once a week for five weeks. This amounted to 168 minutes of observation per week or a total of 840 minutes for the five-week period. This was an average of 14.0 hours of observation time per student observer.

Each of the videotapes used in the video observation experiences was thirty minutes in length. During each of the two quarters, winter and spring, the video observers met once a week for five weeks to view the tapes. Therefore, the total amount of time spent in observing these tapes per quarter was two and one-half hours per video observer.

Following the viewing of the tapes, the video observers used two and one-half hours per week discussing the videotapes. This came to an average of 12.5 hours per video observer. The direct observers were prevented from having an opportunity for follow-up discussion sessions
because there was no time available when all members could meet together. They met once for a three-hour session each quarter after they had completed all observation experiences in the local classrooms.

According to records kept by the direct student observers, 75.1 hours were expended in traveling to and from local schools. This was an average of 3.4 hours per student observer. Transit time to and from off-campus schools ranged from a total, for the round trip, of 15 minutes to a total of 120 minutes with an average round trip taking 41 minutes.

Time was involved in the application of the two methods of observation for the administering unit. Time was devoted to locating places and assigning students to local schools; to preparing and orienting students for the direct observation experience. Approximately 10 to 15 hours was expended each quarter in these activities. Time was used in planning for and in making the videotape recordings which were used in the video observational experience. This amounted to about thirty hours.

In summary, the amount of student time used in observation of teaching-learning situations, follow-up discussions, and travel to and from local schools came to a total of 15.0 hours per student observer in the video method of observation and 20.4 hours per student observer in the direct method of observation.

The direct student observers were asked to keep a record of the number of miles traveled to and from the local schools. Their records show that 1,644 miles were traveled during the winter and spring quarters when this study was underway. This is an average of 74.7 miles
per student observer. The number of miles traveled per school visit ranged from 1.5 to 36 miles with an average round trip covering 14.9 miles. Eighteen of the twenty-two off-campus observers used a private automobile for transportation. Only one observer used solely a public bus as a means of transportation. Three other observers rode the bus on a few occasions but were able to ride with a friend most of the time. Very few problems relating to their observation experiences were encountered by the off-campus observers. The only one identified was in relation to the difficulties of driving during bad weather.

The video observers did not keep a mileage record since their experiences were held on campus. However, 168 miles were traveled in the process of making the videotape recordings used in this study.

Cost involved in the application of the two methods of observation was another factor under consideration in this study. The figures reported herein are those which represent the "obvious" cost involved in the application of the two methods. "Hidden" cost, such as clerical work and others, are not included because of the complexity of the problems encountered in trying to arrive at an accurate figure.

The amount of money used in the application of the direct method of observation was determined from reports of the student observers. They reported that $31.25 was spent for transportation purposes during the winter quarter and $22.45 during the spring quarter. The amount came to a total of $53.70 or $2.44 per student observer. Each observer was made responsible for making travel arrangements and financing her way to and from the local schools. On the other hand, video observation
sessions were held on campus. Therefore, cost to the video observers was nil. However, the application of this method did involve the use of some money.

The videotape recorder, camera, and monitors were rented for $125.00 per quarter or a total of $250.00. Six videotapes were purchased at $40.00 each or a total of $240.00. The cost of travel to schools to make the video recordings was calculated at nine cents per mile for 168 miles. This came to a sum of $15.12. The three major items—rent of videotape equipment, videotapes, and travel—came to a total of $505.12. When this sum is averaged per student observer, it amounts to approximately $21.00 each.

It is estimated that the videotapes would not need replacement for several quarters. Assuming a continued use of them and prorating the total expense involved, say over a period of three years or nine quarters with an average of twenty-five students per quarter, the cost per student observer would be greatly reduced to $2.25 per observer. Since the onset of this study, the videotapes have been used two additional quarters reducing the cost to $5.26 per student observer.

Some problems were encountered both while making the videotape recordings and, also, in playing them. Although the video equipment was portable, it weighed about fifty pounds and created such problems as lifting, placing, and carrying such a heavy load along with several other pieces of equipment.

Once in the classroom situation, problems of lighting, locating available electrical outlets, placement of video equipment, and seating arrangements for the pupils had to be met and solved.
In playing back the videotapes there was a distracting buzzing sound on each one. Although the equipment was thoroughly checked out by a technician, the cause was never determined. Student observers indicated that after viewing the first tape, the buzz in the background ceased to disturb them. Generally, the sound system on the one-half inch portable videotape recorder used in this study was inadequate. However, the visual image was good.

Results of the study related to hypotheses

A comparison of the two methods of observation was evaluated in terms of data related to three "effects" in this study. They were students' ability to evaluate a home economics lesson presentation; student observers' opinions about the usefulness of their respective method of observation, video and direct; the amount of time, travel, and cost involved for the student in the application of the two methods of classroom observation.

Hypothesis I

The directed viewing of selected videotaped recordings of classroom situations will not increase the students' ability to evaluate critically a home economics lesson presentation to a greater degree than this same ability will be increased on the part of the students who directly observe classroom situations.

This hypothesis was evaluated by administering an essay test to the student observers following a sample home economics lesson presentation. According to the results of an analysis of the test scores, the video student observers made statistically greater gains on the test
than students did on the same essay test who observed by the direct method. Therefore, the null hypothesis is rejected.

Hypothesis II

According to each of eighteen identified functions of observation, the video observers' opinions about the usefulness of their particular method of observation will not differ significantly from the direct observers' opinions concerning the usefulness of their particular method of observation.

Data used to assess this particular aspect of the study was provided by means of a student observer questionnaire (Appendix, p. 95). Each student responded to eighteen functions of observation, in light of their particular method of observation, by rating each one as very useful, useful, somewhat useful, uncertain, or not useful. The ratings were tallied and then a t-test of significance was applied. The results showed that the two groups of observers, video and direct, did not differ significantly on seven of the eighteen items. However, the two groups differed significantly at the .01 and .02 levels of confidence on eleven items. Therefore the null hypothesis is rejected.

Hypothesis III

The amount of student time, travel, and cost involved in the application of the video method will not be greater than those involved in the direct method of observation.

The amount of time involved for students in the video method of observation was 15.0 hours per student observer as compared to an average of 20.4 hours per direct student observer.

The direct student observers traveled an average of 74.7 miles per student observer. The video observations were held on campus,
therefore, no travel to off-campus schools was involved for the video observers.

The direct observers reported that $53.70 or about $2.44 per student observer was spent in traveling to and from the local schools. There was no money involved for traveling purposes for the video observers. However, there was money involved in the application of the video method of observation. This came to a total of $505.12 or an average of $21.00 per student observer. This cost was borne by the administering unit. Since the amount of time, travel, and money involved for the student in the application of the direct method of observation was greater than those involved for the student in the video method of observation, the null hypothesis is accepted.
CHAPTER V

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

Today, observation of classroom teaching and learning is an inherent part of many of the professional courses required in the educational program for prospective teachers. Some educators have indicated that classroom observation provides an opportunity for the prospective teacher to see an intermeshing of teaching theory and teaching practice. Other educators have indicated that the provision of observational experiences alone does not guarantee a correlation of theory and practice. Furthermore, they point out that the observation must be carefully selected and directed if the teacher trainee is to see the relating of the practical to the theory discussed in methods courses or other courses. The question of whether or not direct classroom observation serves this purpose and others has not been fully answered by research. Perhaps this is because some consider classroom experimentation to be ineffective.

The belief that classroom experimentation or research is ineffective is based upon the number of variables involved and the difficulty of identifying and controlling the variables. However, this kind of research is necessary for determining the effectiveness of the present methods of teacher preparation. It is essential that an attempt be made to make the research as accurate and as sound as possible so
that proposals for change in the educational process can be offered and so that other studies can be built upon it.

This present study is concerned with feasibility. It represents an attempt to find an effective, alternative method of observation of teaching and learning, to be used in improving the educational experiences of prospective teachers in the field of home economics.

Purposes of the study

Specifically, the concern of this study was with two methods of observing classroom teaching and learning, direct classroom observation, and observation by means of videotape recordings. Three major effects of observing by these two methods were evaluated. The first effect evaluated was the student observers' ability to evaluate critically a home economics lesson presentation; the second effect evaluated was students' opinions about the usefulness of their respective method of observation with regard to eighteen functions of observation; the third effect assessed was the amount of time, travel, and money involved in the application of the two methods of observation.

Description of the sample

This study involved fifty female students enrolled in a general methods course in home economics at The Ohio State University, twenty-eight one quarter and twenty-two in a succeeding quarter. All students were in their senior year having only one or two quarters of study remaining prior to graduation. One of the remaining quarters would be devoted to student teaching.
Observational procedure

The regularly scheduled methods course in home economics requires the students to attend three forty-eight minute lecture-discussion sessions per week per quarter. In addition, the students are required to observe assigned home economics classes in local junior high schools for four consecutive periods per week. The junior high school class periods are approximately forty-two minutes each.

During each of the two quarters in which this study was underway, the students enrolled in the general methods course in home economics attended the regularly scheduled lecture-discussion sessions but for observation they were divided into two groups for assignment to one of the two methods of observation, direct or video. Equal numbers were maintained in each of the groups. The cumulative point-hour ratio for all college and university work was used as a basis for dividing the students into two groups. The spread of cumulative point-hour ratios (2.26 to 3.47 for video and 2.27 to 3.78 for direct) and the average cumulative point-hour ratios (2.70, video; 2.72, direct) for each group were approximately the same. The two groups were arbitrarily assigned as direct observation group and video observation group.

The direct observation group made five visits to a local junior high school to observe home economics classes. These visits were made for five consecutive weeks, one visit a week. The observers went in pairs to various local schools. In some situations there were two pairs of observers in one school because there were two home economics teachers in the school. During each of these visits to the junior high
school, the student observed two different home economics classes. Each class met for two school periods or about eighty-four minutes. Therefore, the student observers spent about 168 minutes observing each week.

The student observers had been prepared for the direct observational experiences by telling them the kinds of things they should look for while in the school. They were directed to observe the physical facilities and instructional materials available in the classroom. In addition, they were directed to observe the pupils with regard to their physical, social, and intellectual differences; the various rates at which they learn; evidences of various kinds of learning; experiences which motivate the pupils; evidences of group interaction. Finally, the student observers were directed to observe the teacher in terms of her relationships with pupils, the motivational techniques used, and her competencies in presenting lessons. The student observers were prepared to observe and then evaluate the lessons presented in terms of the objectives, content, method, and materials. Forms on which they were to record their observational experiences were provided for each observer.

There was no time available in the direct observers' schedules immediately following the observation experiences when they could meet together as a group to discuss and interpret their experiences. Therefore, the entire group did not meet together as a group except once prior to the five-week observation period and once following the five-week observation period. However, since these observers were assigned
in pairs to a school, they were able to discuss the observation experience with one another.

The video observation group met for five consecutive weeks for approximately 180 minutes a week at a designated time and place. These observers viewed videotaped recordings of selected teaching-learning situations for thirty minutes each week. Following this activity, the observers discussed and interpreted the videotaped recordings for the remaining time. In addition to discussion, the observers reconstructed the lesson viewed by using various techniques such as small group work and role playing.

The video observers had about the same preparation for viewing as did the direct group. In essence, they were directed to look at the physical classroom facilities, the pupils, and the teacher in as much as was permitted by the videotape recordings.

**Video equipment used in this study**

A portable, one-half inch, instant playback videotape recorder was selected to use in this study. The complete set of equipment included a camera, the recorder, and two nineteen-inch receivers or monitors mounted on viewing stands.

**Evaluation methods used in this study**

Of concern for this study was the development of devices for evaluating the effects of the two methods of observation. An essay test was developed especially for this study to assess the students' ability to evaluate critically a lesson presentation. In addition, a
questionnaire was developed for the purpose of determining student opinions about their respective method of observation according to eighteen identified functions. Student reactions or opinions to certain other aspects of their respective method of observation was also assessed through the use of the questionnaire.

The following hypotheses were selected and then used as a basis for evaluation in this study:

1. The directed viewing of selected videotaped recordings of classroom situations will not increase the students' ability to evaluate critically a home economics lesson presentation to a greater degree than this same ability will be increased on the part of students who directly observe classroom situations.

2. The video observers' opinions about the usefulness of their particular method of observation will not differ significantly from the direct observers' opinions concerning the usefulness of their particular method of observation.

3. The amount of time, travel, and cost involved in the video method of observation will not be greater than those involved in the direct method of observation.

Conclusions

As a result of statistical analysis and evaluation, the first two hypotheses stated were rejected and the third accepted.

1. Members of the two observational groups, video and direct, were tested on their ability to evaluate a home economics lesson presentation. The essay test required the observers to evaluate the lesson presentation with regard to the introduction, the major
teaching-learning points, method, materials, motivational techniques, and the summary or lesson closure.

Test scores were analyzed using the analysis of covariance technique. The results indicated that the students who observed classroom teaching-learning situations recorded on videotape achieved significantly higher scores on the post-test than did students who observed off-campus in classrooms. Therefore, the hypothesis that the directed viewing of selected videotape recordings of classroom situations will not increase the student's ability to evaluate a home economics lesson presentation to a greater degree than this same ability on the part of the students who directly observe classroom situations was rejected on the basis of a statistical analysis of the test scores.

2. The members of each of the two observational groups involved in this study were asked to respond relative to eighteen functions of observation in terms of whether or not their respective method of observation was useful. These functions were concerned with selected aspects of learning, the learner, planning, and implementation of lesson plans.

It was determined that both groups found their observational experiences useful. However, there was a statistically significant difference at the .01 and .02 per cent level of confidence on eleven of the eighteen functions. Therefore, the hypothesis was rejected.

3. The third hypothesis stated that the amount of time, travel, and cost involved in the video method of observation will not be greater than those involved in the direct method of observation was accepted.
It is imperative to understand that the time, travel, and cost referred to in the preceding hypothesis is that of the student observer rather than the instructor or the administering unit.

The time involved in the application of the video method of observation was less than the time involved in the application of the direct method of observation; an average of 15.0 per video student observer as compared to an average of 20.4 per direct student observer. Time was evaluated with respect to the number of hours involved in observing lessons, follow-up discussions, and travel.

The total number of miles traveled was 1,644 for those who observed by the direct method. This was an average of 74.7 miles per student observer. A range of 1.5 to 36 miles traveled per visit was recorded with an average round trip covering 14.9 miles. Since the video observation sessions were held on campus, no travel was involved for these observers.

The total amount of money used by student observers who made in-person classroom visits was for traveling purposes. These students reported that, as a group, they spent $53.70 or approximately $2.44 per student observer. There was no money involved for traveling purposes for the video observers. However, there was cost involved in the application of the video method of observation. This was borne by the administering unit.

In the video method, money was used for rent of video recording equipment, videotapes, and travel. The total sum was $505.12 or an average of $21.00 per student observer. It is important to bear in
mind, however, that as the videotapes continue to be used in future observation experiences, the average amount per student observer will be greatly reduced.

Recommendations

Certain implications for further study and research can be drawn from this study. In view of its findings and current available information on the use of videotape recordings in other teaching situations, there is little doubt that Home Economics could profit from using them. A recognized advantage is their value in capturing and preserving lesson presentations of exceptionally fine teachers. It is, therefore, recommended that there be further development of the use of videotape recordings of the performances of superior home economics teachers. Such recordings could be used in developing a bank of tapes to be used either in a pre-service or in-service program for teachers. Stanford University and Brigham Young University have such a "model tape" bank under way. The tapes are being used in teaching selected teaching competencies to members of their undergraduate education programs.

At least two aspects of evaluation connected with this study bear further investigation: (1) the use of this type of essay to appraise the ability to evaluate teaching and (2) the methods used in determining the relative cost of the video and direct methods of classroom observation.

First, the essay may have provided a rather rough measurement of students' ability to evaluate a home economics lesson presentation.
The reliability level may have been low because of the amount of subjectivity involved in grading and scoring each test item. Steps were taken to insure that each item was graded in a consistent manner. Nevertheless, it was difficult to maintain consistency.

The conditions under which the lesson presentation was observed and the test administered probably contained confounding variables which may well have had an effect upon the outcomes of the test. In a live lesson presentation where students, teachers, and observers are involved there are many existing variables almost beyond control. There is probably less consistency and standardization in this evaluation setting than in other testing environments. It is, therefore, recommended that there be further development of the use of the essay test in measuring students ability to evaluate a home economics lesson presentation.

Second, there was an indication in this study that the "true" cost of using the video and direct methods of observation, as used in this study, was not determined. Cost factors related to faculty and other personnel involved (salaries) were not taken into consideration; neither was consideration given to the cost of such supplies as stencils and paper. It is, therefore, recommended that in subsequent studies of videotape and live observation, careful financial record be maintained of all costs, both direct and related, so that a more accurate cost comparison can be made.

Recommendations for further consideration and research are summarized as follows: (1) general suggestions concerning the use of videotapes in the field of Home Economics and (2) more specific recommendations for the observational program in Home Economics Education.
For the use of videotape recordings in the field of Home Economics, it is recommended:

1. That investigation be made of the possibility of developing a model tape bank for Home Economics on a national level.

2. That investigation of the use of videotapes to teach various competencies or skills in the field of Home Economics be considered.

3. That consideration be given to the use of videotapes for observational purposes in various areas within the field of Home Economics.

4. That further investigation be carried out to determine the finances needed to develop and use videotapes in various areas of Home Economics.

For the observational program in Home Economics Education, it is recommended:

5. That consideration be given to the use of a combination of the direct and video methods of observation.

6. That a study be made to determine the use of videotape recordings in learning how to develop selected teaching competencies, such as demonstration techniques and so forth.

7. That evaluation instruments be devised which yield a more accurate measure of students' ability to evaluate a home economics lesson presentation.

8. That videotape recordings become part of a self-instructional refresher course in home economics methods of teaching for teachers who have been teaching for a number of years or who have been out of the teaching profession for a number of years.
APPENDIX
CLASS AND WORK SCHEDULE

Name ________________________ Address ______________________

Birthdate______ Cum PHR____ Number of hours earned to date________

Quarter in School of Home Economics (circle) 8 9 10 11

<table>
<thead>
<tr>
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<th>MON</th>
<th>TUES</th>
<th>WED</th>
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Check the Observation Experiences you have had prior to this course:

Education 435 (old 535). Give name of school_________________

September Field Experience. Name of school_________________

List any additional observation experiences you have had:

_____________________________
Our Home Economics Class is being videotaped on ____________.

We would like to have your permission to include _____________________
in the videotape recording of her class.

Thank you for helping us,

_______________________
Home Economics Teacher

_______________________
Signature of Parents or Parent
OBSERVATION EXPERIENCE STUDY QUESTIONNAIRE

Directions: The following is a list of statements about the usefulness of the observation experience. Consider each statement carefully. Indicate how you feel about each statement by circling one of the possible choices.

Section I

The observation experience was useful in helping me to understand:

1. The kind of environment which promotes learning. [VU U SU O NU]
2. Differences in the mental abilities among learners. [VU U SU O NU]
3. The different paces at which pupils learn. [VU U SU O NU]
4. Differences in the interests of pupils. [VU U SU O NU]
5. Differences in the emotional development of learners. [VU U SU O NU]
6. Differences in the physical growth and development of pupils. [VU U SU O NU]
7. Ways of identifying pupil problems in learning. [VU U SU O NU]
8. Ways of gaining classroom (pupil) control. [VU U SU O NU]
9. The elements of the teaching-learning situation which have an effect upon pupil behavior. [VU U SU O NU]
10. The content of course offerings in home economics. [VU U SU O NU]
11. The specific skills needed successful teaching of home economics. [VU U SU O NU]
12. The importance of each part of the lesson plan (e.g., opening, closing, etc.) to a successful lesson presentation. [VU U SU O NU]
13. The influence of planning upon effective lesson presentations and pupil learning. [VU U SU O NU]
14. How to use effectively a variety of teaching techniques. [VU U SU O NU]
Section I--Continued

The observation experience was useful in helping me to understand:

15. How to use instructional materials in a way that promotes learning.  
16. The role of the teacher in the classroom.  
17. The various responsibilities of the home economics teacher.  
18. The atmosphere or "tone" of the classroom.

Section II

Directions: Indicate your feelings about each of the following questions by circling one of the three choices.

1. Did you look forward to the observation experience each week?  
2. Do you feel that you had adequate preparation for observation? Explain.  
3. Did you do the things that you thought you would do when you first began the observation experience? If not, what did you expect?  
4. Could you hear what was taking place in the classroom? Explain.  
5. Could you see what was taking place in the classroom? Explain.  
6. Did you feel that you spent more time each week observing than you should?  
7. Did you feel that the number of times you observed was about right? If no, why?
Section II--Continued

8. Do you feel that you gradually lost interest in the observation experience? If yes, why? Y N U

9. Do you feel that the observation experience contributed to your preparation for student teaching? Y N U

10. Do you feel that the post observation discussion was helpful? Explain. Y N U

Section III

If a course you needed next quarter required observation, with which of the following media do you think you would prefer to observe? Check (X) one.

_____________Direct Classroom
_____________Videotape
_____________Combination of Direct Observation and Videotape
_____________No Preference

Section IV (FOR THE EXPERIMENTAL GROUP ONLY)

How much importance did you attach to the fact that:

1. Your college instructor was present with the class during the observation sessions? HI I QI O U

2. All members of your section were present during the observation? HI I QI O U

3. Your college instructor was able to call attention to aspects of the class situation while the videotape was in progress? HI I QI O U

4. Your observation experience took place on campus? HI I QI O U

5. You had an opportunity to share your opinions and ideas with someone immediately following the observation? HI I QI O U
LOGISTICAL INFORMATION—OBSERVATION EXPERIENCES

Name____________________________

School____________________________

<table>
<thead>
<tr>
<th>Observation</th>
<th>Mode of Travel to School</th>
<th>Approximate Number of Miles (to and from)</th>
<th>Time</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>#1</td>
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<td>TOTALS</td>
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</table>

Please include the total amount of time and cost getting to and from the school.

Problems encountered getting to and from the school:
LESSON PRESENTATION ESSAY EXAMINATION

Group: Video___ Name________________________
Direct___ Date________________________

Directions: Please answer the following short-answer essay questions in light of the lesson presentation you have just observed.

1. What appeared to be the objectives of the lesson?

2. What was accomplished through the lesson introduction?

3. In the space below describe (a) the major teaching points and (b) the teaching techniques and instructional materials which led to understanding of the major teaching points.

<table>
<thead>
<tr>
<th>Teaching Points</th>
<th>Teaching Techniques and Instructional Materials</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>
4. What was accomplished through the lesson closure?

5. How did the teacher provide for practical application of the lesson?

6. What technique, to motivate pupil participation, did the teacher use most?

7. How did you know the objectives were accomplished? Give two examples.
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