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IN A PRE-SERVICE PROGRAM FOR PROSPECTIVE
STUDENT TEACHERS

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

By
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* * * * * * *

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CHAPTER I

THE PROBLEM

Background

There are truisms in teaching as in most other professions. One which any teacher recognizes is that learning must begin on the individual's present level of understanding and not at the level which we wish he had attained. The status and condition of a student teaching program are dependent upon this educational truism. As long as teacher education personnel endeavor to "talk about" teaching, a student's level of understanding of performance as a teacher has not necessarily increased. Merrill (11) notes that liberal arts instructors can "talk about" any subject with interest and vigor, for their aim is to teach the subject, but professional courses are held to a different criterion. They are charged with assisting the prospective teacher to perform, to behave with competence and effectiveness in the classroom. He sees little evidence that many professional education courses today contribute greatly to, or predict successful performance. He sees a need for planned experiences to ensure engagement with the environment of the school and awareness of this environment. This engagement can be experienced either in a real situation where practical and possible or where simulation can provide a high level of experience in a compressed time span. Such an experience should enable a prospective teacher to
begin to recognize some teaching problems, to formulate questions, and
to search for some answers.

Merrill (11:110-111) sees a vast area for creative and innovative experimentation that may be found through simulation of teaching experience for students before they are actually in the situation. Many of the human relations situations which exist in a classroom can be created elsewhere. Simulation can enable the prospective teacher to experience the school environment gradually and develop an awareness of learning problems of pupils. Cruickshank (17) believes that a college student can test his ability to handle teaching technique and technology through a simulated experience. A potential teacher can certainly demonstrate by teaching a specific subject area of the curriculum in a simulated situation the kind of resourcefulness which prompts learning. Thus, the many dimensions of teaching may be simulated as parts or wholes. The time needed for a normal student teaching experience may very well be reduced and enhanced by utilizing such simulation experiences.

Merrill (11:113) has stated that the purpose of all professional laboratory experiences is to provide opportunities for the prospective teacher to learn in a very fundamental way. His values, mind, personality, and energy are all involved in these experiences. Action and interaction with others are vital. Such a role is difficult to perform and difficult to assess, and vast amounts of descriptive data from real and simulated situations must be secured to provide evidence of teaching competence. High standards of quality performance rather than grades assigned in traditional academic and professional courses must be
applied here. These standards must take the form of performance criteria.

The frequently mentioned dichotomy between theory and practice reflects an imbalance and gap between foundational courses and performance experiences in preparation programs. Classroom teachers, as well as students, frequently ruefully note that what they learn in the college classroom doesn't seem to apply in real-life school settings, and that the two worlds are not in agreement. John Dewey was concerned with the need to relate theory to practice as early as 1904:

... We may use practice work as an instrument in making real and vital theoretical instruction; the knowledge of subject matter and principles of education. This is the laboratory point of view ... practice work thus ... gives the student a better hold upon the educational significance of the subject matter he is acquiring (4).

LaGrone has more recently stated:

The professional component of a program of teacher education for the last 25 or 30 years has taken for granted that the teacher education student will put together the talk about education and his teaching. The recent research in teaching and work in theory indicates that this is an extremely difficult task, and that an assumption of this magnitude is more likely false than true (10).

Cruickshank (30) reports an attempt to combine the use of the newer media and the adaptation of an old training technique, simulation, in order to make it possible for teacher educators to provide additional life-like learning situations of an instrumental nature which also permit theory and practice to be joined without actually being in the classrooms. That is, life-like situations or incidents are created which permit learners to apply theoretical analysis to them. For example, a variety of constructs which have been previously presented to
students in theory classes are used to analyze a phenomenon such as student behavior which is recreated. Among other phenomena, the simulated classroom setting provides opportunity to study teaching behavior, student behavior, curriculum, social relationships, values, and individual differences. Unlike individual case studies, the devised experiences are placed in a realistic setting and systematized in such a way that one participates as a hypothetical teacher in a long-range, in-depth experience which is both intellectually and psychologically engaging (30:3).

It is recognized, however, that prospective teachers must be open to the many stimuli available in the simulated learning experiences and in student teaching in order for such a set of experiences to make an impact on them. An environment rich in stimuli can be of little use to a person if he is unable to perceive accurately the stimuli that characterize that environment. Prior experience and the condition of receptors are two factors that influence perception. A third factor may be found in the relative openness or closedness of a person's belief or disbelief system as defined by Rokeach (13). Ideas that pose a threat to the person's belief-disbelief system are likely to be distorted to harmonize with that system or to be subconsciously screened out (13).

Rogers (21) has stated that student learning is enhanced for teachers who are congruent, and are capable of expressing unconditional positive regard and empathy to their students. He suggests the possibility that the ability of a person to enter into a helping relationship with other persons may be directly related to the person's ability to
show to others the conditions of empathy, congruence, and unconditioned positive regard. The California Personality Inventory (36) is one instrument that has been developed and validated to measure teacher empathy, acceptance, and rejection of students, among other personality factors.

Ashland College is a private liberal arts institution with a total enrollment of about 1800 men and women students. Its stated purpose is to offer a high quality of liberal arts and professional training in a highly personalized environment (35). Home economics is a department of the college where a student may pursue a program with a major in general home economics or home economics education. Those students majoring in general home economics pursue a liberal arts program with a broad home economics emphasis without professional training as those in education do. Those students majoring in home economics education substitute education courses for some liberal arts requirements, and receive a degree in education instead of a liberal arts degree. Approximately ninety percent of the one hundred and fifty home economics students enrolled in 1967-68 were enrolled in home economics education as a major field of study. Twenty-one of these were enrolled for their student teaching experience during that year. Seven of the twenty-one were involved in student teaching the semester in which this study took place, and were the participants in the pre-service simulated experience reported here. The home economics methods teacher, the college supervisor, and the investigator were the instructors for the program of pre-service simulated experience.
The Problem Statement

About a year ago the Ashland College Education Department received a grant from the Kettering Fund to purchase equipment for a studio for the use of closed circuit television in order to add a new dimension to the teacher education program. Two sets of the following equipment were available for this project—one for use in the public school classroom and one for use in the television studio: one Ampex 7000 (a video tape recorder), a CC $2h$ video camera (equipped with a zoom lens) on a dolly tripod to facilitate easy moving in order to get many different angle shots, an Ampex adapted Motorola monitor (twenty-one black and white), three Electro-voice microphones (two on stands and a lavaliere type for the speaker in the problem incident) which feed into an audio mixer (Shure M-68) switching arrangement which permits the operator to ride gain on the various microphone inputs and balance the output of the VTR unit, and for taping in the public school classroom, a portable cart with wheels to hold all the equipment. This provided an exciting challenge for those responsible for the teacher education program in the home economics department. It was seen as a potential means for the improvement of the program for the preparation of home economics teachers. The use of the techniques of closed circuit television and video tape recording could probably offer stimulating and new possibilities for analytical discussions on student teacher behavior and performance at a level of precision and actuality which had not before been possible by providing an effective means for prospective student teachers to participate in simulated classroom situations before they
entered the classroom and faced students in the actual teaching situation.

The specific problem was to determine the feasibility of utilizing the simulation technique for introducing prospective teachers to student teaching under the conditions at Ashland College. In more general terms, however, the problem was to determine the feasibility of using simulated teaching experiences as an educational tool in the preservice preparation of student teachers, i.e., determine whether simulated learning experiences could be built into a total learning situation profitably.

If desirable teaching behaviors and attitudes could be discovered and developed by prospective student teachers through participating in simulated experiences, and then it was found that they transferred from participating in a simulated experience to the student teaching situation, a valuable technique would have been created to help solve the problem of making theory practical by providing prospective student teachers with realistic classroom experience before they reach the actual student teaching situation.

**Purpose of the Study**

The plan was designed to determine the feasibility of providing a systematic, controlled learning experience in which the prospective teacher under direct supervision was able to practice classroom teaching behavior by interacting with practical problems in classroom management.

This was a pilot study designated to delineate limits of feasibility for this method of teaching prospective student teachers.
Simulated experiences were developed and produced in which prospective student teachers had opportunity to (a) apply knowledge about principles of teaching and learning, (b) make use of such knowledge in a situation characterized by personal meaning, (c) get immediate feedback regarding the effects of their behavior in the classroom, and thus (d) discover for themselves effective patterns of teaching behavior. These were used to give prospective student teachers an opportunity to gain classroom experience and confidence in their ability before actual performance was required as student teachers.

As the feasibility of using this method of pre-service education of prospective student teachers was considered, answers to the following questions were sought: Can it be done? How can it be done? With what kinds of course management can it be done? With what kinds of equipment and materials can it be done? Is it effective? Under what circumstances or conditions would it be feasible, if at all? Are there recognized merits? Are there identifiable limitations?

Can a simulated experience program be provided in a teacher education program?

1. Can interest of faculty and students be secured?
2. Can a simulation experience program be developed with measurable factors?
3. What personnel and equipment are needed, and what are the time limits?
4. What policy level decisions need to be made?
Is simulation in teacher education an effective learning experience?

1. Will prospective student teachers show measurable positive change in ability to respond to, assess, and solve teaching problems?

2. To what extent will positive change be shown in confidence in ability to teach?

3. Will the degree of open-mindedness of the prospective student teachers be a factor related to their performance in the simulation experience program?

4. Will personality factors of poise, sense of well-being, responsibility, ability to conform, self-control, and empathy possessed by prospective student teachers be factors related to their performance in the simulation experience program?

5. Will prospective student teachers use the principles which were incorporated in the simulated experiences in solving the problems encountered in the actual classroom?

Is simulation in teacher education an acceptable learning experience?

1. Is simulation acceptable to students?
   a. Will the reaction of students to the new responsibilities imposed be acceptable?
   b. Will the restructuring of scheduling be acceptable to students?
   c. Will the methodology and course content be acceptable to students?

2. Is simulation acceptable to faculty?
   a. Will the reaction of faculty to the new responsibilities imposed be acceptable?
   b. Will the restructuring of scheduling be acceptable to faculty?
   c. Will the methodology and course content be acceptable to faculty?
   d. Will the costs in human and material resources be acceptable to those who are responsible for the program?
The experiment was not a test of participation in simulated teaching experiences before student teaching against any other method of preparation for student teaching. The simulated method was accepted, and was used exclusively for two weeks prior to beginning actual student teaching in the classroom. The test was therefore not of method, but of the feasibility of using this method in relation to the conditions, equipment, and personnel available at Ashland College. An attempt was made to do nothing in the experiment that set it apart from what could be done in other situations with similar facilities and personnel.

It was felt that a period of two weeks participation in simulated classroom experiences prior to student teaching was a reasonable amount of time to include in a teacher education curriculum which most institutions would find possible to manage. Time required for providing simulated experiences could perhaps be found in the methods course or by delaying the field experience, which was done in this experiment, in order to incorporate this type of practice and study. In this respect, an effort was made to do at Ashland, not what a laboratory school could do, or what might be done briefly with the aid of a research grant, but rather what might be done under normal conditions in a teacher education curriculum. Pre-service education and the up-grading of student teachers in the skills of teaching and developing confidence in ability to teach were the important objectives here.
Theory Underlying the Use of Simulation

Vlcek (34) reviewed important theoretical conclusions about the learning process upon which researchers are in general agreement, and gleaned from these theoretical elements and parts of learning, theories which research evidence tends to support and which are conducive to transfer of learning which provides the theoretical foundations for this method of pre-service preparation of classroom teachers. He summarizes them as follows:

1. Immediate knowledge of results is important in the learning process.

2. Application of principles to problems are conducive to generalizations.

3. Activity of a prospective teacher through laboratory instruction contributes positively to learning.

4. Verbalizing principles increases generalizations to similar situations.

5. Guided discovery increases retention.

6. Successful learning experiences must be meaningful and realistic.

7. A healthy concept of oneself aids learning.

8. Laboratory experiences, the learning of principles, learning through problem-solving, learning through discovery, and meaningful and realistic learning experiences are factors which contribute to transfer of training . . . (34:20)

Definition of Terms

To assist the reader in perceiving meanings of concepts as they were used in this experiment, a definition of terms and concepts will be helpful.
**Simulation.** Simulation refers to the procedure of creating life-like classroom situations that are a replication or adequate reproduction of a real classroom. It is the procedure of creating a working model of an individual or group interaction process.

**Simulated classroom experiences.** Simulated classroom experiences consist of specific classroom problem situations presented through the use of video tape, role playing, and written incidents or problems in which the student acts and interacts.

**Prospective student teacher.** Prospective student teacher is a college student enrolled in a teacher education program which leads to a college degree and state teacher certification and who has not yet participated in the student teaching experience.

**Student teacher.** Student teacher is used to designate the college student functioning under supervision in a classroom in a public school.

**College supervisor.** College supervisor is a professor responsible for scheduling student teaching assignments for student teachers, for supervisory contacts in the student teacher's classroom, and for conducting weekly seminars with the student teachers under her supervision.

**Supervising teacher.** Supervising teacher is the public school teacher who receives and supervises a student teacher within her classroom.
Assumptions

The following assumptions are made:

1. It is possible for a prospective student teacher to learn to control his own behavior in a classroom situation.
2. A range of teaching behaviors is identifiable.
3. Students can develop the ability to demonstrate these behaviors at appropriate moments in spontaneous situations.
4. The consequence of teaching behaviors can be predicted under specified conditions.
5. A strategy of teaching behaviors can be planned for specified purposes and situations.
6. It is possible to obtain information about the effectiveness of behavior and the resulting consequences of this behavior in simulated classroom situations.
7. Realistic learning experiences provided through participating in simulated classroom situations enable prospective student teachers to view their own teaching behavior accurately.

Organization of Remainder of Report

Pertinent literature is reviewed in Chapter II. Military and industrial uses of simulation are described briefly, but the major emphasis is placed on a review of research on simulation as an educational technique and its application. The method of the study is presented in Chapter III. A description of the population is given, the instrumentation is explained, and this is followed by a discussion of the procedures which includes those used for the development of the
materials, those used for testing, and those used for the orientation
and the instructional phases of the study. Included in Chapter IV are
findings of the study and a discussion of them. Chapter V includes the
summary and conclusions, a discussion of them, and implications.
CHAPTER II

REVIEW OF LITERATURE

Many forms of simulation are among the most recent innovations in instructional technique. Some are as simple and familiar as card or board games. Others involve technical equipment for use in transmitting facts and principles about their subjects of study.

A review of the purposes and forms of simulation serves two purposes: Some discussion is illustrative of the present stage of simulation as it is used in the military, business and industry, in the social sciences, and in the professional field of education. Other reporting provides some evidences of the impact and use of these new techniques as educational devices where the focus is on the teaching-learning process. No attempt is made to include reviews of all the simulation efforts recorded in the literature, but only those that seem to shed light on the establishment of a firm base of knowledge of the use and consequences of simulation.

Purposes and Forms of Simulation

The successful employment of simulation as an instructional technique in industrial and military areas is well known. Simulation techniques are employed here for practical reasons, either to avoid damage to costly equipment or to avoid endangering lives, as in the training of air defense personnel and astronauts. Through simulation
techniques, commercial pilots are trained and air force officers learn to direct fighter interceptions of enemy bombers (1;15). They learn through actual experience in situations which approximate reality. The sensation of sight, sound, and motion are so realistic that the learner frequently has difficulty retaining his true orientation in the artificial setting. Computer-based "games" and related simulations are equally good examples, although they place less emphasis on the physical setting. They appear to be promising for teaching basic concepts of balance of power, collective security, military aggression, and international law, among others (7:14; 8).

Although interest in the practical application of knowledge provided the original impetus for simulation, many are used essentially as research instruments (12). Robinson (12:97) noted that, except for war and business games, most instructional simulations have grown out of games developed to investigate a particular system or process. Once the subject-matter has been modeled in the form of a simulation by researchers, it then seems to be possible to teach the subject in a more challenging and more effective manner (12:96). He feels that this segregating instruction and research in simulation activities may be unfortunate, and that it would be desirable for teachers to be familiar with the latest models and simulations in their fields in order to provide the best instruction possible for their students (12:97).

Robinson (97) observed that instructional uses of simulation include both teaching and training. Teaching usually means the transmission of knowledge about subject matter through operational models. Training usually means the transmission of information or requirements
for a particular role in professional or business life. He questions whether simulations for teaching are appropriate as simulations for training. In the study of public affairs, for instance, he wonders whether a simulation of a local government or of foreign policy-making should be the same for supplementing a college course in political science and for an intensive short course for city managers or foreign service officers. Research is needed here to discover whether training for policy-making and training for citizenship are similar and whether they differ sufficiently to require different educational programs.

Impact of Simulation as an Educational Device

Simulation in the military

War games are the earliest known efforts to train practitioners by using operating models of field tasks. War games were introduced in ancient Greece and have been expanded and refined for centuries. The Prussian general staff developed war games in the late nineteenth century, and since then military organizations in other countries have adopted them on varying scales (6).

Edwin Link, a young flight instructor, introduced simulation as an educational tool into the training program of the Armed Forces in 1929 when he saw the need for a safe and inexpensive means for teaching aircraft control. Highly complex simulators are used in military schools today as a result of the variety of stages of development of the "Link Trainer" (2). Results of the laboratory experiments prompted the Air Defense Command to contract with the System Development Corporation
of RAND for training all of their air defense crews throughout the world by using simulator packages (2:3).

The Systems Research Laboratory of Rand Corporation recreated an air defense direction center using human beings. The entire environment of an air defense direction center including the physical layout, the communication net, the central displays, the general atmosphere, and the cultural environment were recreated by the simulator. The task environment was the only manipulative variable, i.e., the kinds and amounts of information needed to be responded to by the crews. The effectiveness of the air defense laboratory experiment was reported as follows:

The members of each crew became an integral unit in which many interdependencies and coordinating skills developed, and each crew learned to perform more effectively. This learning showed itself in procedural shortcuts, reassignment of functions, and increased motor skill to do the job faster and more accurately (16).

The Radar Navigation Trainer developed by Searle and Murry is also a simulator used for training in an operational Air Force task. It is explained thus:

The Radar Navigation Trainer employs radar motion films as its prime component and provides a means of acquiring skill in interpreting radar scope returns, obtaining fixes, determining wind, plotting courses, and maintaining the navigational log as would be done in actual flight (1:36).

Experimental results measuring the differences between groups receiving training in all air missions, half air and half motion-picture training showed no significant differences in the final performance examination of the course. However, it was reported that the Radar Navigation Trainer made it possible to simplify instruction and to accomplish practice much more economically than with conventional in-flight methods of instruction and practice (1:2).
Another simulator employed by the Air Force which simulates part of the Air Force supply system is known as "monopologs" (26). It is made up of one depot and five two-wing bases. Reality is simulated, but time and space are compressed so that students can conveniently experience essential problems of management. Inventory management is practiced, thus contributing to insight into inventory control problems:

The player acts as the inventory manager for the "widget" . . . a high-value, depot-repairable spare part . . . and makes the principle decisions of inventory control that such a manager has to make in reality. Aware of the given costs and lead times for each of his actions, he initiates procurement, plans repair schedules, and sets inventory and distribution policies.

True to practical Air Force experience, the demand for the "widget" is a random variable beyond the player's control. He is given certain limited information on the basis of which he must predict decisions, and in time learns their consequences. A simulated period of 31 months is required, and the student computes his score at the end—the total costs his actions incurred (22:iii).

"Monopologs" is used as an educational training device. Civilians who are unfamiliar with the Air Force supply system, Air Force supply managers, and aircraft contractors are trained by the effective use of the simulator.

The few types of simulators employed by the Armed Forces reviewed here illustrate the use of simulation for training personnel to develop individual skills, group skills, to work together as teams, and to develop management skills.

Simulation in business and industry

Simulation techniques have been used for many years in business and industry for training prospective business men in many aspects of commerce and administration, including marketing, production,
inventorying, investment, personnel, and organizational decision-making. The most sophisticated and best known of the simulated business situations is the Carnegie Tech Management Game. It is not representative of business simulations, but it is the leading example of the present stage in the development of business simulations (5).

The Carnegie Tech Management Game is one of the most complicated of the business simulations, and probably the most expensive. It is a simulator for training people to become more effective business managers. Three competing firms representing detergent companies require three teams of five to ten participants to play the roles of top executives of these companies. Teams make one hundred to three hundred decisions every "month" for future operations of their firms. Decisions cover raw material orders; additions to work force and overtime to expedite production, inventory, marketing, advertising, and consumer surveys. When the decisions have been made, they are entered in a computer that contains a model of the economy, industry, and company. The outcomes of each company's decisions are determined by the computer. Then results are reported, and teams begin a new period of decision-making.

The simulator requires analytical or intellectual tasks which are represented in the decisions that must be made. Although a deterministic model is used for assessing the outcomes of the competing teams' decisions, devising an optimal decision is prevented by the complexity of the tasks. In addition to requiring performance of analytical tasks, the simulator allows for roles within each team that are differentiated enough to offer complex organizational tasks. It
helps students understand the importance of interpersonal skills and relations, coordination, communication, and other organizational characteristics (16).

The Remington Rand Univac Sales Management Decision-making Simulator is another simulation device designed for computer use, and calls for decisions to be made in the areas of sales personnel, administration, product pricing, advertising, sales promotion, and stock management (7:12).

Paul and Faith Pigors developed a simulation technique which they call the Incident Process which centers around a labor arbitration case and calls for each student to commit himself individually in writing to a specific course of action:

The Incident Process begins with each student being given a brief description of an incident of importance in the case under review. The group is then allotted about thirty or forty minutes to ask questions of the instructor (who has at his disposal additional information about the problem) in an effort to find out as much as they can about the situation. After completion of the question period, the major issues at stake are usually summarized, and each student is then asked to submit in writing an outline of the course of action he deems most appropriate to the resolution of the problem (7:12-13).

Zoll designed another type of simulator called Operation Suburbia (7:13-14). Each of five company groups own real estate which is mapped out in an hypothetical developmental area. The goals for each group are different, and the acquisition of a portion of the other companies' land is required for its fulfillment.

The groups are allowed to negotiate with each other in any manner they see fit, and to make the exercise seem more realistic, each group is given facsimile money, deeds, and option forms. They discuss
the results after negotiations, plans, and strategies have been completed. The Incident Process centers around group decision-making, and provides for competitive interaction and negotiation practice (7:13-14).

Simulation in social sciences

One of the subjects in which simulation has proliferated most quickly is politics. Most of the simulated political problems used for teaching or training were originally designed for research. Potential political and diplomatic strategies by means of simulated political problems were devised at Massachusetts Institute of Technology (14). Real world names for countries were adopted, and decision-makers were assigned to represent particular international figures. Umpires or referees are appointed to rule on the appropriateness or realism or strategies that players propose. Students from other New England Institutions participate, thus providing a league for diplomacy to correspond to leagues for athletics. These confrontations can occur at a single point in time, as during a week end, or over extended periods in the manner of chess-by-mail. The most frequent practice for participation, however, has been over a week end, with time at the end reserved for discussing its relation to the purposes of the course it supplements.

A different international relations simulation was designed by Guetzkow and his associates at Northwestern (8). Unlike the M.I.T. simulator, the Northwestern Inter-Nation Simulation does not identify its nations with real-world nations. Rather than calling a country France or Hungary, the Inter-Nation Simulation creates the fictitious
names of Algo, Ergo, Ingo, and so on. Also, titles for roles are decontaminated by replacing the title of prime minister or president with the title of Central Decision Maker; foreign ministers are referred to as External Decision Makers. Real world concepts such as Gross National Products are replaced by Basic Capability, public opinion polls are identified as an index of Validator Satisfaction, and concepts of democracy and government are replaced by Decision Latitude.

The Inter-Nation Simulation originated as a research instrument, and therefore required an abstract character. Guetzhow and his colleagues proposed to simulate their view of the central features of inter-nation processes without regard to cultural and historical contexts. In other words, they initially tried to control for certain features that vary greatly in the international environment and to concentrate on other basic characteristics of international systems. Although they recognized the importance of the cultural heritage and historical precedents of a nation, they attempted to hold such factors constant during their simulations.

Thus, when simulation was converted from research to instruction, it was already in a decontaminated form. Guetzkow notes that college students are simply not qualified to play Kosygin or Johnson. Even though they might research the person they are to play, there is the risk that they will "bootleg" as much inaccurate or irrelevant motivation as correct motivation into their performance of a world dignitary's role. Playing an anonymous role will prevent the participant from being led astray by wrong viewpoints or impressions as he plays out the roles in the simulation. The idea here is to challenge
the student to play the role as he personally would play it, gaining some insight into his own performance and considering which model of diplomacy and negotiation he would like to adopt for himself (8).

Simulation Focused on the Teaching-Learning Process

Simulation techniques have only recently been employed in the professional field of teacher education. Perhaps one explanation of this relatively slow adoption of a promising instructional technique by educators is that, until recent years, it has been fairly easy to arrange laboratory experiences for student teachers.

Coleman (28) at Johns Hopkins University directed technically advanced work in developing simulations for teaching. Coleman's first effort was an election campaign game which was designed for research and commercial uses, but is now one of a series of teaching games that includes a career-choice program and a legislative program.

Coleman's model of high school behavior starts from the assumption that each boy and girl attempts to maximize his self-esteem (29). Each student may be assumed to have his own level of self-esteem, and as he makes choices about time, friends, activities, and the like, he increases or decreases his estimate of self. In the high school situation program, each participant takes the role of a high school student. Parents and teachers are represented through the calculations prepared by those who designed the problem. Both long-term and daily choices of activities as well as a choice of peoples' judgments to pay attention to are made by the participants. As these decisions are made over an extended period of time, the consequences gradually unfold. Results
are conveyed to the students, and they may use the knowledge of previous outcomes in making future decisions.

Coleman effectively summarized the purpose of this simulated problem which really is the central purpose of most educational simulations: It allows a boy or girl to act through situations before he faces them in real life, to see the indirect and long-range consequences of choices he may make before it is too late and he must face the consequences in real life (29:4).

In the late 1950's, the University Council for Educational administration simulated the administrative position in the public school in its Development for Criteria Study (5). The simulation materials through film, filmstrips, tape recordings, and printed materials introduced each participant to Jefferson Township and Whitman Elementary School. Following orientation, each participant assumed the role of Marion Smith, principal, and engaged in problem-solving activities centered around administration and leadership.

The "principals" were oriented to their roles by studying written materials, tape recordings, and films about Whitman school and the hypothetical community of Whitman. The principals reacted and responded to various simulated problems presented to them by the "in-basket" technique. Such problems were encountered as writing an article for the school paper, making a tape recorded speech for the PTA, analyzing quality of teaching of probationary teachers through viewing a film, participating in a parent-teacher conference, handling discipline problems, and answering various letters. For one week the participants played the role of principal of Whitman School and left completed work
in an "out-basket" for scoring at the end of each day. Frederiksen concluded the study by stating:

The simulation of a standard job in educational administration through the use of in-baskets has proven to be successful as a method of collecting records of administrative performance which can be scored reliably, and yields scores which are useful in providing a better understanding of some of the dimensions of performance in such a situation (5).

The Whitman School Simulator package materials were used as an administrative core sequence, as an introduction to school administration, and as laboratory experiences by eight universities in workshops conducted during the summer of 1961 (24). The staff reported the outcomes at the conclusion of the workshops as follows:

The simulated situation provided high motivation and interest plus instructional opportunities not usually found in traditional courses. . . .

Workshops provided an opportunity to apply theory to specific situations in working with students preparing for administrative positions. In the simulated situation the responsibility for problem solving was shifted to the group. The workshop staff was better able to appraise students' effort since each participant's approach to problem solving could be observed (24:13-14).

In the field of driver education, driver training simulators are being used successfully to teach behind-the-wheel driver training. Richards provides a description of a driving simulator:

The driving compartment of an automobile is duplicated. . . . It is a single unit which is equipped with an accelerator, brake pedal, steering wheel, gear shift, directional signal, horn button, light switch, headlamp. . . . All of these controls are electronically connected to the meter unit so that the instructor may record on a continuous score card the action of the controls. . . . Driving situations to which the students react are flashed on a screen in front of the car simulator. The motion picture film confronts the students with such operations as steering through complicated situations, parallel parking, etc. . . . (20).
Cruickshank and others simulated a teaching environment in an effort to wed theory and practice for preparing elementary student teachers through developing the Teaching Problems Laboratory (30). This was revised from a study done by Broadbent, Bubb, Cruickshank and others (31). The Laboratory creates the Longacre Elementary School wherein participants or players assume the role of Pat Taylor, a beginning fifth grade teacher, and practice solving thirty critical teaching problems which are presented on film, through role play, and in written incidents.

After encountering each initial teaching problem, the participant responds on an Incident Response Form where he is required to (1) identify the problem, (2) identify forces and factors affecting the problem environment, (3) locate pertinent information, (4) project alternative courses of action, and (6) communicate and implement a decision. After the individual problem analysis and response on the Critical Incident Response Form, participants interact in groups of four, and discuss their solutions. The problem is further explored and analyzed by the entire group (32). There are no "correct" answers in this simulated experience. Instead, each participant is encouraged to "stretch" his teaching behavior, i.e., to consider employing as many alternative solutions to classroom problems as he can.

Participants in this simulated laboratory experience are required to construct a classroom test, hold parent conferences, prepare and teach "meaningful" lessons, locate instructional materials, develop a reading program, solve student behavior incidents, learn to use
children's cumulative records, consider motivational techniques, prepare behavioral objectives for learning, analyze and use results of sociograms, provide for individual differences in learning, and other typical teacher roles (30:6).

Cruickshank reported that preliminary results of participating in this simulated school environment provide supportive data. Participants reported that it was (1) very enjoyable, (2) realistic, (3) very helpful, (4) much more meaningful than college lectures, and (5) would be more valuable to them than the first two weeks of student teaching they had missed. They also noted that (1) they felt involved in the devised situations, (2) the small group discussions were very helpful in aiding them to develop their own concepts of teaching, (3) the simulation experiences were very helpful in developing methods of coping with classroom problems, and (4) they would recommend simulation training to their friends (30:6).

Kersh experimented with a classroom simulator for the pre-service education of student teachers (25). During instruction, students were presented with filmed problems to which they responded verbally and physically. Filmed feedback sequences based on the student's response were then presented to enable the student to see the class behavior that resulted from his responses. The effect of this experience was measured by a post-test with another set of filmed problems. Kersh hypothesized that a realistic display (life-size picture and motion) would enhance learning. He found that simulator experience did enhance learning, but that a less realistic (small picture and
motion) mode of presenting the filmed problem and sequences was more effective than a realistic mode of presentation.

Many instructional variables have been researched using the basic framework of the original study as a model since it was performed by Kersh. The original study was concerned with realism variables (size of image—small or large) in the orientation—pre-test experience and training. Later studies considered the mode of response (enacted or verbalized), motion in image (moving or still [25]), and prompting as an instructional variable (33). Findings here suggested that realism in simulation and prompting are not important variables in enhancing transfer, in comparison with instructor differences and possibly length of training. An on-going research project, reported by Twelker, is concerned with investigating the simultaneous, as compared with the successive attainment of objectives and the interaction between these modes of presentation and learners' cognitive and personality characteristics (22:202).

Vlcek (34) also studied the effects of Kersh's classroom simulation facility by using the instructional materials developed by Kersh. Although he did not manipulate the instructional procedure in order to provide for more or less realism in the simulated display, he did study the transfer value of simulation instruction in a real classroom setting. Vlcek selected student teachers from a junior level elementary education course at Michigan State University and assigned them randomly to an experimental and a control group, each of which was classified in terms of high and low grade point averages. The experimental group received
approximately nine hours of classroom simulation experience in a laboratory training facility modeled after the one developed by Kersh while his control group received an orientation session only. Neither group was pre-tested in the classroom simulation laboratory, but each was tested in the simulation laboratory after receiving the respective treatments (orientation only or orientation plus instruction) and were rated on a procedure based on the one developed by Kersh and which the present investigator adapted to home economics teaching situations and problems for use in this study. Vlcek's experimental group performed significantly better than did his control group.

A special interest group on **Simulation Systems** organized by Cruickshank at the University of Tennessee has recently been announced (19:5). It is composed of members whose interest in simulation ranges from using it as a research tool to using it for instruction. Its purpose is to keep members informed as to what is going on in the field as well as providing a means of reporting and discussing important theoretical questions about instructional simulation.

Another significant development is a project directed by Twelker concerned with research development and dissemination of instructional simulation. This was announced in the first newsletter reporting the activities of the instructional simulation program at Teaching Research Division of Oregon System of Higher Education. The objectives in this research development and dissemination activity are listed in the **Newsletter** as follows:

1. To continue a comprehensive search of the literature pertaining to simulation including military and industrial
sources that has already produced an 848-item bibliography on simulation and related topics.

2. To develop guidelines of instructional simulation design that will help developers in specifying the form of the simulation.

3. To identify research directions, and state these in the form of hypotheses.

4. To specify applications of instructional simulation.

5. To disseminate widely the information gained. (9:1)

So it can be seen that simulation as an instructional technique has begun to make inroads into education. As the types of simulation that are most appropriate for the various types of learning are discovered, research directions and applications of simulation for teacher education can be identified and disseminated by means of these new projects and activities that are focused on reporting and distributing simulation research.

Summary

Those simulation efforts recorded in the literature that seemed to shed light on the establishment of a firm base of knowledge on the use and consequences of simulation are limited but effective, apparently. The Armed Forces personnel used the principle of simulation in their training programs for many years. There seems to be evidence that simulators have been used effectively in developing individual skills, group skills, teamwork, and management skills.
Simulation serves many functions in business and industrial training:

1. It stimulates discussion of management principles and concepts.

2. It provides practice in obtaining information necessary in decision-making.

3. It provides for competitive interaction experiences and insights into group decision-making.

4. The factors involved in making top management decisions and the experience of choosing and manipulating them can be provided.

5. Time can be suppressed in order to provide more experience in a short time interval.

6. Because simulations are abstract, students are saved from many of the details and minutiae that they ordinarily discover when confronted by the real world, but at the same time are introduced to what research has discovered to be the central and distinguishing characteristics of whatever behavior is being studied.

Not enough experimentation with simulation in the educational field has been reported to know the full potential for it here. The number of projects for critically evaluating simulations is still small. Strong judgments about the value of simulation for teaching and training should await the completion of research evaluating particular simulations intrinsically and in relation to alternative forms of instruction. No apparent trends as to the use of simulation in teacher education are yet in evidence.
Special interest groups are being formed and projects initiated that should be instrumental in identifying the most appropriate types of simulation for the various types of learning and disseminating information to those interested in this innovative concept for teacher education.

The next chapter contains a description of the method used to determine the feasibility of providing a program of simulation experiences in a teacher education curriculum.
CHAPTER III

METHOD

A study was designed to determine the feasibility of using the simulation technique for introducing home economics education students to student teaching under the conditions at Ashland College. Simulated experiences were developed that embodied the use of video tape, role playing, case studies, and written episodes to portray problems in the high school home economics classroom. Since the kinds of data Kersh (25) and Vlcek (34) collected for their studies with the use of multiple projection techniques to present realistic classroom problems were similar to that needed for answering the questions in this study, the instruments which they developed and used for collecting data were modified and adapted for this study. Permission was asked and graciously granted to adapt instruments developed by Kersh and Twelker in the Kersh studies for use here. They generously provided copies of their studies and sent reports of their present on-going research on simulation studies.

An attempt was made to locate Vlcek in order to discuss the development of a confidence scale to measure any change in confidence in students that occurred during this experiment similar to one he used. No information was available on Vlcek's present location, so the investigator adapted the confidence scale used by him in his study to fit the needs of the present study.
The major elements in determining the effectiveness of the experiment can be expressed schematically as follows:

Exposed to teachers
- investigator
- college supervisor
- methods teacher
- supervising teacher

Exposed to two weeks of simulated experiences
- video tape incidents
- feedback results
- role played incidents
- written incidents
- practice sessions
- individual conferences
- group discussions
- outside activities

Criterion Measurement
- improvement in ability to react to problems
- improvement in ability to recognize problems
- improvement in ability to assess problems
- improvement in ability to solve problems
- improvement in confidence in ability to teach

Differences Among Students
- abilities
- interests
- backgrounds
- motivations
- personality
- beliefs

Uncontrolled elements. Controlled elements.

Kersh and Vlcek were concerned with testing variables within the classroom simulator through use of experimental and control groups. In the present study, the investigator was looking at the feasibility of providing a systematic controlled learning experience in which the
prospective student teacher under direct supervision determines and practices her own classroom teaching behaviors by interacting with practical problems in classroom management through the use of group and individual instructional methods in a simulated classroom situation. Two programs of problem incidents consisting of a pre-test and post-test were administered to measure the effectiveness of the treatment, and questionnaires were developed and administered to determine the acceptability of this method of instruction to the participants.

Description of Population

Selected to participate in this study were the seven prospective student teachers enrolled in an Ashland College methods class for spring semester, 1968. They were all seniors who had completed their formal courses. These students had two weeks of simulated teaching experience from March 18 to March 29 previous to the student teaching experience. There was a ten-day spring vacation break from March 29 to April 8, and the students began their field experience in teaching immediately following vacation.

Instrumentation

Simulated classroom problems were created and produced by the investigator that embodied the use of teaching principles and skills. These were identified and validated by a jury of master teachers in a study conducted by Hughes (23) at the University of Utah as being needed for the development of desirable and effective teaching behaviors in prospective teachers. The immediate concern was with the
prospective teacher's ability to detect, diagnose, and resolve such teaching problems as confusion, inattention, distraction, and fatigue on the part of the learner as identified in the standards for rating teachers developed by Kersh (25). His standards for rating teachers were in terms of the following behavioral dimensions: (1) accuracy of prospective student teacher's (T) verbal assessment of the problem, (2) adequacy of T's choice of response procedure, and (3) effectiveness of T's response (timing, clarity, etc.). The investigator based the range of responses for each problem developed by her (effective, acceptable, ineffective) on these three standards. Half of the simulated situations posed problems in classroom management and the remaining posed communication problems.

Five instruments were adapted or developed to measure effectiveness of the experience and to gather information in order to determine the feasibility of simulation as a means for preparing prospective student teachers in this manner: Instructional Procedure Forms, Confidence Scale; Student Reaction to Simulation Experience, Faculty Reaction to Simulation Experience, and Supervising Teacher Questionnaire. The California Personality Inventory and The Dogmatism Scale: Form E, were used to measure certain personality factors and the degree of open-mindedness possessed by the students in order to determine if these characteristics seemed to relate to the effectiveness of the simulated experience participation.
Instructional procedure forms

A detailed instructional procedure for each problem sequence was prepared to contain information necessary for the Examiner (E) to use for both instruction and testing. Forms patterned after the procedure developed by Kersh (25) for the Examiner (E) to follow for the treatment or instructional phase were used for scoring the pre-test and post-test (Appendix A, B).

Behaviors and skills are expected to differ according to subject, field, grade level, and a host of other variables. While there are obviously some skills which are common to home economics teachers and history teachers, for example, it is important to realize that there are also some crucial behaviors and skills unique to teachers in each area. There is no one set of technical skills which is better than another set. The selection and development of technical skills of teaching depends upon the objectives of the teacher education program. The problems selected for this study and adapted for use with student teachers were based on situations derived from studies of critical teaching problems by Cruickshank (30) and Kersh (25) which embody the following teaching principles and skills developed and validated in a study conducted by Hughes (23):

1. The effective student teacher defers to authority in problems involving rules of procedure.
2. The student teacher is most effective when she shows a supporting manner.
3. When learners appear disinterested or confused, the effective student teacher stimulates a more active interested response.
4. The effective student teacher is attentive to entire class as well as to the individual.

5. The effective student teacher discourages undesirable behavior.

6. The effective student teacher acts quickly when direct action is required to control a disruptive group.

7. The effective student teacher communicates at close range to control a disruptive individual(s).

8. The effective student teacher encourages student initiative to learn.

9. The effective student teacher deals with the individual(s) directly with minimal disruption of instructional continuity when learners exhibit deviant behavior.

10. The effective student teacher encourages learners to replace an inappropriate response immediately with an appropriate response.

11. The effective student teacher maintains a neutral behavior when confronted with parent-school interest conflicts.

Beneath the description of the problem scene were the standards and rating criteria for evaluating T's response. Each problem was planned to embody the need to recognize and use from one to three standards (principles) in order to cope with it effectively. Numerical values were assigned to the quality of the enacted responses--effective (3), acceptable (2), ineffective (1), and no response (0), as exemplified by T's recognition and use of the standards in coping with the problem situations. The pre-test was the same as the post-test in kinds of problems selected and the instructional procedure used except that different programs were used. Program I was used for the pre-test and Program II was used for the post-test (Appendix A, B).

After T enacted her response, the evaluators compared it against the standards for criterion response; determined whether it was
effective, acceptable, ineffective, or no response; and assigned the appropriate rating.

Next, E determined whether or not T understood the problem and acted on the basis of appropriate information by asking two questions:

1. "What was the problem you saw that made you react or respond?"

2. "What did you feel was the most important thing for you to do in order to cope with this situation?"

If T's answers to these questions showed that T recognized the problem and knew a feasible method of coping with it, i.e., used the standards around which the problems were built, a score of two was given for adequate verbal response to both. If only one was answered adequately, a score of one was given. If student failed to recognize problem or standard(s) for coping with it, a zero was given.

Confidence scale

A confidence scale designed by Vlcek (34:62) was used to determine if the prospective student teacher's level of confidence in her ability to teach would increase during this period of pre-service experience with simulated classroom problem situations (Appendix D). The confidence scale was limited to the measurement of the prospective student teacher's confidence in skills which were experienced in coping with the simulated problem situations. A nine-question four-point scale similar to a Likert Scale was used. The midpoint on the scale was eliminated to force the prospective student teacher to take a position above or below a center position. This was administered to the prospective student teachers before studying simulated experiences, and
again after the post-test to determine if their level of confidence in their ability to teach had increased during the period of simulated classroom experiences.

California Personality Inventory

The California Personality Inventory, developed and validated by Gough (36) was used to measure the positive and favorable aspects of personality which apply to human behavior. It was especially adaptable for this study after refinement because brief, accurate, and dependable sub-scales for the identification and measurement of personality variables chosen for inclusion in the inventory were included. For the purposes of this study, it was important to identify in the subjects the variables of empathy, acceptance of others, tolerance, and feelings of worth in order to determine if these personality characteristics seemed to relate to the effectiveness of the simulated experience participation. This was administered to the students prior to the two-week simulated experience program. A comparison of a student's scores on these factors and her improvement in ability to respond to the problem situations as a result of the two-week study provided information on the relationship between certain personality factors and improvement in ability to respond to the problems.

Dogmatism Scale

The relative openness or closedness of the prospective student teacher's belief-disbelief system was measured by the Dogmatism Scale: Form E developed by Rokeach (Appendix E). According to Rokeach, the
belief-disbelief system seems to act as a filter which distorts the reality of some stimuli and screens out others. There seems to be a relationship between the relative openness of a person's belief-disbelief system and his ability to perceive stimuli accurately and profit from experience with them. The procedures used in the development and validation of this instrument were reported by Rokeach (13). The form of the instrument used in this study consisted of the 40 items in Form E. The items are responded to on a six-point continuum from strong agreement (+3) to strong disagreement (-3). A high score on this test represents a relatively closed belief-disbelief system, i.e., the dogmatic person. This scale was administered to determine if there was a relationship between the students' belief-disbelief system and the effectiveness of the simulated experience program in helping the student develop ability to recognize and cope with classroom problems.

**Student reaction to simulation experience program**

A form was developed to obtain the prospective student teacher's acceptance or rejection of the simulated experience (Appendix F). This instrument included seventeen objective questions directed at discovering the feelings the prospective student teachers had toward the simulated experience program. Two open-end questions were also included. This instrument was administered to the group after the simulated experience program and again at the end of the student teaching assignment.
Faculty reaction to simulation experience program

The Home Economics Education faculty and some of the Education Department faculty who assisted with the study were asked to state their feelings about the feasibility of the simulated experience as a result of their participation in the experiment. A questionnaire (Appendix G) was developed to elicit information about feelings as to the acceptability and effectiveness of the developmental, testing, and instructional phases of the program from those who were involved with the different parts of the program. A four-point scale was used to determine if the program was felt to be acceptable and effective. Each point on the scale was assigned a value from one, signifying a low value, to four, signifying a high value. The midpoint of the scale was eliminated to force a position above or below a center position so that acceptability-unacceptability would be recorded. Statements receiving a low (or 1 or 2) rating were considered to be unacceptable to the faculty, and those receiving a high (or 3 or 4) rating were considered to be acceptable to them. Six open-end questions requesting suggestions for improving the program were included as well as a question asking them if they would recommend this method of instruction to others. They were also asked to make comments about the different details of the program with which they had experience.

Supervising Teacher Questionnaire

The Supervising Teacher Questionnaire was adapted from one developed by Kersh and Twelker and consisted of seventeen questions (Appendix H). The procedures used in the development of this instrument
are reported by Kersh (25). Fifteen questions involved behaviors directly related to the standards employed in the classroom simulation experience. The remaining two questions asked for a general assessment of the student teacher pertaining to (1) her ability to assume responsibility quickly for the class, and (2) the types of problems with which the student teacher had difficulty. Each supervising teacher was instructed by the investigator on the use of the questionnaire.

In responding to a question, the supervising teacher was asked to indicate (1) how frequently T responded in the manner indicated, and (2) how frequently a problem arose which required T to use such a technique. The supervising teacher used a five-point scale ("always" to "never") to respond. For example, a supervisor might estimate that her student teacher "moved in" every time the opportunity occurred ("always"), yet might indicate that the problem occurred rather rarely ("seldom").

In responding to the question regarding how quickly T was capable of assuming full responsibility for the class, the supervising teacher responded by checking a given category indicating the number of weeks after the beginning of student teaching (within 1 week, 1-3 weeks, 4-6 weeks, 7-9 weeks, after 9 weeks). The supervising teachers rated their student teachers on this instrument two weeks before the close of the student teaching experience.

**Procedures**

The study was divided into three phases: (1) the developmental phase, (2) the testing phase, and (3) the instructional phase.
Developmental Phase

Simulated experiences were created to provide opportunities for prospective student teachers to assume the role of a beginning home economics teacher and practice solving critical teaching problems which were presented on video tape, by role play, and in written incidents. In the developmental phase of the study, the experimental materials were created and produced and a teaching procedure was developed.

Production of video taped simulated problems. Through the cooperation of the administrative personnel and the home economics teacher at Clover Leaf High School in Medina County, permission was granted to spend one day in the home economics department video taping the critical incidents that embody the principles and skills selected for this study that were needed for the development of desirable and effective teaching behaviors in prospective student teachers. Twelve home economics pupils who were enrolled in this school were the pupil actors, an Ashland College home economics student portrayed the student teacher, and the Cloverleaf high school home economics teacher played the part of Mrs. Ace, the supervising teacher. The college home economics supervisor, the investigator, a student assistant, and an operator for the video taping facilities worked together to get the problem situations set up, rehearsed, and video taped.

Scripts and directions were written for thirteen critical teaching incidents to be produced and recorded on video tape. The investigator's previous experience as a high school home economics teacher, a college home economics methods course teacher, and a college student teacher supervisor enabled her to be familiar with problems
encountered in the home economics classroom and experienced by student teachers. An experienced home economics teacher who supervised student teachers, a college home economics methods teacher, and a college home economics supervisor evaluated the problems in terms of their being typical ones and their portrayal of the principles which the problems represented. They agreed that the problems were familiar, common, and that they were frequently encountered in classroom situations. They offered suggestions for problems to include that they thought were important for prospective student teacher familiarity, and these were developed into problem situations to be included in the simulated experience.

Each of the problem sequences originated by the investigator was prepared in the form of a rough script prior to the actual video taping. Scripts and directions were also written by the investigator for an orientation tape to be produced in which the teacher, Mrs. Ace, is shown performing in a home economics classroom and sets the stage for each prospective student teacher to become accustomed with the video taping procedure by introducing herself to the class.

Each incident was rehearsed twice before video taping was attempted. Because the students knew that the incident could be erased and repeated if a mistake was made, they were able to perform in a relaxed and natural way.

The thirteen video taped problem incidents varied in length from twenty seconds to seventy-five seconds. The average time required for rehearsing and producing each problem incident was about fifteen minutes. The college supervisor and the television operator worked
together on the video taping of each incident, while the investigator and student assistant prepared for the next problem rehearsal. This system proved to be efficient with a minimum loss of time, once all persons were acquainted with the routine.

Seven video taped problems and three written problems were used in Program I which was used for the pre-test and instruction sessions. Program II contained six video taped incidents and four written problems, and was used for the post-test.

The simulated experiences were designed to permit participants to do six things:

1. Assume the role of a beginning teacher.
2. Have access to, and use related appropriate professional information and materials.
3. Have opportunity to solve critical problems of beginning teachers free from stress.
4. Be exposed to a variety of alternatives of potential solutions to particular problems.
5. Consider possible consequences of their problem-solving behavior and evaluate them.
6. Focus intensively on critical teaching problems and study or analyze them before they were confronted with them in an actual teaching situation.

**Preparation of instructional procedure forms.** Two programs were prepared, each containing ten simulated critical teaching incidents involving a student teacher in a home economics class through use of video tape and printed materials. Each simulated problem presented to the prospective student teacher (T) by video tape, role play, or written incident posed situations to which T reacted as if she were the actual
teacher. The Instructional Procedure Form prepared for each problem contains solutions with alternative "feedback sequences" to be related to T in a verbal form by Examiner (E) (Appendix A, B). These were designed to show T how Mrs. Ace's pupils might react to her under different circumstances. The purpose of the feedback and discussion here was to reveal how T perceived and diagnosed the problem, and to assist her in evaluating her own performance in the light of information gained through the feedback sequence. All alternative responses were considered whether or not T's response satisfied the particular requirements employed in the rating procedure.

The video taped and role played portrayal of the problems were constructed to embody and illustrate only the one, two, or three principles needed for the effective teacher behavior required for coping with the problem presented. This kept the content of the video taped or role played portrayal of the incident clear of extraneous information that might make it too difficult for T to see and identify the problem. Where needed, supplementary information about the student or situation was included in the description of the classroom situation.

Use of case studies. A case study was prepared for each student involved in the problem incidents. These studies included a case history of four students, Grace, Agatha, Kathy, and Alvertia. It was necessary for T to refer to these case studies of students in order to get further information needed for effectively coping with some of the problems. Each student in the case studies is descriptive of pupils of one type of academic achievement: the high ability pupil, the low ability pupil, the underachiever, or the overachiever. Data on these students were
collected for a master's study by Brinker at Iowa State University in 1963 (27). These case studies were illustrative of individual differences among high school pupils, and illustrated the kinds of pertinent data about pupils which are accessible to homemaking teachers. These four case studies contained the following data collected about the students when they were in the tenth grade: (a) intelligence quotients and names of tests from which they were derived, (b) marks obtained in the ninth through the first semester of the tenth grade in all subjects except driver training, music, and physical education, (c) number of days absent from school, (d) the father's occupation and other data from which a social classification of the family could be made, and (e) scores derived from responses to the Mooney Problem Check List, high school form. When these girls were seniors, achievement and attendance records from the second semester of the sophomore year through the first semester of the senior year were added to the previous data collected.

Preparation of orientation video tape. An orientation video tape showing the teacher (Mrs. Ace) working with her class in a typical manner was prepared. This was used during the first day of the experiment in the first individual conference to familiarize the student with video taping procedures and to acquaint her with the classroom set-up used for the video taped incidents. Mrs. Ace introduces T to the pupils in the classroom and asks her to make a few comments to the class. At this point T was expected to make a few comments about herself and her expectations for the student teaching experience.
Preparation of prospective student teacher's handbook. The prospective student teacher's handbook included the following: (a) A student syllabus for use in the instructional phase (Appendix J). This contained the objectives, a list of behaviors which were expected to be improved, a description of the types of experiences provided to develop competence in the expected teaching behaviors, and a discussion of the resources available to help the prospective student teacher. (b) A list of the principles to be used in solving the problem (Appendix K). (c) A description of each of the ten classroom situations which were to be read prior to the video tape portrayal of the problem incident in order to orient T to the problem incident (Appendix C).

Some of the problem incidents were presented by a written description of the problem rather than by video tape (Appendix L). In this case, the written description of the classroom problem situation was included. A response form was included with the description of each teaching incident for the student to write an analysis of each problem incident after she had role played her response (Appendix N).

Preparation of instructor's handbook. This included the following: (a) The student syllabus which is described above. (b) The instructional procedures for each problem for providing verbal feedback information to show the prospective teacher the possible consequences of her handling of the problem (Appendix A). It is recognized that not all variations in behavior were available for presentation to T, and that there was no guarantee that feedback of possible consequences of her handling of the problem was actually how the students would react in the classroom. Each was told that the
"negative feedback" should be interpreted by T to indicate that she was not behaving in the most effective manner. "Positive feedback" should be interpreted to mean that she was "on the right track." Numerical values were assigned to various levels of performance on each problem situation (depending upon T's ability to recognize and apply the principles needed for meeting the problem) for use in scoring T's performance on a pre-test and post-test. (c) Scoring criteria principles which have been described previously. (d) A description of the procedures for scoring. From one to three principles applied in each problem situation. The prospective student teacher's enacted and verbal responses to each problem were scored by comparing her responses to the principles required for the solution of the problem (Chart 1).

If three principles were required, one point was awarded to the student for each principle correctly applied, establishing a range from one to three points for the physical response.

If two principles were required, three points were awarded if two principles were correctly applied; two points if one principle was correctly applied; one point if no correct principle was applied but the student did respond; and no credit if the student did not respond.

If only one principle was required according to the criteria as stated on the problem instructional procedure form, two points were awarded if one principle was applied correctly; one point was given if no principle was applied, but the student did respond; no credit was given if the student did not respond.

For the verbal assessment, two points were given if the student correctly verbalized both what the problem was and the most important
Standards as Specified by the Problem | Score for Response
---|---
3 principles required | 3 points
2 principles applied | 2 points
1 principle applied | 1 point
0 principle applied | 0 points
2 principles required | 3 points
1 principle applied | 2 points
0 principle applied but T responded | 1 point
T did not respond | 0 points
1 principle required | 2 points
0 principle applied but T responded | 1 point
T did not respond | 0 points

Chart 1. Procedure for scoring problem responses in Instructional Procedure Form

thing to do to cope with the situation. One point was awarded if the student correctly identified either the problem or the most important thing to do in order to cope with this situation. No credit was given if student failed to verbalize the correct problem assessment and what to do in order to cope with the problem. The sum of the scores provided a possible total of five points for each problem (3 for the physical response and 2 for the verbal response).

Tryout of materials. The video taping of the problem incidents was completed about three weeks prior to the time the experiment was to begin.

Before the beginning of the experiment, a jury of five teacher educators agreed to score the prospective teachers on pre- and post-performance tests. The home economics methods teacher, the college home economics supervisor, the head of the Ashland College education
department, a high school social studies supervisor, and the director of the student teaching program at Ashland College were briefed on the objectives of the study and the method of carrying it out. They then met as a group in order to become familiar with the scoring procedure and to have any questions answered. This meeting took place about one-half hour previous to a trial run through the scorings of some of the problems in order to insure that all understood the procedure, and to resolve any discrepancies and differences in judgments in scoring the problem incidents.

Two students who had finished student teaching the previous semester agreed to be prospective teachers who would cope with a selected sample of the problems in this try-out of the materials. The jury made independent observations of problem solutions by each of the student teachers. Discrepancies between the scores were noted and discussed after each problem situation in an attempt to determine the cause of the differences. Discussion and review of criteria ensued, and differences were noted and resolved. After scoring each student teacher on five problem situations, the jury was in agreement, with very few differences in the observations, and it was felt that consensus could be reached on the scoring of future problem responses.

This try-out of the scoring of the problem situations brought to light the need for a more adequate instrument for recording the scores and comments needed for each problem response. A recording instrument was developed that would contain total scores and comments for each student for both pre-test and post-test results (Appendix M).
The need for a sharper technique for examiner's (E) questioning prospective student teachers in securing verbal assessment from the student of each problem situation was another deficiency noted. It was decided that two questions would secure information that would clarify the accuracy and adequacy of T's assessment of the problem and her consideration of the particular aspects of the situation:

1. "What was the problem you saw that made you react or respond?"

2. "What did you feel was the most important thing for you to do in order to cope with this situation?"

A place on the scoring instrument was provided to record this information (Appendix M).

Voiced recordings were made of each T's reactions to problem sequences in order to have a complete record of verbal assessment in case it was needed. This proved to be useful, and all the members of the jury felt this ability to hear the recorded verbal assessment enabled them to make a more accurate appraisal of the student teacher's responses. Several times the recorded response brought to light a verbal response that had been missed by all the members of the jury because they were involved in observing and recording the student teacher's physical response to the problem.

Approximately one hour and a half were needed for the appraisal of two student teachers each responding to five problem situations. About two-thirds of this time was used for orienting the student teacher to the situation and for the discussion among the jury after each problem situation in order to reach consensus. These procedures were not needed during the actual pre-testing because the prospective student
teachers were oriented to the problem situations as a group previous to the individual pre-test participation, and the jury was able to assess the problems without the lengthy consultations on each problem presentation. Therefore, it was estimated that approximately one half hour would be needed for each prospective student teacher to respond to the ten problem situations and be scored on them which later proved to be the average time required for the pre-test and post-test for each individual.

The jury members commented afterward that the experience of analyzing the problem situations in terms of the standards selected for these problems was beneficial to them professionally. It tended to both sharpen and level their thinking in regard to techniques used in coping with classroom problems.

Testing phase

Prior to the beginning of the instructional procedure, the Dogmatism Scale, the California Personality Inventory, and the Confidence Scale were administered to the participants by the director of the Ashland College testing services in the testing services laboratory. A pre-test and post-test were administered, and the supervising teachers were asked to respond on a questionnaire relative to student teacher's use of the principles studied in the classroom simulation experience. The purpose of each of these tests is reviewed here briefly.

Administering the Dogmatism Scale. At the close of the methods class, and immediately prior to the experiment (two weeks of participation in simulated classroom experience), the prospective student
teachers were tested on the Dogmatism Scale to determine their openness to the stimuli available in the simulated experience. An analysis of the relationship between the openness of a student's belief-disbelief system and her improvement in ability to respond to the problem situations provided information on the relationship between these two factors for these students.

**Administering the California Personality Inventory.** This was also administered to the students prior to the two-week simulation experience program in order to determine each student's ability to show to others the conditions of empathy, congruence, and unconditional positive regard. A comparison of a student's scores on these factors and her improvement in ability to respond to the problem situations provided information on the relationship between certain personality factors and improvement in the student's ability to respond to the problems.

**Administering the confidence scale.** Vlcek's nine question four-point confidence scale was administered to the group before the two-week simulation experience, and after the post-test.

**Administering the pre-test and post-test.** The pre-test was the same as the post-test procedure except that Program I was used for the pre-test and Program II for the post-test.

A jury of five teacher educators formed the panel of judges to evaluate T's responses to ten problem situations in both the pre-test and post-test. They sat near the back of the room facing the simulated classroom which was set up in the front of the room. The simulated classroom was furnished with two large tables, ten chairs, a teacher's desk, and a chalkboard which were necessary furnishings for presenting
the role played incidents. There was also a closed circuit television receiver for presenting the video taped problem incidents.

Ten home economics students agreed to enact the incidents to be presented by role playing. Scripts of the incidents to be role played were written, and the ten home economics students met together before the tests to rehearse the incidents. Approximately one-half hour was required for each of these rehearsals in order for the student actors to become familiar with their parts and the purpose of each problem to be enacted.

T was provided with a written description of the problem situation to read before the video taped or role played problem incident was presented. T was instructed to enact her response rather than tell what she would do to cope with the situation.

The judges used the Instructional Procedure Forms which were divided into three sections: (1) Assessment, (2) Principles, and (3) Response (Appendix A). These three sections corresponded with the processes that the prospective student teacher was expected to follow in solving each problem, namely: (1) assessment to determine specifically what the problem was; (2) formulation of the most effective method to cope with the problem, i.e., awareness of principles to apply; and (3) application of the principles in physically and verbally attempting to solve the problem by enacting the desired behavior and explaining the cause and solution of the problem.

After T enacted her response, each judge compared her response against the standards identified for the problem and determined whether it was effective (3 rating), acceptable (2 rating), or ineffective
(1 rating), or failed to respond to the problem (0 rating), and assigned the appropriate rating.

Next E pursued a line of inquiry to determine whether or not T understood the problem and acted on the basis of appropriate information by asking the following questions:

1. "What was the problem you saw that made you react or respond?"

2. "What did you feel was the most important thing for you to do in order to cope with this situation?"

Again, T's response was compared against the standards, and a rating of 2 was assigned if both answers fitted the standards, a rating of 1 if one or the other question fitted the standards, and a rating of 0 if neither was applicable. The test then continued with the next problem sequence following the same procedure until 10 problem sequences in Program I were completed for the pre-test. The post-test was conducted after the simulation experience in exactly the same way except that Program II of the problem situations was used (Appendix B).

Since the test sequences were not intended to be instructional, E remained neutral in her reactions to T so that she would have as little feedback as possible upon which to evaluate her own performance. Inquiry was designed to elicit from T as nearly as possible what T was thinking at the time she enacted her response. One-half hour was required for each pre-test and post-test making a total of three and one-half hours required for pre-testing the seven students, and three and one-half hours required for post-testing the seven students.

The sum of the scores for each individual problem constituted the individual problem score, and the ten individual problem scores were
again totaled for the subject's total pre-test and post-test scores. These were recorded on a form developed especially for this purpose (Appendix M). The scores of the five judges were totaled on the pre-test and again on the post-test and the mean was determined from the total problem score for each student on each test. Scores on the pre-test and post-test were analyzed to determine the amount of change that took place during the simulation experience.

Administering the supervising teacher questionnaire. A questionnaire consisting of seventeen questions was used to secure the reactions of the supervising teachers (Appendix H). Fifteen questions involved behaviors directly related to the standards employed in the classroom simulation experience. The remaining two questions asked for a general assessment of the student teacher's ability to assume responsibility quickly and the types of problems with which the student teacher had difficulty.

Each supervising teacher was instructed by the investigator on the use of the questionnaire. The student teachers were rated on this instrument approximately two weeks before the close of the student teaching experience.

Instructional phase

Since the purpose of the third phase of the procedure was instructional, the problem sequences were presented and used in a different way from that used for the pre-test and post-test. The student was allowed to practice each problem sequence as many times as necessary in order to attain effective behavior. Also, the student
discussed her response with the investigator in order to discover the most effective response to each problem situation through finding out why responses tried out prior to the most effective response were less effective. The program and method for achieving it were explained to the prospective student teachers prior to beginning the instruction.

**Orientation sequence.** During the first day of the experiment and just prior to the pre-test, the investigator talked with all the prospective student teachers as a group and briefly described the procedure and techniques used in the study without revealing the details of the experimental design. The Prospective Student Teacher's Handbook was distributed to members of the class, and they were instructed to become familiar with its contents.

The students were reminded that information found in the case studies of the four types of students would be valuable and necessary in order to be able to cope successfully with many of the ten problem situations which were described in their handbook and which would provide the basis for study for the next two weeks. They were instructed to read the case studies prior to their first instructional period in the simulation experience.

The students were scheduled to spend twenty minutes each morning in an individual conference with the investigator and two hours each afternoon for five days in a group session making a total of about 12 hours of classroom instruction for each student. Each student was scheduled to take the pre-test on the first day. One-half hour was required to complete each pre-test.
During the first individual conference, the procedure to be followed for the daily individual conferences and group meetings was outlined once again. Then T was asked to imagine that she had already met Mrs. Ace, her supervising teacher, and that she had come to observe in Mrs. Ace's class prior to the beginning of her student teaching. A video tape recording of a teacher performing in a home economics classroom was then introduced. When the video tape started, T observed Mrs. Ace passing out papers to her students. After a few seconds, Mrs. Ace appeared to notice T for the first time, approached T, spoke to her and softly said that she would like for T to make a few remarks to the class. She would let her have a few minutes to plan what she would say. She continued passing out papers for a short time to the class, and then indicated to the class that T was about to speak to them. This was T's cue to begin.

**Instructional sequence.** The simulated problem situations provided experience for the student in identifying and solving problems with five types of student behaviors. The student behaviors were (1) inattention, (2) irritating behavior, (3) undesirable conduct, (4) distracting behavior, and (5) fatigue. In the process of solving problems based upon these five behaviors, the prospective student teachers discovered and developed behavior reflecting the eleven principles which were adapted for use in this study.

The Prospective Student Teacher's Handbook contained a description of each problem situation together with supplementary information that would help T know how to cope effectively with the problem.
The Instructional Procedure Forms used by E corresponded with the processes that T was expected to follow in solving each problem and to serve as a guide to E in leading T to discover the most effective methods of coping with the problem situations.

Since the purpose was instructional, T was allowed to practice each problem sequence as many times as necessary in order to attain effective behavior. Also T discussed her response with E. E did not give information in suggestions directly, however. Instead, T was instructed to "discover" the most effective response to each problem situation on the basis of information provided through the verbal feedback sequences provided by E in discussions with T. The Instructor's Handbook contained a description of each problem sequence. The problem situation was presented to T by E either by video tape or by verbal description when the video taped incident was not available.

E had a record of the judges' evaluation and comments to T's responses to these same problem situations on the pre-test. T and E discussed and analyzed this pre-test response. Then T was asked to respond to the problem situation. E would verbally provide feedback that would probably be the student's reaction to the behavior enacted by the teacher. Generally speaking, if T's response was judged effective by E, a "positive" feedback response was given, i.e., in the form of desirable student behavior; if T's response was judged ineffective by E, a "negative" feedback, i.e., in the form of undesirable student behavior, was given.
After the problem-response-feedback interaction, T and E evaluated T's response jointly. The case studies and supplementary information were referred to freely. If T's response previously had been judged effective, and if T was satisfied with her response, the instruction continued with the next problem sequence. Two problem sequences were responded to, analyzed, and practiced at each twenty minute individual conference. This then required five sessions to complete the practice of the ten problem situations in Program I.

After the individual conference and before the group meeting in the afternoon, T wrote out responses on an Incident Response Form for each of the two problems discussed and analyzed in the conference (Appendix N). This response form accompanied each problem setting description included in her handbook. This exercise required her to (1) identify the problem, (2) identify forces and factors affecting the problem environment, (3) locate pertinent information if more was needed than was supplied in the description of the situation which was included in her handbook, (4) discuss alternative courses of action using the principles which were discussed in the analysis of the problem with E, (5) select a "most desirable" course of action, and (6) communicate a decision.

Each afternoon for five days students returned to the television studio for two hours where they discussed and compared their written solutions in pairs, and later the entire group further explored the problems.
Students created classroom problem situations of their own that embodied the principles and student behaviors studied, enacted them, and analyzed them. When possible, these were video taped for instant replay so that students could see themselves performing as they really were.

After these sessions were completed the post-test (Program II) (Appendix B) and the Confidence Scale (Appendix D) were administered.

Statistical Plan for Analysis and Presentation

The study was designed to answer specific questions. An analysis of variance was appropriate to use to determine the degree to which appropriate answers had been found. Interaction and correlation techniques were used to determine the degree to which the program was effective and related to the personality variables and the degree of open-mindedness possessed by the participants. All computations were performed using a General Electric 235 computer in the Ashland College computation center.

The following questions relative to the effectiveness of the program were to be answered:

1. Will prospective student teachers show measurable positive change in ability to respond to, assess, and solve teaching problems?

2. To what extent will positive change be shown in confidence in ability to teach?

3. Will the degree of open-mindedness of the prospective student teachers be a factor related to the simulation experience program?

4. Will personality factors of poise, sense of well-being, responsibility, ability to conform, self-control, and empathy possessed by prospective student teachers be factors related to their performance in the simulation experience program?
5. Will prospective student teachers use the principles which were incorporated in the simulated experience in solving the problems encountered in the actual classroom?

The "t" test was used to test for significant differences in change in performance using three variables in both the pre-test and post-test—the mean of the total performance scores, the mean scores for acting out the behavior, and the mean scores for verbal assessment of the problem.

The "t" test was used to test for significant difference in change in confidence between mean scores of the pre-test data and mean scores of the post-test data.

The correlation coefficient was computed between change in performance and the personality factors and the open and closed-mindedness of the participants to determine relationships here.

The reactions and evaluations of the individuals involved in this study as to the feasibility of the experiment did not require statistical analysis for interpretation and are reported descriptively.

The next chapter is a report of the findings of the study in answer to the following three questions:

1. Can a simulated experience program be provided in a teacher education curriculum?

2. Is simulation in teacher education an effective learning experience?

3. Is simulation in teacher education an acceptable learning experience?
CHAPTER IV

FINDINGS OF THE STUDY

In order to determine the feasibility of using simulated experiences as a part of the preparation of prospective student teachers at Ashland College, three questions were asked: (1) Can a simulated experience program be provided in a teacher education curriculum? (2) Is simulation in teacher education an effective learning experience? (3) Is simulation in teacher education an acceptable learning experience?

A discussion of the nature of participant enlistment and reaction is presented first to answer the question, "Can a program of simulated experiences be provided in a teacher education curriculum?" The effectiveness is measured and reported by a statistical analysis of (1) the change in the prospective student teacher's ability to respond to, assess, and solve teaching problems as measured by scores on a pre-test and a post-test; (2) the prospective student teacher's use of the principles incorporated into the simulated experiences in solving problems encountered in the classroom as measured by responses on the Supervising Teacher Questionnaire; (3) the change in the prospective student teacher's confidence in her ability to teach as measured by the Confidence Scale administered at the beginning of the experiment and again at the close of the experiment; (4) the relationship between the degree of open-mindedness of the prospective teacher as measured by the
Dogmatism Scale and her change in ability to solve teaching problems; and (5) the relationship between certain personality factors possessed by the prospective student teacher as measured by the California Personality Inventory and her change in ability to solve teaching problems.

The discussion of the findings concludes with the presentation of the reactions of the individuals involved in this study and their comments and evaluations as to the acceptability and effectiveness of the experiment.

Can a Program of Simulated Experiences Be Provided in a Teacher Education Curriculum?

The ultimate criterion for evaluating the possibility of the use of this method for pre-service preparation of student teachers was whether or not such a program could be set up and followed at Ashland College.

Securing interest of faculty and students

Can the interest of faculty and students be secured?

It was necessary to secure the interest and cooperation of the education department faculty and administrators as well as the interest and cooperation of the home economics education faculty and students. They were asked to approve the plan and to assist in the conducting of the experiment. They were enthusiastic about the project and contributed immeasurably with their whole-hearted support and suggestions for carrying it out. Everyone cooperated and frequently offered suggestions or help. The home economics supervisor suggested a high school home economics teacher, students, and classroom for video taping the problem
incidents, and worked with the investigator in making the necessary contacts and arrangements for the video taping.

The young men in charge of the television equipment were available with the equipment whenever they were needed. This was vital and necessary for successfully developing, producing, and using video taped simulated incidents. In fact, it would not be feasible to attempt such a project without the full cooperation and availability of these people and their equipment. Their keen interest, patience, and expertise frequently made the difference between success and failure in the production and use of the video taped problem incidents. Their suggestions for lighting, placement of equipment and students for the video taping of the incidents and use of the audio equipment were indispensable for usable and effective video taped recordings.

The attitudes of the participating students at first were a mixture of anxiety, curiosity, and possibly resentment, but as they recognized this as an attempt to provide them with an experience that would help them become acquainted with some of the problems they would face as student teachers, and that they would develop knowledge and skill in ability to cope with them before they faced pupils as student teachers, it changed to one of acceptance and wanting to cooperate. They were patient, understanding, and cooperative with the more than usual number of tests, scales, and questionnaires administered before and after the experiment in order to have a measure of changes occurring.
Developing a simulation experience program

Can a simulated experience program be developed with measurable factors?

Some scholars are experimenting with simulation as a means of preparing student teachers for their professional responsibilities, and are reporting their studies in the literature.

By being able to borrow heavily from efforts of previous investigators, it was found that a program of simulated experiences with measurable factors could be developed and found usable.

Each student participated twenty minutes a day in an individual conference with the investigator and two hours each afternoon for five days in a group session making a total of about twelve hours of classroom instruction for each student. Approximately one-third of this time was spent in responding to simulated video taped or role played problem incidents; one-third of the time was spent in individual discussion with the instructor, group discussion, and analysis of problem situations; and about one-third of the time was spent in creating classroom problem situations of their own that embodied the principles and student behaviors studied, practicing coping with them, and analyzing them. When possible, these were video taped for instant reply so students could see themselves performing as they really were.

Determining personnel and equipment needed, and time limits

What personnel and equipment are needed, and what are the time limits?

No outside technical assistance was solicited because one of the goals of the study was to ascertain if a pre-service simulation program
was a feasible method to use with the existing personnel and equipment at Ashland College. Because all the student teachers, except those involved in the study, were off-campus beginning their student teaching, the television studio, equipment, and personnel were available for almost any amount and spacing of time needed for this experiment. The prospective student teachers substituted the time that each would have spent in student teaching, participating in daily individual and group conferences and doing outside supplementary work which would comprise the simulation experience for them for a period of two weeks.

The home economics supervisor used the time that she would ordinarily spend supervising the student teacher in the high school classroom for working with the investigator in the individual and group conferences with the students on campus.

The equipment utilized consisted of one Ampex 7000 (a video tape recorder) plus a CC324 video camera (equipped with a zoom lense) on a dolly tripod to facilitate easy moving in order to get many different angle shots, and an Ampex adapted Motorola monitor (twenty-one black and white). Three Electrovoice microphones (two on stands and a lavaliere type for the teacher or student doing the speaking in the problem incident) fed into an audio mixer (Shure M-68) switching arrangement which permitted the operator to ride gain on the various microphone inputs and balance the output of the VTR unit were found to be adequate for the audio. The natural lights of the classroom were found satisfactory for the lighting. For taping in the public school classroom, a portable cart with wheels to hold all the equipment was used.
The television studio was equipped with another set of the same equipment as above. For the role played incidents, an arrangement in the front of the room simulating a conventional classroom with ten chairs, two large tables, a chalkboard, and teacher's desk was provided. The television studio was available for use as a conference room except for two one-hour periods twice a week when it was scheduled for use by another class. It was easy to plan use of the room and facilities around this schedule.

It wasn't possible to produce and use video tape recordings as much as desired because VTR equipment and personnel were off campus recording those students in other subject fields who had already started their student teaching experience. The fact that neither of the instructors could operate the television equipment was a further handicap.

The television camera operator was the most imposed-upon member of the team of workers. He was not always able to work with the investigator during the individual and group conferences when the problem situations were presented to the students. Necessary adaptations had to be made by presenting the problems and feedback verbally.

Making policy level decisions

What policy level decisions need to be made?

The investigator talked with the administrators in the education department about the objectives for the study and the necessary requirements for carrying it out. They stated that they believed that simulated teaching would be a profitable experience for these students, and were glad to have an opportunity to have home economics students participate
in such an experience as a pilot study to determine the feasibility of using such a program at Ashland College in the future. Therefore, they agreed to change the time for beginning the student teaching experience for these home economics students in order that they might participate for two weeks on campus in this pre-service simulation experience. They also agreed to make the closed circuit television equipment and personnel available for use in producing and using the video taped recordings.

It can be concluded that in answer to the question, "Can a simulation experience program be provided in a teacher education curriculum?" that such a program can be planned and carried out. Discussions were held with the home economics and education department personnel to determine the extent of the commitment possible from the teachers and administrators and found that whole-hearted support could be expected. Assignments were made and enthusiastically accepted by the home economics supervisor and the two education department men who operated the VTR equipment.

Is Simulation in Teacher Education an Effective Learning Experience?

Analysis of pre-test and post-test ratings

Will prospective student teachers show measurable positive changes in ability to respond to, assess, and solve teaching problems?

For the statistical analysis, the null hypothesis that "there will be no change from pre-test to post-test on performance" was employed.
Symbolically: 
\[ t = \frac{\bar{Y} - \mu}{\frac{S}{\sqrt{n}}} \]

\( \bar{Y} \) is the mean of the sample
\( S \) is the standard deviation of the sample
\( n \) is the sample size (7)
\( \mu \) is the hypothesis value (0)

Performance mean scores ranged from 2.80 to 3.36 out of a possible score of 5.00 for the pre-test (Table 1). The post-test mean scores ranged from 3.74 to 4.70 out of a possible score of 5.00 which was a gain of .94 to 1.34 points on performance (Table 1).

The change in ability to enact the desired response, to assess the problem, and the total performance are all significant (Table 2). A "t" value of 8.83 was computed for the enacted response; of 4.95 for the verbal or assessment of the problem response; and 7.07 for the combined enacted and verbal responses, all of which are significant at the .01 level. On the basis of this evidence, the first null hypothesis tested that there will be no change from performance on the pre-test, and performance on the post-test was rejected for all three of the variables: (1) ability to enact response to, (2) assess, and (3) solve teaching problems.

**Analysis of the confidence scale ratings**

To what extent will positive change be shown in confidence in ability to teach?

The null hypothesis that "there will be no change in confidence shown at the end of the experiment from that held at the beginning of the experiment" was employed.
TABLE 1
MEAN PRE-TEST AND POST-TEST RATINGS ON PERFORMANCE TESTS

<table>
<thead>
<tr>
<th>Student Behavior</th>
<th>Pre-test Mean</th>
<th>Post-test Mean</th>
<th>Change</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Student 1</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Enacted response</td>
<td>1.74&lt;sup&gt;a&lt;/sup&gt;</td>
<td>2.26</td>
<td>.52</td>
</tr>
<tr>
<td>Verbalized response</td>
<td>1.34&lt;sup&gt;b&lt;/sup&gt;</td>
<td>1.48</td>
<td>.14</td>
</tr>
<tr>
<td>Total</td>
<td>3.08</td>
<td>3.74</td>
<td>.66</td>
</tr>
<tr>
<td><strong>Student 2</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Enacted response</td>
<td>1.96</td>
<td>2.38</td>
<td>.42</td>
</tr>
<tr>
<td>Verbalized response</td>
<td>1.40</td>
<td>1.58</td>
<td>.18</td>
</tr>
<tr>
<td>Total</td>
<td>3.36</td>
<td>3.96</td>
<td>.60</td>
</tr>
<tr>
<td><strong>Student 3</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Enacted response</td>
<td>1.74</td>
<td>2.62</td>
<td>.88</td>
</tr>
<tr>
<td>Verbalized response</td>
<td>1.06</td>
<td>1.78</td>
<td>.72</td>
</tr>
<tr>
<td>Total</td>
<td>2.80</td>
<td>4.40</td>
<td>1.60</td>
</tr>
<tr>
<td><strong>Student 4</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Enacted response</td>
<td>1.98</td>
<td>2.82</td>
<td>.84</td>
</tr>
<tr>
<td>Verbalized response</td>
<td>1.36</td>
<td>1.88</td>
<td>.52</td>
</tr>
<tr>
<td>Total</td>
<td>3.34</td>
<td>4.70</td>
<td>1.36</td>
</tr>
<tr>
<td><strong>Student 5</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Enacted response</td>
<td>1.98</td>
<td>2.44</td>
<td>.46</td>
</tr>
<tr>
<td>Verbalized response</td>
<td>1.26</td>
<td>1.66</td>
<td>.40</td>
</tr>
<tr>
<td>Total</td>
<td>3.24</td>
<td>4.10</td>
<td>.86</td>
</tr>
<tr>
<td><strong>Student 6</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Enacted response</td>
<td>2.00</td>
<td>2.64</td>
<td>.64</td>
</tr>
<tr>
<td>Verbalized response</td>
<td>1.24</td>
<td>1.60</td>
<td>.36</td>
</tr>
<tr>
<td>Total</td>
<td>3.24</td>
<td>4.24</td>
<td>1.00</td>
</tr>
<tr>
<td><strong>Student 7</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Enacted response</td>
<td>1.94</td>
<td>2.46</td>
<td>.52</td>
</tr>
<tr>
<td>Verbalized response</td>
<td>1.38</td>
<td>1.68</td>
<td>.30</td>
</tr>
<tr>
<td>Total</td>
<td>3.32</td>
<td>4.14</td>
<td>.82</td>
</tr>
</tbody>
</table>

<sup>a</sup>Perfect enacted response score: 3.00

<sup>b</sup>Perfect verbalized response score: 2.00

<sup>c</sup>Perfect total response score: 5.00
### TABLE 2

**CHANGE FROM PRE-TEST TO POST-TEST RATINGS ON PERFORMANCE TESTS**

(N=7)

<table>
<thead>
<tr>
<th>Response Variable</th>
<th>Mean</th>
<th>Standard Deviation</th>
<th>&quot;t&quot; Test</th>
<th>Value Needed for Significance at .01 Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enacted response</td>
<td>.6114</td>
<td>.1832</td>
<td>8.827</td>
<td>3.41</td>
</tr>
<tr>
<td>Verbal response</td>
<td>.3742</td>
<td>.1999</td>
<td>4.953</td>
<td>3.41</td>
</tr>
<tr>
<td>Total enacted and verbal response</td>
<td>.9857</td>
<td>.3687</td>
<td>7.072</td>
<td>3.41</td>
</tr>
</tbody>
</table>

Symbolically:

\[
t = \frac{\bar{Y} - \mu}{\frac{S}{\sqrt{n}}}
\]

- $\bar{Y}$ is the mean of the sample
- $S$ is the standard deviation of the sample
- $n$ is the sample size (7)
- $\mu$ is the hypothesis value (0)

The confidence scale had a possible score range of 9 (very confident) to 36 (very uncertain). The students' scores ranged from 20 to 24 at the beginning of the experiment. When it was administered at the end of the experiment, the scores ranged from 11 to 20 which is clear indication of growth in confidence.

The change in confidence is significant (Table 3). A "t" value of 4.80 was computed for the degree of confidence which was significant at the .01 level. On the basis of this evidence, the second null hypothesis tested that "there will be no change in confidence shown at the end of the experiment from that held at the beginning of the experiment" was rejected.
TABLE 3
CHANGE IN CONFIDENCE SCORES FROM PRE-TEST TO POST-TEST

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean</th>
<th>Standard Deviation</th>
<th>&quot;t&quot; Test</th>
<th>Value Needed for Significance at .01 Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Change in confidence</td>
<td>4.428</td>
<td>2.439</td>
<td>4.8025</td>
<td>3.14</td>
</tr>
</tbody>
</table>

Analysis of the dogmatism scores

Will the degree of open-mindedness of the prospective student teachers be a factor related to their performance in the simulation experience program?

The null hypothesis that "there will be no relationship between the dogmatism scores and the change in performance scores" was employed. The correlation coefficient indicates that there were no interaction effects between the dogmatism scores and the change in performance scores (Table 4). On the basis of this evidence the third null hypothesis tested was accepted.

Analysis of the personality factors

Will personality factors of poise, sense of well-being, responsibility, ability to conform, self-control, and empathy possessed by prospective student teachers be factors related to their performance in the simulation experience program?

The null hypothesis that "there will be no relationship between the personality factors of sense of well-being, responsibility, ability to conform, self-control, and empathy possessed by the prospective student teachers and their change in performance" was employed. The correlation coefficient indicates that there were no interaction effects...
between the personality factors and the change in performance scores (Table 4). On the basis of this evidence, the fourth null hypothesis tested was accepted.

**TABLE 4**

**RELATIONSHIP OF DOGMATISM SCORES AND PERSONALITY FACTORS TO CHANGE IN PERFORMANCE**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Student Scores</th>
<th>Coefficient of Correlation&lt;sup&gt;a&lt;/sup&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dogmatism</td>
<td>150 155 102 163 115 200 200</td>
<td>-.3559</td>
</tr>
<tr>
<td>Personality Factors</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Poise</td>
<td>18 24 24 23 24 21 21</td>
<td>.4054</td>
</tr>
<tr>
<td>Sense of well-being</td>
<td>36 34 39 41 40 28 21</td>
<td>.3939</td>
</tr>
<tr>
<td>Responsibility</td>
<td>28 30 30 33 34 29 25</td>
<td>.3117</td>
</tr>
<tr>
<td>Ability to conform</td>
<td>37 25 43 39 38 27 26</td>
<td>.4861</td>
</tr>
<tr>
<td>Self control</td>
<td>32 21 37 31 27 13 14</td>
<td>.5020</td>
</tr>
<tr>
<td>Empathy</td>
<td>15 14 17 21 21 14 12</td>
<td>.4574</td>
</tr>
</tbody>
</table>

<sup>a</sup> Value needed for significance: .65.

**Supervising teacher evaluations**

Will prospective student teachers use the principles which were incorporated in the simulated experiences in solving the problems encountered in the actual classroom?

A Supervising Teacher's Questionnaire was used to collect information from supervising teachers. The first fifteen questions involved student teacher behaviors directly related to the standards and behaviors employed in the simulation experience. The remaining two questions asked for a general assessment of the student teacher as to (1) the speed of her ability to assume full responsibility for the class and (2) the most difficult problems the student teacher had to overcome.
The supervising teachers reported that all of the techniques representing knowledge of the principles were used with varying degrees of frequency by the student teachers in the classroom and the need for all the principles and behaviors occurred with varying degrees of frequency (Appendix P). Three teachers reported that two of the techniques were always or often used by the student teacher whenever there was a need for them to be used: the student teacher deferred to authority when necessary; and maintained a neutral position whenever there were conflicting parent-school interests. One teacher reported the need to defer to authority as occurring often, and six teachers reported it as occurring sometimes. The need to remain neutral when confronted with conflicting parent-school interests was most frequently reported as seldom occurring.

When the techniques and principles used "always" or "often" are combined, it is apparent that almost one-half of the techniques were reported by most of the teachers as being frequently used (Table 5). Six of the teachers reported that the student teacher always or often moved in and communicated at close range when direct action was required. Five teachers reported that the student teacher always or often used the following techniques when the need for them occurred:

- Student teacher maximized active participation of class members.
- Student teacher was attentive to entire class as well as individual in instructional situations.
- Student teacher was attentive to entire class as well as individual in problem situations.
### TABLE 5

**TECHNIQUES AND PRINCIPLES FREQUENTLY USED IN CLASSROOM (N=7)**

<table>
<thead>
<tr>
<th>Technique or Principle</th>
<th>Number of Teachers Reporting Frequent Use of Technique</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Moved and communicated at close range when direct action was required</td>
<td>6</td>
</tr>
<tr>
<td>2. Maximized active participation of class members</td>
<td>5</td>
</tr>
<tr>
<td>3. Deferred to authority when necessary</td>
<td>5</td>
</tr>
<tr>
<td>4. Was attentive to entire class as well as to individual in instructional situations</td>
<td>5</td>
</tr>
<tr>
<td>5. Was attentive to entire class as well as to individual in problem situations</td>
<td>5</td>
</tr>
<tr>
<td>6. Maintained neutral position in conflicting parent-school interests situations</td>
<td>5</td>
</tr>
<tr>
<td>7. Encouraged immediate replacement of inappropriate response with appropriate response</td>
<td>5</td>
</tr>
</tbody>
</table>

Student teacher maintained a neutral position when confronted with conflicting parent-school interests.

Student teacher encouraged learner to replace inappropriate response immediately with an appropriate response.

Most of the teachers reported that the need for the use of three of these techniques and principles occurred very often or often (Table 6).

Five of the student teachers were reported as being ready to assume full responsibility for a new class within one to three weeks (Table 7). The two teachers reporting slower readiness to assume full
### TABLE 6

TECHNIQUES AND PRINCIPLES OCCURRING FREQUENTLY IN CLASSROOM

<table>
<thead>
<tr>
<th>Technique or Principle</th>
<th>Number of Teachers Reporting Frequent Use of Technique</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Was attentive to entire class as well as to individual in instructional situations</td>
<td>7&lt;sup&gt;a&lt;/sup&gt;</td>
</tr>
<tr>
<td>2. Maximized active participation of class members</td>
<td>6&lt;sup&gt;a&lt;/sup&gt;</td>
</tr>
<tr>
<td>3. Was non-directive in instruction</td>
<td>6</td>
</tr>
<tr>
<td>4. Was attentive to entire class as well as to individual in problem situations</td>
<td>4&lt;sup&gt;a&lt;/sup&gt;</td>
</tr>
<tr>
<td>5. Anticipated management problems beforehand</td>
<td>4</td>
</tr>
</tbody>
</table>

<sup>a</sup>Reported as being used most frequently also.

### TABLE 7

SPEED OF ADJUSTMENT TO STUDENT TEACHING  
(N=7)

<table>
<thead>
<tr>
<th>Rate</th>
<th>Number of Teachers Reporting</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very rapid (within one week)</td>
<td>1</td>
</tr>
<tr>
<td>Rapid (between one and three weeks)</td>
<td>4</td>
</tr>
<tr>
<td>Average (between four and six weeks)</td>
<td>1</td>
</tr>
<tr>
<td>Slow (between seven and nine weeks)</td>
<td>1</td>
</tr>
<tr>
<td>Very slow (more than nine weeks)</td>
<td>0</td>
</tr>
</tbody>
</table>
responsibility for the class by the student teacher added the comment that they felt that readiness comes with experience only.

"Being able to work out good lesson plans," "the mechanics of managing a foods lab," and "being able to coordinate audio-visuals with lessons" were reported most frequently as being the most difficult problems for the student teacher (Table 8). Measuring the development of these competencies was not an objective of this experiment.

<table>
<thead>
<tr>
<th>Problem Reported</th>
<th>Number Reporting Problem</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Being able to work out good lesson plans</td>
<td>4</td>
</tr>
<tr>
<td>2. Needs to coordinate audio-visuals with her lessons</td>
<td>2</td>
</tr>
<tr>
<td>3. Mechanics of managing a foods laboratory</td>
<td>2</td>
</tr>
<tr>
<td>4. Lack of knowledge in subject matter</td>
<td>1</td>
</tr>
<tr>
<td>5. Talking loudly enough to get and keep attention</td>
<td>1</td>
</tr>
<tr>
<td>6. Lack of self confidence at first</td>
<td>1</td>
</tr>
<tr>
<td>7. Had to learn to avoid repetitive phrases such as &quot;OK&quot;</td>
<td>1</td>
</tr>
<tr>
<td>8. May have to guard against being too autocratic with students</td>
<td>1</td>
</tr>
<tr>
<td>9. Pronunciation of words new to students</td>
<td>1</td>
</tr>
<tr>
<td>10. Spelling</td>
<td>1</td>
</tr>
<tr>
<td>11. Slow in reacting to disciplinary problems</td>
<td>1</td>
</tr>
<tr>
<td>12. Organization</td>
<td>1</td>
</tr>
<tr>
<td>13. Sometimes &quot;lost&quot; students during a lecture</td>
<td>1</td>
</tr>
<tr>
<td>14. Too generous and sympathetic with students</td>
<td>1</td>
</tr>
<tr>
<td>15. Knowing what to expect of high school students</td>
<td>1</td>
</tr>
<tr>
<td>16. Illness—tonsillitis</td>
<td>1</td>
</tr>
</tbody>
</table>

The answer to the question, "Is simulation in teacher education an effective learning experience?" was sought by testing three hypotheses (the first, third, and fifth) and found to be true in all three
instances. The first null hypothesis was rejected and its alternative accepted that post-test results of prospective student teachers show measurable changes from pre-test results in ability to enact responses to, assess, and solve teaching problems. The second null hypothesis was rejected and its alternative accepted that participating in simulation experiences will increase self-confidence in teaching ability. The third hypothesis as to effectiveness was accepted that student teachers will use the principles that were incorporated into the simulation experiences to solve problems they encounter in the classroom.

In addition to testing these three hypotheses in order to determine the effectiveness of the program, two hypotheses were tested to determine the relationship between the degree of open-mindedness and certain personality factors possessed by the participants and the change in ability to respond to the problems.

The third null hypothesis that "there will be no relationship between the dogmatism scores of the participants and the change in performance scores" was accepted. The correlations here did not indicate that there was a relationship between these two factors. The fourth null hypothesis that "there will be no relationship between the personality factors of sense of well-being, responsibility, ability to conform, self-control, and empathy possessed by the participants and their change in performance" was also accepted. The correlations here, too, did not indicate a relationship between these two factors in this study.
Is Simulation in Teacher Education an Acceptable Learning Experience?

Acceptability of simulation in teacher education to students

Is simulation in teacher education acceptable to students?

To determine the attitude of the students toward participating in simulation experiences, a Student Reaction to Simulation Experience form was designed (Appendix F). This instrument was based upon the behaviors and principles experienced by the prospective student teachers as they participated in these simulated teaching problems. This questionnaire was administered immediately after the simulation experience program closed. Because it was desired to have the reactions of the participants after they had actual experience with students in the classroom, the questionnaire was administered again at the close of the student teaching experience. Because negative answers to questions 13, 14, and 15 on the questionnaire indicated positive or favorable reactions to the program, it was necessary to transpose the questions in Tables 9 and 10 in order to show the positive or "agree" answer for purposes of securing an accurate percentage of agree-disagree statements.

Ninety-seven (82 percent) of the 119 responses on the questionnaire administered at the close of the experiment were agreeable (Table 9). The students disagreed with 22 (18 percent) of the questions, which signified dissatisfaction with these parts of the experiment related to student acceptance. When the questionnaire was administered again at the close of their student teaching experience, attitudes on some of the items had changed somewhat. There is evidence
### Table 9

**Student Reaction to Simulation Experience at Close of Experiment (N=7)**

<table>
<thead>
<tr>
<th>Item</th>
<th>Number of Responses</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Strongly Agree</td>
</tr>
<tr>
<td>1. Simulated experiences (SE) were enjoyable</td>
<td>6</td>
</tr>
<tr>
<td>2. Video taped incidents (VTR) were realistic</td>
<td>2</td>
</tr>
<tr>
<td>3. Role played incidents were realistic</td>
<td>1</td>
</tr>
<tr>
<td>4. I felt involved acting out responses</td>
<td>1</td>
</tr>
<tr>
<td>5. Individual conferences helped me develop concepts</td>
<td>5</td>
</tr>
<tr>
<td>6. Group discussions helped me develop concepts</td>
<td>6</td>
</tr>
<tr>
<td>7. SE increased my capacity to identify problems</td>
<td>6</td>
</tr>
<tr>
<td>8. Coping methods for problems were developed</td>
<td>6</td>
</tr>
<tr>
<td>9. Concepts made more meaningful than by lecture</td>
<td>5</td>
</tr>
<tr>
<td>10. Was beneficial to write out responses</td>
<td>1</td>
</tr>
<tr>
<td>11. Helpful to see myself cope with problems on VTR</td>
<td>5</td>
</tr>
<tr>
<td>12. Was more relaxed with VTR during student teaching</td>
<td>5</td>
</tr>
<tr>
<td>13. Amount of time spent was satisfactory</td>
<td>2</td>
</tr>
<tr>
<td>14. Was better to use student teaching time for SE than methods class time</td>
<td>1</td>
</tr>
<tr>
<td>15. Better to use SE before student teaching that during student teaching</td>
<td>5</td>
</tr>
<tr>
<td>16. Handbook helped me understand SE objectives</td>
<td>1</td>
</tr>
<tr>
<td>17. Handbook helped me understand SE responsibilities</td>
<td>1</td>
</tr>
<tr>
<td><strong>Total responses (119)</strong></td>
<td>59</td>
</tr>
<tr>
<td><strong>Percent of total response</strong></td>
<td>50%</td>
</tr>
</tbody>
</table>
that now 91 (77 percent) of the 119 responses signified favorable reactions, and 28 (23 percent) of the responses signified unfavorable reactions (Table 10). The realism of the tape recorded problem incidents, the length of the time spent, and delaying student teaching were the most unacceptable parts of the program to the students. At the close of the simulation experience, all responded that it was an enjoyable experience (Table 9). At the close of the student teaching experience, one student reported that it was not an enjoyable experience. Responses as to the realism of role played incidents changed. At the close of student teaching, all reported that they were realistic presentations, while at the close of the experiment, one student had felt they were not realistic. Although they all thought at the close of the simulation experience that they would be more relaxed as a result of the experience when television was brought into the classroom, one student reported at the close of the student teaching experience that this was not the case, and having had simulation experience was of very little help here.

At the close of the experiment, no item on the questionnaire received an unfavorable reaction from more than three of the seven students (Table 9). At the close of student teaching, a change in attitudes occurred as to the amount of time used, and taking time from student teaching experience. At that time, five students felt that the amount of time spent on simulated experiences could have been shortened, and six felt that it would have been better to take time in methods class than to shorten student teaching time (Table 10). These were
### TABLE 10

**STUDENT REACTION TO SIMULATION EXPERIENCE AT CLOSE OF STUDENT TEACHING**

(N=7)

<table>
<thead>
<tr>
<th>Item</th>
<th>Number of Responses</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Strongly Agree</td>
</tr>
<tr>
<td>1. Simulated experiences (SE) were enjoyable</td>
<td>3</td>
</tr>
<tr>
<td>2. Video taped incidents (VTR) were realistic</td>
<td>0</td>
</tr>
<tr>
<td>3. Role played incidents were realistic</td>
<td>2</td>
</tr>
<tr>
<td>4. I felt involved acting out responses</td>
<td>3</td>
</tr>
<tr>
<td>5. Individual conferences helped me develop concepts</td>
<td>3</td>
</tr>
<tr>
<td>6. Group conferences helped me develop concepts</td>
<td>3</td>
</tr>
<tr>
<td>7. SE increased my capacity to identify problems</td>
<td>4</td>
</tr>
<tr>
<td>8. Coping methods for problems were developed</td>
<td>3</td>
</tr>
<tr>
<td>9. Concepts made more meaningful than by lecture</td>
<td>5</td>
</tr>
<tr>
<td>10. Was beneficial to write out responses</td>
<td>1</td>
</tr>
<tr>
<td>11. It helped to see myself cope with problems on VTR</td>
<td>5</td>
</tr>
<tr>
<td>12. Was more relaxed with VTR during student teaching</td>
<td>5</td>
</tr>
<tr>
<td>13. Amount of time spent was satisfactory</td>
<td>0</td>
</tr>
<tr>
<td>14. Was better to use student teaching class time than methods class time</td>
<td>0</td>
</tr>
<tr>
<td>15. Better to use SE before student teaching than during student teaching</td>
<td>5</td>
</tr>
<tr>
<td>16. Handbook helped me understand SE objectives</td>
<td>1</td>
</tr>
<tr>
<td>17. Handbook helped me understand my SE responsibilities</td>
<td>2</td>
</tr>
<tr>
<td>Total responses (119)</td>
<td>45</td>
</tr>
<tr>
<td>Percent of total responses</td>
<td>38%</td>
</tr>
</tbody>
</table>
the only two items that were unsatisfactory to more than half of the students. This suggests that although the students felt that the experience was worthwhile and helpful, their student teaching experience made them feel that this was not an adequate substitute for actual classroom experience and should be provided at a time that did not diminish the student teaching time.

Either six or seven of the students were favorably inclined toward 11 of the 17 items on the student reaction form at the close of the simulation experience (Table 11). At the close of the student teaching experience, either six or seven of the students had favorable reactions to ten of the items (Table 11).

Four students stated that they felt that simulation experience was a great help to them, three students stated that they felt that the time could have been shortened, two commented that it made them more aware of situations which might arise and that it helped them to develop ability to control situations (Table 12).

The students were asked to suggest means of improving the simulation program. Three stated they would like more time devoted to developing problems of their own. Two students felt this experience would be more beneficial to students if it were incorporated in the methods course. Two would have liked more time allowed for video taping problems of their own creation, and to have had the program explained more fully to them at the beginning of the experience (Table 13).
TABLE 11

PARTS OF PROGRAM RECEIVING MOST FAVORABLE STUDENT REACTIONS
(N=7)

<table>
<thead>
<tr>
<th>Items Receiving Most Favorable Responses</th>
<th>Number of Students Responding Favorably</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>At Close of Experiment</td>
</tr>
<tr>
<td>1. I enjoyed simulation experience</td>
<td>7</td>
</tr>
<tr>
<td>2. Individual conferences helped me develop concepts</td>
<td>7</td>
</tr>
<tr>
<td>3. SE increased my capacity to identify problems</td>
<td>7</td>
</tr>
<tr>
<td>4. Coping methods for problems were developed</td>
<td>7</td>
</tr>
<tr>
<td>5. Concepts were made more meaningful than by lecture</td>
<td>7</td>
</tr>
<tr>
<td>6. Was more relaxed with VTR during student teaching</td>
<td>7</td>
</tr>
<tr>
<td>7. Role played incidents were realistic</td>
<td>6</td>
</tr>
<tr>
<td>8. Acting out responses made me feel involved</td>
<td>6</td>
</tr>
<tr>
<td>9. Group discussions helped me develop concepts</td>
<td>6</td>
</tr>
<tr>
<td>10. Helpful to see myself cope with problems on VTR</td>
<td>6</td>
</tr>
<tr>
<td>11. Handbook helped me understand SE objectives</td>
<td>6</td>
</tr>
<tr>
<td>12. Handbook helped me understand SE responsibilities</td>
<td>5</td>
</tr>
</tbody>
</table>
### Table 12

**Student Comments about the Program**

*(N=7)*

<table>
<thead>
<tr>
<th>Comment</th>
<th>Number Making the Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. It was a great help</td>
<td>4</td>
</tr>
<tr>
<td>2. The time could have been shortened</td>
<td>3</td>
</tr>
<tr>
<td>3. It made me aware of situations which might arise</td>
<td>2</td>
</tr>
<tr>
<td>4. It helped me develop ability to control situations</td>
<td>2</td>
</tr>
<tr>
<td>5. I mentally flashed back info to solve problems on the post-test</td>
<td>1</td>
</tr>
<tr>
<td>6. It was very worthwhile</td>
<td>1</td>
</tr>
<tr>
<td>7. It opened my eyes to many things I had never considered before</td>
<td>1</td>
</tr>
<tr>
<td>8. I will be more inclined to look at more than one side of a problem</td>
<td>1</td>
</tr>
<tr>
<td>9. The principles behind simulated classes are good</td>
<td>1</td>
</tr>
<tr>
<td>10. Good to be presented with situations we will be facing</td>
<td>1</td>
</tr>
<tr>
<td>11. I found that you can never be sure how you will react in a situation until you are confronted with it</td>
<td>1</td>
</tr>
<tr>
<td>12. The experiences really came true, and I found it was a great help to know how to handle the situations</td>
<td>1</td>
</tr>
</tbody>
</table>
TABLE 13
STUDENT SUGGESTIONS FOR IMPROVEMENT OF THE PROGRAM
(N=7)

<table>
<thead>
<tr>
<th>Suggestion</th>
<th>Number Making the Suggestion</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Give us more time to develop problems of our own</td>
<td>3</td>
</tr>
<tr>
<td>2. Incorporate this in the methods course</td>
<td>2</td>
</tr>
<tr>
<td>3. Would have been helpful to know more about the program before we became involved</td>
<td>2</td>
</tr>
<tr>
<td>4. Allow more time for taping of own problems</td>
<td>2</td>
</tr>
<tr>
<td>5. Make the description of settings more specific</td>
<td>1</td>
</tr>
<tr>
<td>6. Use a different set-up of time—too much to have an individual conference and long group conferences the same day every day for two weeks</td>
<td>1</td>
</tr>
<tr>
<td>7. Shorten the time</td>
<td>1</td>
</tr>
<tr>
<td>8. Spend more time discussing case studies</td>
<td>1</td>
</tr>
<tr>
<td>9. Spend less time writing out analysis—discuss them together in class instead</td>
<td>1</td>
</tr>
<tr>
<td>10. Cover more problems and have students act out problems</td>
<td>1</td>
</tr>
<tr>
<td>11. Have judges placed where students can't see them</td>
<td>1</td>
</tr>
</tbody>
</table>

Acceptability of simulation in teacher education to faculty

Is simulation in teacher education acceptable to faculty?

A Faculty Reaction form which was a four-point scale instrument (Appendix G) was devised to collect data from those who assisted with the simulation experience program to secure their reactions as to the acceptability and effectiveness of the program and record any comments or suggestions for improvement of the program. Each point on the four-point scale was assigned a value from 1, signifying a low value, to 4, signifying a high value. Scores of 3 and 4 were considered favorable reactions to the program, and scores of 1 and 2 were considered unfavorable reactions. Of a total of 113 reactions to the acceptability
of the program, 97 (86 percent) were favorable, and 16 (14 percent) were unfavorable. Of 84 reactions to the effectiveness of the program, 72 (86 percent) were favorable, and 12 (14 percent) were unfavorable reactions (Appendix Q).

Eleven of the details of the program itemized on the questionnaire were found acceptable by all the faculty (Table 14). Eight were felt to be effective by all the faculty. Two of the three faculty involved with the instructional phase felt that having the students write analyses of the problems was effective. The investigator, who was one of the instructors, knew that some of the students felt that this time would have been better spent in discussion and creating problems of their own (note item 10, Table 10), and therefore could not give it a totally acceptable rating for effectiveness.

The try-out of the evaluation materials in order to become familiar with the scoring procedures was the most frustrating and difficult procedure, and this was reflected in the unfavorable faculty reactions to its acceptability and effectiveness (Table 15). Although the group was able to agree surprisingly well on the quality of the prospective student teacher performance on the pre-test and post-test (Appendix R), it was not a smooth and satisfying endeavor. There was consensus and consistency of opinion on the part of the judges for the students' enacted and verbalized responses to the questions. The investigator and one other judge felt that five people were too many to have on the panel of judges, and that perhaps three could do an adequate evaluation.
TABLE 14
PARTS OF PROGRAM RECEIVING MOST FAVORABLE FACULTY REACTIONS

<table>
<thead>
<tr>
<th>Most Favorable Reaction Item</th>
<th>Number of Faculty with Favorable Reactions</th>
<th>Acceptability</th>
<th>Effectiveness</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No. Responding</td>
<td>Total</td>
<td>No. Responding</td>
</tr>
<tr>
<td>1. Use of high school students for production of video tapes</td>
<td>6</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>2. Use of TV equipment to produce problem incidents</td>
<td>6</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>3. Use of a high school classroom</td>
<td>6</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>4. Audio was clear and understandable</td>
<td>7</td>
<td>7</td>
<td>not asked for</td>
</tr>
<tr>
<td>5. Picture clear, free from unnecessary detail</td>
<td>7</td>
<td>7</td>
<td>not asked for</td>
</tr>
<tr>
<td>6. Use of VTR to portray problem incidents</td>
<td>6</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>7. Use of individual conferences</td>
<td>4</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>8. Use of case studies</td>
<td>3</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>9. Having students write analysis of problems</td>
<td>3</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>10. Students write and solve problems</td>
<td>3</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>11. Use of group seminars</td>
<td>3</td>
<td>3</td>
<td>3</td>
</tr>
</tbody>
</table>

TABLE 15
PARTS OF PROGRAM RECEIVING LEAST FAVORABLE FACULTY REACTIONS

<table>
<thead>
<tr>
<th>Least Favorable Reaction Item</th>
<th>Number of Faculty with Unfavorable Reactions</th>
<th>Acceptability</th>
<th>Effectiveness</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No. Responding</td>
<td>Total</td>
<td>No. Responding</td>
</tr>
<tr>
<td>1. Try-out of materials to learn how to score performance</td>
<td>4</td>
<td>6</td>
<td>4</td>
</tr>
<tr>
<td>2. Use of full day for VTR incidents</td>
<td>2</td>
<td>5</td>
<td>1</td>
</tr>
<tr>
<td>3. Adequacy of VTR portrayal of problem</td>
<td>2</td>
<td>7</td>
<td>not asked for</td>
</tr>
</tbody>
</table>
The faculty members were asked on the questionnaire if they would recommend this method for the pre-service preparation of student teachers. All seven responded that they would. They were also asked for comments about the parts of the program in which they participated. Four felt that simulation experiences acquainted students with teaching problems and provided them with some techniques for dealing with these problems. Four of the seven commented that it was desirable to use real high school students to portray the simulated problems. The rest of the comments followed no clear pattern (Table 16).

The faculty members were asked to make specific suggestions for improvement of this simulation experience. Three of the seven faculty members involved in the simulation experience felt that some arrangement should be made to permit students to participate in simulation experiences without shortening student teaching experience so much. It was revealed that both students and faculty agreed that this is not a substitute for student teaching. Some excellent and productive suggestions were offered, but they were unable to be classified or grouped (Table 17).

The evidence collected here in answer to the question "Is simulation in teacher education an acceptable learning experience?" shows that the faculty and students feel that this is a highly acceptable and effective method. Although they do not feel that it is an adequate substitute for time spent in student teaching, they feel that it is worthwhile and useful, and that time should be planned for this experience in the preparation of student teachers.

The next chapter contains a summary, discussion, and implications of the findings.
### TABLE 16
FACULTY COMMENTS ABOUT SIMULATION EXPERIENCE PROGRAM

<table>
<thead>
<tr>
<th>Item</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. I would recommend this method as a part of the pre-service preparation of student teachers</td>
<td>7</td>
</tr>
<tr>
<td>2. Simulated experiences acquaint students with problems and techniques for approaching these problems</td>
<td>4</td>
</tr>
<tr>
<td>3. Problems dealing with high school pupils should definitely use high school pupils for producing the problems</td>
<td>4</td>
</tr>
<tr>
<td>4. Simulated teaching is an excellent means of training teachers which should not be divorced from correlation with micro-teaching and actual participation in public school classroom</td>
<td>1</td>
</tr>
<tr>
<td>5. Simulated experiences point up a student's weaknesses and strengths in decision-making before she actually goes into a classroom</td>
<td>1</td>
</tr>
<tr>
<td>6. At times student didn't seem to understand the problem--maybe this is the purpose--to make student more observant</td>
<td>1</td>
</tr>
<tr>
<td>7. These were very good incidents and well acted</td>
<td>1</td>
</tr>
<tr>
<td>8. If the desired improvement came about, it is well worth the time</td>
<td>1</td>
</tr>
<tr>
<td>9. I had a feeling the students didn't like missing student teaching</td>
<td>1</td>
</tr>
<tr>
<td>10. Good teaching aid--may need modification</td>
<td>1</td>
</tr>
<tr>
<td>11. Group seminars are very good because students learn from each other</td>
<td>1</td>
</tr>
<tr>
<td>12. Some students seemed to have difficulty visualizing students shown on monitor as a real classroom</td>
<td>1</td>
</tr>
<tr>
<td>13. Students seem to get more understanding and insights when they discuss rather than write analysis</td>
<td>1</td>
</tr>
</tbody>
</table>
TABLE 17

FACULTY SUGGESTIONS FOR IMPROVEMENT
OF SIMULATION EXPERIENCES

<table>
<thead>
<tr>
<th>Comment and Aspect of Program for Which It Was Made</th>
<th>Number Reporting</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>A. Number of people involved in conducting the simulation experiences</strong></td>
<td></td>
</tr>
<tr>
<td>1. Should be a ratio of no greater than 1 professor to 5 students</td>
<td>1</td>
</tr>
<tr>
<td>2. Seemed adequate</td>
<td>1</td>
</tr>
<tr>
<td>3. No comment</td>
<td>4</td>
</tr>
<tr>
<td><strong>B. The time required for the program</strong></td>
<td></td>
</tr>
<tr>
<td>1. Shorten it to 1 week and allow students to teach 1/2 day and return to campus for simulation experience 1/2 day</td>
<td>2</td>
</tr>
<tr>
<td>2. If the desired improvement came about, it was well worth the time</td>
<td>1</td>
</tr>
<tr>
<td>3. Would like to see 3 to 4 weeks of simulation experience for 1/2 day periods</td>
<td>1</td>
</tr>
<tr>
<td>4. Seemed O.K.</td>
<td>1</td>
</tr>
<tr>
<td>5. No comment</td>
<td>1</td>
</tr>
<tr>
<td><strong>C. The shortened student teaching experience</strong></td>
<td></td>
</tr>
<tr>
<td>1. This should be combined with a 10 week student teaching in the school</td>
<td>1</td>
</tr>
<tr>
<td>2. Shouldn't shorten student teaching experience</td>
<td>3</td>
</tr>
<tr>
<td>3. Seemed all right to do so because they should have a head start when they do enter the classroom</td>
<td>2</td>
</tr>
<tr>
<td>4. No comment</td>
<td>1</td>
</tr>
<tr>
<td><strong>D. The use of TV studio for 4 hours daily</strong></td>
<td></td>
</tr>
<tr>
<td>1. If this program were expanded to include all disciplines, time efficiency for use of TV studio would be important. A maximum of 1 hour per day could be allowed for each discipline</td>
<td>1</td>
</tr>
<tr>
<td>2. No comment</td>
<td>3</td>
</tr>
<tr>
<td><strong>E. Use of equipment and personnel for video taping and replaying tapes</strong></td>
<td></td>
</tr>
<tr>
<td>1. Home economics education personnel need to learn to use equipment</td>
<td>2</td>
</tr>
</tbody>
</table>
TABLE 17 (Contd.)

<table>
<thead>
<tr>
<th>Comment and Aspect of Program for Which It Was Made</th>
<th>Number Reporting</th>
</tr>
</thead>
<tbody>
<tr>
<td>2. A workshop should be provided to train college personnel in use of TV equipment</td>
<td>1</td>
</tr>
<tr>
<td>3. Seemed to be satisfactory</td>
<td>1</td>
</tr>
<tr>
<td>4. No comment</td>
<td>2</td>
</tr>
</tbody>
</table>

**F. Production of simulated incidents**

<table>
<thead>
<tr>
<th>Comment</th>
<th>Number Reporting</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. More rehearsal might have improved quality of production—plus use of 2 cameras</td>
<td>2</td>
</tr>
<tr>
<td>2. Try to get problems in an actual classroom</td>
<td>3</td>
</tr>
<tr>
<td>3. Have speakers speak more slowly on VTR</td>
<td>1</td>
</tr>
<tr>
<td>4. Would have helped to plan a lay-out of all camera angle and shots beforehand</td>
<td>1</td>
</tr>
<tr>
<td>5. Improvement might come through the use of 2 cameras, a synth generator, and narration for parts of the tape</td>
<td>1</td>
</tr>
<tr>
<td>6. Clearer directions would have helped the role playing actors</td>
<td>1</td>
</tr>
</tbody>
</table>

**G. Try-out of materials**

<table>
<thead>
<tr>
<th>Comment</th>
<th>Number Reporting</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. More time is needed for try-out of materials to assist evaluators to become familiar with scoring procedures—especially non-home economists</td>
<td>3</td>
</tr>
<tr>
<td>2. Might be best to have home economics oriented judges</td>
<td>3</td>
</tr>
<tr>
<td>3. Forms should be in hands of judges several days before using them</td>
<td>1</td>
</tr>
</tbody>
</table>

**H. Pre-test and post-test**

<table>
<thead>
<tr>
<th>Comment</th>
<th>Number Reporting</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Examiner should be very specific in giving directions to student</td>
<td>1</td>
</tr>
<tr>
<td>2. I question the playing back of all VTR of student teachers. Poor ones may be embarrassing to student teacher involved</td>
<td>1</td>
</tr>
<tr>
<td>3. Role playing is good, but not as consistent as replaying video</td>
<td>1</td>
</tr>
<tr>
<td>4. I wonder if this program can be tailored to the individual student, i.e., some may need a lot more of this than others, pre-test to determine strengths and weaknesses</td>
<td>1</td>
</tr>
</tbody>
</table>
CHAPTER V

SUMMARY, DISCUSSION, AND IMPLICATIONS

This study was designed to determine the feasibility of providing a systematic, controlled learning experience in which the prospective student teacher was able, under direct supervision, to practice classroom teaching behavior by interacting with practical problems in classroom management through the use of individual and group instructional methods in simulated classroom situations at Ashland College prior to student teaching in an actual classroom.

Video taped and role played simulated experiences were developed and produced in which seven prospective student teachers received twelve hours of instruction during a two-week period and had opportunity to (a) apply knowledge about principles of teaching and learning, (b) make use of such knowledge in a situation characterized by personal meaning, (c) get immediate feedback regarding the effects of their behavior in the classroom, and thus (d) discover for themselves effective patterns of teaching behavior. These simulation problems were used to give prospective student teachers an opportunity to gain classroom experience and confidence in their ability before actual performance was required as student teachers.

A pre-test and a post-test were administered to measure the effectiveness of the treatment, and questionnaires were developed to
determine the acceptability to the participants of this method of instruction.

In addition, the degree of openness of the student's belief-disbelief system and the personality factors of poise, sense of well-being, responsibility, conformability, self-control, and empathy were measured in order to note any relationship of these factors with the effectiveness of the simulation experience.

As the feasibility of using this method of pre-service education of prospective teachers was considered, answers to the following questions were sought: Can a simulated experience program be provided in a teacher education curriculum? Is simulation in teacher education an effective learning experience? Is simulation in teacher education an acceptable learning experience?

The fact that the investigator designed the study, conducted the experiment, and was also one of those responsible for the preparation of student teachers at Ashland College made it possible to maintain a practical perspective as evaluative instruments were planned and constructed. It was found that there is a great need for information that will narrow the gap between should and can, hope and realization, ideal and possible in the use of simulation for teacher education purposes.

Because of a three-way involvement in the study as the designer, the investigator, and the practitioner who will put the feasibility findings into action, some suggestions are offered for application and needed research requirements in the hope that the reader will be stimulated to see other refinements, applications, and gaps in present
knowledge that will be needed before the full potential of using simulation experiences in teacher education can be realized.

Can a Simulated Experience Program Be Provided in a Teacher Education Curriculum?

Can the interest of the faculty and students be secured? Can a program be developed with measurable factors? What procedures are needed for providing such a program? What personnel and equipment are needed, and what are the time limits? What policy level decisions need to be made? Each of these factors was considered in deciding whether a simulated experience program for student teachers could be provided at Ashland College.

Can the interest of the faculty and students be secured?

It was found that the education department faculty, the home economics education department faculty, and students were willing and eager to be a part of a study focused on discovering the feasibility of providing simulated problems to improve the laboratory experiences for prospective student teachers before they begin their student teaching. Both home economics and education department faculties cooperated to the fullest extent and contributed valuable suggestions to the investigator to improve and implement the study as it was put into action.

The attitudes of the participating students at first were a mixture of anxiety, curiosity, and possibly resentment. As they recognized that this was an attempt to provide them with an experience that would help them become acquainted with some of the problems they
would face as student teachers, and that they would develop knowledge and skill in ability to cope with them before they faced pupils as student teachers, this attitude changed to one of acceptance and wanting to cooperate. Careful consideration needs to be given to the orientation of students to this new type of experience for them. The need to clarify the goals and the means of achieving them at the outset of the program are of prime importance in securing student cooperation and acceptance.

The students were patient, understanding, and cooperative with the more than usual number of tests, scales, and questionnaires that were administered before and after the experience in order to get a measure of the changes occurring during the study so that acceptability and effectiveness could be judged. The enthusiastic cooperation of the faculty and students was extremely gratifying and most helpful in the successful completion of this project. Their candid criticisms pointed up the weaknesses and portions where changes need to be made in order to make the program more acceptable and effective.

Can a program be developed with measurable factors?

It was found that scholars are experimenting with simulation procedures for preparing student teachers and reporting their studies and results in the literature. Problems have been developed with built-in criteria that enable responses to be measured in terms of effectiveness. The investigator was able to create and produce twenty video taped and role played home economics teaching problem situations using the principles and procedures developed by Kersh as models. They
were organized into a program composed of ten problems to be used for a pre-test (and again for an instructional phase), and a similar second program of ten simulated problem situations to be used as a post-test so that a measure of change that occurred during the instructional phase could be determined. A panel of judges agreed to observe and record the students' enacted and verbal responses to the problem situations on both the pre-test administered at the beginning of the program and the post-test administered two weeks later at the close of the instructional period.

No assumption was made that these teaching behaviors represented the most important ones a teacher should have, but it was believed that each was significant and should be a part of the teacher's repertoire.

There is need for research in this area of selecting and defining skills in order to avoid wasting time and energy working on skills which are of little use to the teacher. It is important to discover what skills will produce the greatest pay-off for the teacher in the classroom. Very few answers to this question are known. Research is also needed to guide the selection of the behavioral components of each skill. Which techniques should the simulated problems emphasize? The investigator operated on common sense, hunches, and intuition in the selection and defining of the problem situations. This is not good enough for a long range development of teaching skills; it is only a stop-gap measure until empirical proof is gathered.

Some students reported that the simulated problems did not seem realistic. Attempts should be made in the future to video tape problem incidents live in the classroom as they happen, to add to or replace the
collection of contrived ones that make up these two programs. This is far more difficult than recording scripted problems and no one has yet succeeded to any great extent. Actual teachers facing genuine problems with students as they are happening perhaps would be more realistic and seem more real to prospective student teachers. The taped problem situations would require editing in order to remove extraneous information so that only the action involving the occurrence of the problem is left on the recording.

The ability to recognize, assess, and cope with the problem was the basis for the judgment of the student’s performance in this study. The problem then of recording only the factors that make up the problem situation so that no extraneous information is present to confuse or distract the student from what is intended for him to cope with was a real one.

The idea of providing necessary written supplementary information to clarify the setting and enlighten the student about the situation, in order to keep the problem situations clean of extraneous information, worked well. However, it is also important for students to develop the ability to recognize and sift out these extraneous factors from problem situations, and the opportunity to analyze teaching situations from this standpoint can be provided. It is necessary to provide for the development of the ability to perceive and interpret correctly and effectively all the components of a teaching situation. Being able to measure student performance when all these variables are present will probably continue to be a real problem for researchers. The concept of
micro-teaching which is a scaled-down teaching encounter in class size and class time may provide the framework for developing measurable problem situations.

What personnel and equipment are needed, and what are the time limits?

The administrators of the education department in charge of the student teaching program and the home economics education faculty were contacted and briefed on the purpose and goals for this simulation program to get their reactions to it and suggestions for carrying it out at Ashland College. It was decided that shortening the student teaching time for a period of two weeks for the participants and keeping them on campus in order to participate in this simulation experience would be a feasible way to work out the timing and the management of the experiment. It was agreed that close collaboration of the investigator (who was also the instructor) and the technical production staff would be needed. The investigator worked out the educational objectives and instructional points to be made, determined how the simulation materials, i.e., video tape recordings, role played incidents, supplementary materials (principally case studies and written setting situation descriptions to accompany each simulated problem) were to be used, and structured the educational situation in which to use the simulation materials. The television equipment operator and his assistant, who were also college supervisors of student teachers (not in home economics), knew the capabilities and limitations of the equipment and the techniques for using effectively the television camera and video tape recorder.
Because of the excellent cooperation and coordination of the instructor-investigator and the production personnel, it was possible to have vital continuous communication and information about the educational objectives of the simulated problems and the techniques of production necessary to achieve these objectives.

This study was designed to use existing personnel and equipment at Ashland College. New combinations of teachers, television equipment, and time patterns were contrived as search was made for an effective and acceptable method for the pre-service preparation of these student teachers.

Those schools that already possess a basic television unit of a recorder, a camera, and a monitor would find it feasible and desirable to produce and use video taped incidents for the pre-service preparation of student teachers.

It was found in this experience that an extensive corps of technical experts was not necessary to produce the type of recorded episodes developed in this project. However, teachers cannot expect to add this function to their present schedule without some time compensation. The planning, arranging, actual taping, and preparation of supplementary materials required considerable time to complete. Two of the education department members at Ashland College operated the equipment and did all the video taping and had released time from other faculty responsibilities to perform this function for the college. Video taping was demanding in time. The technical ability required to do this work could be developed by the educator in charge of such a program, or mature college
or high school students could be trained to do some of this work. This would be necessary if an extensive program were used that required video taped recordings and playing them back. One of the greatest handicaps in the effort reported here was the fact that neither of the instructors knew how to operate the video taping equipment, and those who could were not available for much of the individual and group instructional periods.

The natural lights of the classroom and three microphones (two on stands and usually a lavaliere for the teacher or student doing the speaking in the problem incident) were used and found adequate for lighting and audio requirements for producing acceptable tapes to serve the purpose for which the procedure was designed.

Considering the inexperience of the staff and the time limits under which the project was conducted, the program was completed with relatively few difficulties and found to be acceptable and effective to use in the pre-service preparation of student teachers at Ashland College. Perhaps one of the most significant findings is that the small college with limited resources can provide this innovation in its program.

Is Simulation in Teacher Education an Effective Learning Experience?

Will post-test results of prospective student teachers show measurable changes from pre-test results in ability to enact responses to, assess, and solve teaching problems? Will the student teachers use the principles that were incorporated into the simulation experience to solve problems they encounter in the classroom? Will the students feel more confident in their student teaching ability after having had
simulation experiences? Each of these factors was considered in deciding whether the simulation experience program for student teachers was effective.

**Will post-test results show measurable changes from pre-test results?**

Student performance was rated on a pre-test administered prior to the simulation experience and a post-test administered immediately following the experience. A jury of five judges rated each of the seven students on the enactment, assessment, and total performance responses to ten video taped and role played problem situations presented on the pre-test and a similar set of ten video taped and role played problem situations presented on the post-test. The pre-test and post-test ratings for each of the variables—the enactment of the response, the assessment of the problem, and the total performance (the sum of the enactment and assessment scores) were compared statistically by using the "t" test of significance of difference in means of the two tests. Changes in ability to enact the desired response, to assess the problem, and the total performance were all significant at the .01 level.

Among other factors besides the simulated problem situations, which undoubtedly were present in this study, that affected the change in pre-test and post-test performances were student motivation, instructor motivation and ability, bias of the judges and supervising teachers, and the Hawthorne or novelty effect of participating in this experiment. Since this was not a comparison of this method of pre-service preparation of student teachers with another method of preparation, but depended upon the use of change scores to measure
effectiveness, the presence of these factors was not a problem in obtaining measurable results. This study concentrated upon defining changes in teaching behavior on a pre-test and post-test and the student teacher's use of these principles or behaviors in the classroom as observed by the supervising teacher as a means of determining the effectiveness of the experiment. However, the determination of the true impact of this method of preparation in student teachers could be assessed only through the eventual outcome in their pupils' learning in the actual classroom situation. This cannot be done until the means of identifying sequential relationships among pre-service simulated problems experience, teacher effectiveness, and pupils' learning have been accomplished.

Although the design of this experiment did not include an attempt to determine what factors in the simulated experiences were responsible for the change in performance, there was clear evidence that student ability to understand and critically assess a simulated teaching problem was improved. The instructional phase included the use of video taped incidents, feedback results, role played incidents, written incidents, practice sessions, individual and group discussions, and a written analysis of each problem. Were some of these more effective and efficient than others for all the students, or for some of them? Do some supplement each other? Could some be substituted for another, i.e., role played incidents for video taped incidents? If the different educational objectives served by each factor, activity, or experience in this simulation experience were specified in detail and verified
empirically, optimum combinations of experiences could be explored. It will be important to design experiments in the future that can help determine whether or not what seems to be worthwhile actually is beneficial.

Will student teachers use the principles in the classroom?

A questionnaire was prepared for the supervising teachers to respond to, which contained fifteen questions involving student teaching behaviors directly related to the standards and behaviors employed in the simulation experience. They reported that all of the principles were used with varying degrees of frequency by the student teachers in the classroom and that the need for using them occurred with varying degrees of frequency.

Two supervising teachers reported that they felt readiness for student teaching comes only with experience in the classroom. Perhaps this indicates a bias on the part of these teachers for student teaching experience in the classroom for the preparation of student teachers. Time did not permit discussion of the reason behind this statement with these two teachers. These teachers may have an emotional barrier which prevents them from being willing to try anything different. They may believe in the effectiveness of simulation experience before student teaching, but their anxiety for the development of teaching competence in their student teachers is so great that they are not willing to try anything different. In these circumstances college personnel must attempt to help supervising teachers to consider changes in underlying
attitudes toward experiences which help prepare students to learn to be effective teachers. Student teaching participation has been considered the principal and vital means of wedding theory and practice in the past. Acceptance of a substitute for any part of it will be difficult until proof is established that it is an effective substitute. This is not yet available.

The supervising teacher can be an important link in providing simulated experiences for student teachers that was overlooked in the planning of this study. Had they been more familiar with the goals and objectives of this study before they agreed to supervise student teachers, they could have made some direct contributions to the program that might have proved to be effective and useful. For instance, they could have assisted in providing video tapes of the prospective teachers' future teaching assignments; that is, the class to which she would be assigned as a student teacher would be video taped with its regular teacher and played back for the prospective student teacher's benefit. Such application of the simulated experiences might have resulted in accelerated orientation to the student teaching situation by the student teachers. Having the sponsor teacher as a member of the simulation experiences team of instructors could be an added benefit which should be considered in future studies of this type.

An explanation of the purposes of the simulation experience and a preview of some of the problem situations to be studied would be desirable and useful in getting the supervising teachers to understand this method of preparation for their student teachers.
The supervising teachers noted many problems that student teachers were having that were not included in the simulated experience program. Lesson plans, managing a laboratory lesson, and coordinating audio-visuals with lesson were most frequently mentioned, and means should be devised for providing simulated experiences that would furnish opportunities for the development of these abilities.

Will the students feel more confident?

A nine-question confidence scale was administered before and after the experience to measure the degree of change in confidence. The changes were compared statistically by using the "t" test of significance of difference of means on the two tests, and was found to be significant at the .01 level of confidence.

One of the dramatic results of the simulation experience program was the student's intense reactions to viewing herself on video tape and receiving immediate feedback relative to her performance. The combination of the use of the video taped student response to a simulated problem with that of an analysis of what was effective and what was ineffective seemed to be a force which built self-confidence in the timid, diffident prospective teacher, and brought the overconfident student face to face with reality and made her receptive to suggestions and willing to re-enact her response in order to improve it. Use of the video tape recordings for play-back of teacher behavior took some of the "sting" out of the supervisor's suggestions by depersonalizing the criticism and seemed to make the student teacher less defensive than she might have been otherwise.
In this study, the most timid and self-conscious student, who was also the one that was of most concern to the home economics faculty so far as her ability to do student teaching was concerned, showed the greatest change on the post-test and greatest growth in confidence. Does this type of student benefit most from this kind of experience? It seemed true in this study. More data under controlled conditions need to be collected to find out if what seemed to be true here is a fact.

Will there be a relationship between certain personality factors possessed by the prospective student teachers and their change in performance?

A dogmatism scale was administered to determine the degree of open-mindedness of the participants, and the California Personality Inventory was administered to secure measures of sense of well-being, responsibility, ability to conform, self-control, and empathy. Statistical analysis was performed on both results, and the correlation coefficient of both analyses indicated that there were no interaction effects between the degree of open-mindedness and the change in performance scores or between the personality factors and the change in performance scores.

One reason why no support for this hypothesis was found perhaps is that interaction among many uncontrolled variables existed within the administering and reacting to the problem situations on the pre-test and post-test. Another reason perhaps was that other factors probably were predominant in their effect on response to the problems. To find an answer here, each personality factor should be matched and compared with
each teaching behavior in order to determine which are related and, thus, do influence one's ability to perform certain teaching behaviors.

Is Simulation in Teacher Education an Acceptable Learning Experience?

Is this method acceptable to students? Is it acceptable to faculty and administrators? These were the questions asked in order to determine the acceptability of providing a simulated experience program for students at Ashland College.

To determine the attitude of the students toward participating in simulation experiences, a "Student Reaction to Simulation Experience" questionnaire was designed. It was administered at the close of the instructional program and again near the close of the student teaching assignment. Information gathered by the responses to questions on this instrument indicated that the participants did feel that the experience as a whole was worthwhile and helpful. Some parts of the program were more acceptable than others and many suggestions for improvement were offered by the students.

Some of the students felt that they needed more explanation of the program and its objectives at the beginning of the experience. The Prospective Student Teacher's Handbook was developed to help them understand the objectives and procedures. The investigator reviewed this with the students in the orientation period at the beginning of the experience and instructed them to read it carefully before the first individual conference. Evidently, more time should have been spent
discussing the information in the handbook with the group in order to help students become familiar and comfortable at the beginning of the simulation experience.

At the close of the student teaching experience, the majority of the participants felt that simulation experience should be provided in the methods class rather than take time from student teaching for it. This feeling was not reported by the students at the close of the program and before they had begun their student teaching. At this time, the majority felt that substituting this experience for two weeks of student teaching was a satisfactory arrangement. This change indicates that the majority felt that simulation experiences are not an adequate substitute for student teaching, even though they feel that they are profitable and worthwhile. The students and their sponsor teachers participating in this study did not fully accept the idea of taking two weeks time from the student teaching experience for this simulation experience. This points up the fact that some changes should be made here to make it more acceptable if it is beneficial.

Some valuable alternatives to shortening the student teaching experience were suggested and should be considered. The students felt that this would be a meaningful experience in the methods course. There is probably merit to this suggestion. Teaching skills to be learned could be pre-planned by the methods teacher and students together. The range of possible teaching behaviors in which simulation is useful is extensive. It would seem that having prospective student teachers participate occasionally in the necessary analysis and behavior reconstruction required for developing and producing simulated experiences
would sensitize them to the necessary principles and behaviors that are needed for successfully coping with the problem situation.

There is also value in the idea of exposing students to simulation experiences while they are student teaching instead of separating the program completely from student teaching. Producing and using video taped or role played problems that they have actually experienced in the classroom would perhaps have greater impact than "artificial" lessons. The analysis and behavior reconstruction required for this should be extremely acceptable and enlightening to these students. This would also individualize the problems so that student deficiencies are recognized and means could be devised to overcome them.

This kind of experience would perhaps be an acceptable substitute for the observation-participation experience often provided in teacher education programs rather than a substitute for the student teaching experience. This could be a more productive experience for students than they sometimes get in the experience and relieve the difficult situation of finding appropriate centers for this experience.

Some students suggested that a shorter time for simulation experiences would be more acceptable. Only a few teaching behaviors were included in these simulation problems, and perhaps they could have been learned in less time. The range of possible teaching behaviors in which simulation techniques could be used is extensive. Problem incidents involving more teaching behaviors, and allowing more student participation in the creation and production of problem incidents perhaps would contribute to students' being willing to spend more time participating in simulated experiences.
Coordinating the simulation program with student teaching might be more acceptable than delaying student teaching in order to provide this experience for students who are eager to begin their student teaching experience.

Is simulation in teacher education acceptable to faculty?

A four-point scale instrument was devised to collect data from those who assisted with the simulation experience program to secure their reactions as to the acceptability and effectiveness of the program. The results secured from this evidence showed clearly that the faculty felt that it was an acceptable and effective means of preparing prospective student teachers. Eighty-six percent of the reactions to the effectiveness and acceptability were favorable ones.

The try-out of the evaluation materials to familiarize the judges with the scoring procedures was the most difficult and frustrating procedure, and was found unsatisfactory by most of the judges. Three details of this procedure need to be altered in order to make it more acceptable and effective. First, spend more time with the judges familiarizing them with the problems to be rated and the procedure for rating them. Second, reduce the number of judges. Three judges would be sufficient to give a fair evaluation of the student's response to the problem situations. Third, use only people to be the judges who are familiar with the subject matter area, and who work with the age group of the pupils portrayed in the problem scenes.

Although the judges received the pre-test and post-test about a week before the judging was to take place, and the investigator
explained the purpose and procedure to them individually, it still was difficult for them to understand and fully comprehend all the parts that had to be considered without actually experiencing using it to appraise a student teacher in action. In addition to talking with them individually, the investigator spent one-half hour previous to the try-out of the instrument discussing and reviewing it together with the group.

In order to keep the judging as objective as possible in this study, two judges were selected outside the field of home economics. Their professional training was elementary education instead of home economics. These were the ones who had the most difficulty understanding and interpreting the acceptable behaviors. People who are familiar with the subject matter area and who work with the age group of the pupils portrayed in the simulated problems should be able to appraise the student teacher in action more easily and effectively because their knowledge and expertise would enable them to identify with the situation and the teacher more quickly.

Almost half of the faculty members involved in the administration of the program felt that some arrangements should be made to permit students to participate in simulation experiences without shortening the student teaching experience. It will be remembered that the students also felt this way. It must be concluded that both the students and faculty felt that this is not an adequate substitute for student teaching. Simulation is an effective technique for preparing students for teaching as a complement to rather than a supplement for student teaching.
Granting the assumption that conceptual learning takes place more effectively as contact with the referent is increased, responding to simulated teaching problems will take on greater and greater importance as it is realized that this technique provides just that—increased contact with the referent, *teaching*, and does so without endangering the education of a regular classroom of students. As more sophisticated and efficient procedures are developed, the range of possible teaching behaviors in which simulation procedures is useful will be expanded. Superior "quality of skill" requires extensive opportunity for practice before actual student teaching is undertaken.

In conclusion, it is evident that an acceptable and effective simulation experience program can be planned and operated at Ashland College. The home economics department education faculty will continue to use simulation experiences as a pre-service method of preparing student teachers. The administrators of the education department are going to recommend that it be introduced into the student teaching programs of other areas of study.

**Implications**

Although quite limited in scope, this study brought to light a number of considerations which are problem areas that need to be kept in mind when future research and experimentation are undertaken. They offer both the hazards to be avoided and principles to be recognized.

1. It would be desirable to design experimentation in cooperation with other institutions in order to achieve necessary replications, applications, and more variegated scope and design in order to
learn the nature and range of the application of simulation procedures to education and what type of simulation is most appropriate for the various types of learning.

2. The problems of defining and measuring criteria of teaching behavior encountered by the investigator in developing these simulated experiences point to two major needs: (1) criteria which objectively reflect the complex and continuously changing behaviors which constitute teaching performance; and (2) experimental designs which can encompass such criteria adequately.

3. There is a need to develop evaluation designs that can help determine whether or not what seems to be worthwhile in the use of simulation actually is.

4. There is a need for more sophisticated and efficient procedures for creating simulated problems, presenting them, and evaluating the worth of them in contributing to effective teaching behavior in order to make them more acceptable and serviceable as educational tools.

5. Careful consideration needs to be given to the orientation of students to this new type of experience for them. The attitudes of students toward simulation experiences are a mixture of anxiety, curiosity, and possibly resentment at first. It is of prime importance to clarify the goals and means of achieving them at the outset of a simulation program in order to secure student cooperation and acceptance. With this preparation, students may enjoy it and find it worthwhile and rewarding.

6. Information needs to be gathered on the types of students most likely to learn from this type of program. Are some students
"visual minded" so that they do particularly well when visual or role played simulated representations are used? Does practice produce greater gains for some students than for other students? Do some students need more repetition and examples to achieve the same accuracy as other students? Are there some students who do not need this experience at all and would profit from some other activity? Experiments need to be designed to find answers to such questions?

7. Those institutions that possess VTR equipment and wish to realize the fullest potential of its use in simulation experiences will find it necessary to provide in-service training in the use of this new medium for all those responsible for the student teaching program---supervising teachers, college teachers and supervisors, and student teachers. Satisfactory and effective results with VTR can be obtained without highly trained technicians to operate it.

8. Simulation probably offers the opportunity for new insights and perceptions of teaching behavior in presentation and evaluation techniques. The model can be adapted to local needs in testing both immediate and long-range instructional goals. Simulation contains a multitude and variety of opportunities for rethinking the basis of in-service education.
APPENDIXES

A. Pre-test (Instructional Procedure, Program I)
B. Post-test (Instructional Procedure, Program II)
C. Post-test (Student Teacher Problem and Supplementary Information Guide)
D. Confidence Scale
E. Dogmatism Scale
F. Student Reactions to Simulation Experience
G. Reaction of Faculty to Simulated Experience
H. Supervising Teacher Questionnaire
J. Syllabus for Prospective Teachers
K. Principles to Be Used in Solving Problems
L. Written Description of Problem (Student Teacher Problem and Supplementary Information Guide)
M. Scoring Instrument for Judges
N. Student Teacher Response Form
P. Table: Employment of Techniques in Student Teaching and Frequency of Occurrence
Q. Table: Reactions of Faculty to Simulation Experience Program
R. Table: Mean Pre-test and Post-test Ratings on Performance Tests
APPENDIX A

MRS. ACE'S HOME ECONOMICS CLASS
INSTRUCTIONAL PROCEDURE

Program I  Problem 5
Management problem
Interruption of class

Situation

You have just begun showing a 30 minute film about family relations when Grace comes into the room to get help on writing up an FHA project for the State Award of Merit. It has to be mailed in today in order for it to be considered for the award. You know that it is vital for you to help her now, and that there is no other time for this discussion with her.

Problem scene:

You have just started showing the film "Being a Better Family Member." Grace enters and says, "I can't remember all the things we decided to include in "contribution to school and community" in my report. Will you please help me out here?"

RESPONSE METHOD

Standard I  Encourage student initiative to learn vs. discourage initiative to learn.

Standard II  Be attentive to entire class vs. be attentive either to class or individual.

A  Encourage student: be attentive to entire class

Make arrangements for student to run projector and offer to help her. Be warm and sympathetic.

B  Discourage initiative: be attentive to entire class

Tell her that you just don't have time now; continue showing film.

C  Encourage student: do not be attentive to class

Help student, tell class to get books out and study, you can't finish picture. Or help student while ignoring class.

Score

A (3)
B (2)
C (2)
D Discourage initiative: do not be attentive to class

Help student, but reprimand her for coming to you during class. Ignore class or tell them to study something else.

E No response

PROBLEM ASSESSMENT

Student interrupts class with a problem that cannot wait or be taken care of at any other time if it is to be settled satisfactorily.
APPENDIX B

MRS. ACE'S HOME ECONOMICS CLASS
INSTRUCTIONAL PROCEDURE

Program II Problem 2 (written)
Management problem
General discipline

Situation:

This is still the study period in which the preceding problem took place. The ninth grade students are working independently on their housing notebooks. Mrs. Ace is still out of the room.

Problem scene:

Grace and Kathy are working together on their notebooks and whispering quietly from time to time. Joanne coaxes Agatha to move next to Joanne in order to talk about a forthcoming high school dance. The two other girls at the table, Mary and Sue, are noticeably disturbed. Mary leaves her seat and walks toward you.

RESPONSE METHOD

Standards

I When learners exhibit behavior which deviates from an instructional objective, deal with the individual(s) directly with minimal disruption of instructional continuity, vs. disrupts instruction.

II When direct action is required to control a disruptive group, act quickly, vs. delay.

A AVOIDS DISRUPTING INSTRUCTION: ACTS QUICKLY

Quickly moves into the situation (by the time Agatha gets to Joanne's desk), and communicates privately with girls.

Alternatives:
(1) Inquires about girls' intentions, and/or "Is it necessary that you work together?"

(2) Explains to girls that they are disturbing the rest of the girls at the table, and ask them to resume individual study. "Agatha, take your seat, you girls are disturbing the rest of the girls at the table."

Note: Grace and Kathy's continued discussion (in previous scene) should be considered as a separate and different problem. It is not necessarily required to redirect these girls to their seats or to an isolated spot.
B AVOIDS DISRUPTING CLASS: DELAYS

Same as A, but delays until after Joanne and Agatha are talking. Mary perhaps will have had a chance to tell you that they don't want them (Agatha and Joanne) sitting together at their table (which would be better not to have happened!).

C DISRUPTS CLASS; ACTS QUICKLY

Same as A, but in manner that disrupts whole study period. May loudly ask Agatha her purpose in moving, or reprimand class for actions of a few.

D DISRUPTS INSTRUCTION: DELAYS

Alternatives

(1) Waits until disruption has spread and calls loudly from distance. May, or may not point out individuals.

(2) Reprimands entire class for actions of a few. "Class, this is a work period . . ." "Class, I think you all had better study at your seats."

E NO RESPONSE

PROBLEM ASSESSMENT

STIMULUS SITUATION

1. Joanne coaxes Agatha to move seat next to Joanne.

2. Some students (Mary and Sue) are noticeably disturbed.

Background information: Grace and Kathy are studying together.

SUPPLEMENTARY INFORMATION

Joanne and Agatha both are above average students. Joanne is a flighty girl who has an active mind and imagination that frequently leads her into disrupting situations. Agatha is a conscientious student who follows rules and directions.
Program II  Problem 2 (written incident)

Situation:

This is still the study period in which the preceding problem took place. The ninth grade students are working independently on their housing notebooks. Mrs. Ace is still out of the room.

Problem scene:

Grace and Kathy are working together on their notebooks and whispering quietly from time to time. Joanne coaxes Agatha to move next to Joanne in order to talk about a forthcoming high school dance. The two other girls at the table, Mary and Sue, are noticeably disturbed. Mary leaves her seat and walks toward you.

SUPPLEMENTARY INFORMATION

Joanne and Agatha both are above average students. Joanne is a flighty girl who has an active mind and imagination that frequently leads her into disrupting situations. Agatha is a conscientious student who follows rules and directions.
CONFIDENCE SCALE

Please place an (X) before the word or words that most nearly describe your feelings about each of the nine statements listed below.

1. I am confident that I have the skills necessary to work effectively with students in small groups.
   ___ very confident
   ___ confident
   ___ uncertain
   ___ very uncertain

2. I am confident that I have the skills necessary to work effectively with students in large groups (entire class).
   ___ very confident
   ___ confident
   ___ uncertain
   ___ very uncertain

3. I am confident that I have the skills necessary to maintain the interest of a class.
   ___ very confident
   ___ confident
   ___ uncertain
   ___ very uncertain

4. I am confident that I possess the necessary skills to cope with individual discipline problems.
   ___ very confident
   ___ confident
   ___ uncertain
   ___ very uncertain

5. I am confident that I possess the necessary skills required to cope with group discipline problems.
   ___ very confident
   ___ confident
   ___ uncertain
   ___ very uncertain
6. I am confident that I know how to study individual student and school records carefully as a basis for evaluating student behavior and progress.

___ very confident
___ confident
___ uncertain
___ very uncertain

7. I am confident that I understand the problems of high school girls.

___ very confident
___ confident
___ uncertain
___ very uncertain

8. I am confident that I have the necessary skills to deal appropriately with unexpected situations as they develop.

___ very confident
___ confident
___ uncertain
___ very uncertain

9. I am confident that I will enjoy my first teaching position.

___ very confident
___ confident
___ uncertain
___ very uncertain

Your name_____________________________________

Date_________________________________________
APPENDIX E

DOGMATISM SCALE

The following is a study of what the general public thinks and feels about a number of important social and personal questions. The best answer to each statement below is your personal opinion. We have tried to cover many different and opposing points of view; you may find yourself agreeing strongly with some of the statements, disagreeing just as strongly with others, and perhaps uncertain about others; whether you agree or disagree with any statement, you can be sure that many people feel the same as you do.

Mark each statement in the left margin according to how much you agree or disagree with it. Please mark every one.

Write +1, +2, +3, or -1, -2, -3, depending on how you feel in each case.

+1: I AGREE A LITTLE  -1: I DISAGREE A LITTLE
+2: I AGREE ON THE WHOLE  -2: I DISAGREE ON THE WHOLE
+3: I AGREE VERY MUCH  -3: I DISAGREE VERY MUCH

( ) 1. The United States and Russia have just about nothing in common.

( ) 2. The highest form of government is a democracy and the highest form of democracy is a government run by those who are most intelligent.

( ) 3. Even though freedom of speech for all groups is a worthwhile goal, it is unfortunately necessary to restrict the freedom of certain political groups.

( ) 4. It is only natural that a person would have a much better acquaintance with ideas he believes in than with ideas he opposes.

( ) 5. Man on his own is a helpless and miserable creature.

( ) 6. Fundamentally, the world we live in is a pretty lonesome place.

( ) 7. Most people just don't give a "damn" for others.

( ) 8. I'd like it if I could find someone who would tell me how to solve my personal problems.
9. It is only natural for a person to be rather fearful of the future.

10. There is so much to be done and so little time to do it in.

11. Once I get wound up in a heated discussion I just can't stop.

12. In a discussion I often find it necessary to repeat myself several times to make sure I am being understood.

13. In a heated discussion I generally become so absorbed in what I am going to say that I forget to listen to what the others are saying.

14. It is better to be a dead hero than to be a live coward.

15. While I don't like to admit this even to myself, my secret ambition is to become a great person, like Einstein, or Beethoven, or Shakespeare.

16. The main thing in life is for a person to want to do something important.

17. If given the chance I would do something of great benefit to the world.

18. In the history of mankind there have probably been just a handful of really great thinkers.

19. There are a number of people I have come to hate because of things they stand for.

20. A man who does not believe in some great cause has not really lived.

21. It is only when a person devotes himself to an ideal or cause that life becomes meaningful.

22. Of all the different philosophies which exist in this world there is probably only one which is correct.

23. A person who gets enthusiastic about too many causes is likely to be a pretty "wish-washy" sort of person.

24. To compromise with our political opponents is dangerous because it usually leads to the betrayal of our own side.

25. When it comes to differences of opinion in religion we must be careful not to compromise with those who believe differently from the way we do.
( ) 26. In times like these, a person must be pretty selfish if he considers primarily his own happiness.

( ) 27. The worst crime a person could commit is to attack publicly the people who believe in the same thing he does.

( ) 28. In times like these it is often necessary to be more on guard against ideas put out by people or groups in one's own camp than by those in the opposing camp.

( ) 29. A group who tolerates too much differences of opinion among its own members cannot exist for long.

( ) 30. There are two kinds of people in this world: those who are for the truth and those who are against the truth.

( ) 31. My blood boils whenever a person stubbornly refuses to admit he's wrong.

( ) 32. A person who thinks primarily of his own happiness is beneath contempt.

( ) 33. Most of the ideas which get printed nowadays aren't worth the paper they are printed on.

( ) 34. In this complicated world of ours the only way we can know what's going on is to rely on leaders or experts who can be trusted.

( ) 35. It is often desirable to reserve judgment about what's going on until one has had a chance to hear the opinions of those one respects.

( ) 36. In the long run the best way to live is to pick friends and associates whose tastes and beliefs are the same as one's own.

( ) 37. The present is all too often full of unhappiness. It is only the future that counts.

( ) 38. If a man is to accomplish his mission in life it is sometimes necessary to gamble "all or nothing at all."

( ) 39. Unfortunately, a good many people with whom I have discussed important social and moral problems don't really understand what's going on.

( ) 40. Most people just don't know what's good for them.

Your name__________________________

Date______________________________
APPENDIX F

STUDENT REACTIONS TO SIMULATION EXPERIENCES

Name ________________________________

This instrument is an attempt to determine your attitude toward your simulated classroom experience. Feel perfectly free to express your true reactions toward the experience. This information will in no way affect your grade in student teaching.

I. Please write a brief paragraph about how you feel concerning your simulated classroom experience (favorable, unfavorable, or neutral, etc.). If more space is needed, use reverse side of page.

II. Please read the following statements about the simulated classroom experience and show your reactions by checking (√) the statement under each item that best expresses your own point of view.

1. I enjoyed receiving the simulated classroom experience.
   ___ a. very much
   ___ b. somewhat
   ___ c. not particularly
   ___ d. not at all

2. The video taped incidents were realistic "life-like."
   ___ a. very realistic
   ___ b. realistic
   ___ c. not particularly realistic
   ___ d. not realistic at all
3. The role played incidents were realistic "life-like."
   __a. very realistic  
   __b. realistic  
   __c. not particularly realistic  
   __d. not realistic at all  

4. "Acting out" my response to the problems made me feel like I was involved in the situation.
   __a. very involved  
   __b. involved  
   __c. not particularly involved  
   __d. not involved at all  

5. The discussion accompanying the simulated experiences during the individual conferences was valuable in developing the concepts.
   __a. very valuable  
   __b. valuable  
   __c. not particularly valuable  
   __d. not valuable at all  

6. The group discussions accompanying the simulated experiences were valuable in developing the concepts.
   __a. very valuable  
   __b. valuable  
   __c. not particularly valuable  
   __d. not valuable at all
7. I feel that my participation in the two-week classroom simulated experiences has increased my capacity to identify classroom problems.

___a. very much
___b. somewhat
___c. not particularly
___d. not at all

8. I believe that my participation in the simulated classroom experience has helped me develop methods of coping with classroom problems.

___a. very helpful
___b. helpful
___c. not particularly helpful
___d. not helpful at all

9. Participation in the classroom simulated experiences made the concepts more meaningful than if they had been presented in lectures.

___a. much more meaningful
___b. more meaningful
___c. as meaningful
___d. less meaningful
___e. much less meaningful

10. I feel that writing the responses after coping with the problems during the individual sessions was beneficial to me.

___a. very beneficial
___b. beneficial
___c. not particularly beneficial
___d. not beneficial at all
11. I believe that it was helpful for me to see myself coping with the problem situations on the video tape playbacks.

___a. very helpful
___b. helpful
___c. not particularly helpful
___d. not helpful at all

12. I believe that becoming familiar with the video taping procedure during this experience will help me to be more relaxed when the video tape recorder is brought into my classroom during student teaching.

___a. very helpful
___b. helpful
___c. not particularly helpful
___d. not helpful at all

13. I believe that the simulated classroom experiences could be provided in less time just as effectively.

___a. strongly agree
___b. agree
___c. disagree
___d. strongly disagree

14. I believe that the simulated classroom experiences should be given in the methods course rather than taking time from the student teaching experience for it.

___a. strongly agree
___b. agree
___c. disagree
___d. strongly disagree
15. I believe that the simulated classroom experiences should be given in the seminars during student teaching rather than be given before student teaching.

   ___a. strongly agree
   ___b. agree
   ___c. disagree
   ___d. strongly disagree

16. The PROSPECTIVE STUDENT TEACHER'S HANDBOOK was helpful to me in understanding the objectives of the simulated classroom experiences.

   ___a. very helpful
   ___b. helpful
   ___c. not particularly helpful
   ___d. not helpful at all

17. The PROSPECTIVE TEACHER'S HANDBOOK was helpful to me in understanding my responsibilities for participating in the simulated classroom experiences.

   ___a. very helpful
   ___b. helpful
   ___c. not particularly helpful
   ___d. not helpful at all

III. Please write any suggestions for improvement that you feel might be added or deleted from the activities that you participated in for the past two weeks in the simulated classroom experience.
APPENDIX G

REACTION OF FACULTY TO SIMULATED EXPERIENCE

In order to evaluate the feasibility of using simulated problem incidents in the pre-service education of prospective student teachers, we need your reactions to the parts of the program in which you were involved.

As you know, this was a pilot study to determine the feasibility of using this method of instruction for part of the education of student teachers before they participate in student teaching.

Your comments about the program and suggestions for improvement will greatly enhance our ability to determine its acceptability and effectiveness as a means of getting students ready for student teaching.

Please feel free to state your personal opinions frankly as you respond to the questions listed below. Any comments you have to make will be greatly appreciated.

I. Would you recommend this method for a part of the pre-service education of student teachers to another person who is responsible for the student teaching program? ____Yes ____No

   Why?

II. Rate each statement using the scale below (1, 2, 3, 4) that best indicates your feelings concerning the statements and write the number in the space provided for it to the right of the statement, or make comments as appropriate.

   low          high

   1  2  3  4

   ____ ____
A. PRODUCTION OF THE VIDEO TAPES

1. THE USE OF HIGH SCHOOL STUDENTS AND TEACHERS

a. It was acceptable (convenient, efficient, manageable) to use a high school home economics teacher and students for producing the video taped problem incidents. ( )

b. It was effective (desired results were produced, adequate) to use a high school home economics teacher and students for producing the video taped problem incidents. ( )

c. Make any specific suggestions you may have for choice of people to use for portrayal of characters in the problem incidents.

2. USE OF TELEVISION EQUIPMENT

a. It was acceptable (convenient, efficient, manageable) to use the television equipment for producing the problem incidents. ( )

b. It was effective (desired results were obtained, adequate) to use the television equipment for the production of the problem incidents. ( )

c. Make any specific suggestions you may have for improving the selection and use of television equipment for producing problem incidents.

3. USE OF A HIGH SCHOOL CLASSROOM

a. The use of a high school home economics classroom was acceptable (convenient, efficient, manageable) in the production of the problem incidents. ( )

b. The use of a high school home economics classroom was effective (desired results were obtained, adequate) in the production of the problem incidents. ( )

c. Make any suggestions you may have for improving the setting for the production of video taped problem incidents.
4. **THE AMOUNT OF TIME USED**

a. The amount of time (a full day in a high school classroom) was acceptable (convenient, efficient, manageable) for video taping the problem incidents. ( ) a.

b. The amount of time was effective (desired results were obtained, adequate) for video taping the problem incidents. ( ) b.

c. The choice of timing (all at one time rather than in several shorter blocks of time) was acceptable (convenient, efficient, manageable) for video taping the problem incidents. ( ) c.

d. The choice of timing (all at one time) was effective (desired results were obtained, adequate) for video taping the problem incidents. ( ) d.

e. Make any specific suggestions you may have for improving the amount and choice of timing for video taping the problem incidents.

5. **THE INSTRUCTION AND PRACTICE OF PERFORMERS**

a. The preparation (instruction and practice) of the performers prior to the video taping was acceptable (convenient, efficient, manageable). ( ) a.

b. The preparation of the performers prior to the video taping was effective (desired results were obtained, adequate). ( ) b.

c. Make any specific suggestions for improving the preparation (instruction and practice) of the performers prior to the video taping of the incidents.

6. **THE QUALITY OF VIDEO TAPED INCIDENTS**

a. The audio was clear and understandable. ( ) a.

b. The pictures were clear and free from unnecessary detail. ( ) b.

c. The length of the problem incidents was suitable. ( ) c.

d. The video portrayed the problem incidents adequately. ( ) d.

e. Make any specific suggestions you may have for improving the quality of the video taped incidents.
B. THE TRY-OUT OF MATERIALS

1. The try-out of materials in order to become familiar with the scoring procedure was acceptable (convenient, efficient, manageable). ( ) a.

2. The try-out of materials was effective (desired results were obtained, adequate). ( ) b.

3. Make any specific suggestions you may have for improving the try-out of materials in order to assist evaluators to become familiar with the scoring procedure.

C. THE PRE-TEST AND POST-TEST

1. PRE-TEST AND POST-TEST FORMS (SEE FORMS A,B)
   a. The pre-test and post-test forms were acceptable (convenient, efficient, manageable) to use in evaluating the student teaching behavior. ( ) a.
   
   b. The pre-test and post-test forms were effective (desired results were obtained, adequate) to use in evaluating the student teaching behavior. ( ) b.
   
   c. Make any specific suggestions you may have for improving the pre-test and post-test forms.

2. THE USE OF A PANEL OF JUDGES
   a. The use of a panel of judges was an acceptable (convenient, efficient, manageable) means for evaluating the students responding to a set of video taped and role played problem incidents. ( ) a.
   
   b. The use of a panel of judges was an effective (desired results were obtained, adequate) means for evaluating the student responses. ( ) b.
   
   c. Make any specific suggestions for improving the administering of either the pre-test or post-test.
3. THE USE OF VIDEO TAPED INCIDENTS

a. The use of video taped incidents was an acceptable (convenient, efficient, manageable) means for portraying the problem incidents. ( ) a.

b. The use of video taped incidents was an effective (desired results were obtained, adequate) means for portraying the problem incidents. ( ) b.

c. Make any specific suggestions for improving the video taped incidents as a means for portraying the problem incidents.

4. THE USE OF ROLE-PLAYED INCIDENTS

a. The use of role-played incidents was an acceptable (convenient, efficient, manageable) means of portraying the problem incidents. ( ) a.

b. The use of role-played incidents was an effective (desired results were obtained, adequate) means of portraying the problem incidents. ( ) b.

c. Make any specific suggestions for improving the role-played incidents.

D. THE INSTRUCTIONAL PROCEDURE FORMS

1. The Instructional Procedure Forms were acceptable (convenient, functional) (See Form A). ( ) a.

2. The Instructional Procedure Forms were effective (desired results were obtained, adequate). ( ) b.

3. Make any specific suggestions for improving the Instructional Procedure Forms.
E. THE INDIVIDUAL CONFERENCES

1. Individual conferences were acceptable (convenient, efficient, manageable) for working with the students as a part of this simulated experience program. ( ) a.

2. Individual conferences were effective (desired results were obtained, adequate) for working with the students. ( ) b.

3. Make any specific suggestions for improving these individual conferences.

F. THE SUPPLEMENTARY WORK DONE BY THE STUDENTS OUTSIDE THE CONFERENCES

1. Having the students use the case studies was acceptable (convenient, efficient, manageable) ( ) a.

2. Having the students use the case studies was effective (desired results were obtained, adequate). ( ) b.

3. Having the students identify and analyze the problem situations on the STUDENT RESPONSE FORMS was acceptable (convenient, efficient, manageable). ( ) c.

4. Having the students identify and analyze the problem situations on the STUDENT RESPONSE FORMS was effective (desired results were obtained, adequate). ( ) d.

5. Having students write and solve problems of their own creation that contain principles and behaviors studied was effective (desired results were obtained, adequate). ( ) e.

6. Having students write and solve problems of their own creation that contain principles and behaviors studied was acceptable (convenient, efficient, manageable). ( ) f.

7. Make any specific suggestions you may have for improving the supplementary work done by the students.
G. THE GROUP SEMINARS

1. Group seminars were acceptable (convenient, efficient, manageable) as a means of working with the students as a part of this simulated experience program. ( ) a.

2. Group seminars were effective (desired results were obtained, adequate) as a means of working with these students. ( ) b.

3. Make any specific suggestions for improving the group seminars.

III. Make any other specific suggestions as to the feasibility or improvement of this simulated experiences program for student teachers at Ashland College.

A. The number of people involved in conducting it.

B. The time required for the program.

C. The shortened student teaching experience.
D. The use of space in the television studio for approximately four hours daily for eight days.

E. The use of equipment and personnel for replaying video tapes and video taping the students as they practiced the problem situations.

IV. Feel free to make any other comments below about this program that may not be included in the above questions.
APPENDIX H

As a part of a follow-up study of a program of simulated classroom experiences for prospective teachers we are interested in an evaluation of the home economics assistant teacher you are supervising. This instrument is designed to measure the frequency of use of some techniques which the assistant teacher may or may not have used. It is important that this follow-up study be conducted. It will serve to guide future development of the pre-service preparation of our home economics student teachers. This information will be held in strict confidence, and will be used only as a means of helping us develop the most effective pre-service program for our home economics education students.

Instruction for Use

It is assumed that the techniques described may not be appropriate in every situation encountered in the classroom. In many cases, an attempt has been made to limit the situation. For example, Technique 1 is limited to those situations involving rules of procedure when the student teacher is not informed of the rules.

It is hoped that no value judgments will be made of the techniques described. The student teacher should be evaluated solely in terms of the frequency of occurrence of the techniques rather than in terms of the evaluator's opinion of the value of the techniques. It is recognized that in some cases, the evaluator's philosophy of teaching would indicate other techniques than those described.

Each question has two parts. One part asks you to estimate the frequency of occurrence of the technique described while the second part asks you to estimate the frequency of occurrence of the problem indicated. For example, an evaluator might estimate that her student teacher used Technique 1 (which involves rules of procedure) every time the opportunity occurred, and check "always" for Frequency of use of Technique. However, the evaluator might estimate that the problem occurs rather rarely, and mark "seldom" for Frequency of Occurrence of Problem.
SUPERVISING TEACHER QUESTIONNAIRE

Description of Techniques

1. In situations involving rules of procedure, when the student teacher was not informed of the rules, did the student teacher defer to some authority (e.g., the supervising teacher) as compared with establishing her own rules that might be contrary to those of the supervisor?

2. In instructional situations where one student's comments or questions could monopolize the student teacher's attention (to the detriment of on-going class instruction), was the student teacher attentive to the entire class as well as to the individual as compared with being attentive either to the individual or to the class only? For example, did the student teacher elicit other class members' reactions in a conversation that involved the student teacher and only one other individual?

3. When learners appeared bored or inattentive in a situation that did not fulfill the instructional objectives (e.g., a disorganized and argumentative committee) did the student teacher deal with the group as compared with deal with the individual(s)?

4. When confronted with conflicting parent-school interests (e.g., a student pits her parents against a teacher in an argument involving homework assignments), did the student teacher maintain a neutral position as compared with taking sides (e.g., attacking the parents or defending her position)?
5. When learners appeared to make an inappropriate response (e.g., make an incorrect generalization), did the student teacher encourage learner(s) to replace it immediately with an appropriate response as compared with not encouraging learners to change the response?

6. When learners caused trouble or were otherwise disruptive in a situation that fulfilled instructional objectives (e.g., an organized, well-executed discussion), did the student teacher deal with the individual(s) directly with minimal disruption of instructional continuity as compared with disrupting instruction to handle the situation?

7. Did the student teacher encourage student initiative to learn (e.g., commend a learner's efforts at outside reading, extra library work) as compared with discouraging or ignoring student initiative?

8. When direct action was required to control a disruptive group or individual, did the student teacher move in and communicate at close range as compared with communicate at a distance (e.g., shout over noise or disrupt a quiet study period)?

9. When direct action was required to control a disruptive group or individual, did the student teacher act quickly as compared with delay and allow the disruption to spread?

10. When learners exhibited undesirable behavior (e.g., interrupting discussion with an inappropriate comment, being rude), was the behavior discouraged (e.g., by withholding praise or other appropriate means) as compared with encouraged?
11. When learners appeared disinterested or confused, did the student teacher attempt to stimulate a more active, interested response (e.g., change the topic or mode of presentation)?

12. Where appropriate, was the student teacher non-directive in instruction (e.g., did the student teacher encourage students to express, explore and explain concepts) in comparison with giving information directly?

13. Did the student teacher publicly call attention to individual's shortcomings or errors so as to place the learner in an embarrassing position?

14. Where possible, did the student teacher give forethought to situations and anticipate classroom management problems before they happened?

15. Did the student teacher seem to instruct students so as to maximize active participation of class members?

16. When did you feel that the student teacher was ready to assume full responsibility for the class. (Please notice the distinction between ready and when the student teacher actually assumed full responsibility.)

17. What, in your mind, were the three most difficult problems which your student teacher had to overcome in her student teaching experience?
<table>
<thead>
<tr>
<th>Supervising Teacher Questionnaire</th>
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<tbody>
<tr>
<td><strong>Frequency of Use of Technique</strong></td>
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<tr>
<td>Always</td>
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<td></td>
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<td>1.</td>
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### Speed of Adjustment

<table>
<thead>
<tr>
<th>Speed</th>
<th>Time Frame</th>
<th>Code</th>
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<tr>
<td>Very rapid</td>
<td>(within one week)</td>
<td></td>
</tr>
<tr>
<td>Rapid</td>
<td>(between one and three weeks)</td>
<td></td>
</tr>
<tr>
<td>Average</td>
<td>(between four and six weeks)</td>
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<td>Slow</td>
<td>(between seven and nine weeks)</td>
<td></td>
</tr>
<tr>
<td>Very slow</td>
<td>(more than nine weeks)</td>
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</tbody>
</table>

17. (a) ________________________________________________

(b) ________________________________________________

(c) ________________________________________________
SYLLABUS FOR PROSPECTIVE TEACHERS

A two-week program of simulated experiences for pre-service preparation of prospective home economics teachers at Ashland College, from March 19 to March 29.

Objectives

1. To improve behaviors related to teaching ability to minimum performance standards, and

2. To develop confidence in ability to teach through—
   a. assuming the role of a beginning teacher,
   b. using related appropriate professional information and materials,
   c. solving problems of beginning teachers,
   d. experiencing a variety of alternative or potential solutions to particular problems,
   e. considering possible consequences of problem solving behavior and evaluating them,
   f. focusing intensively on critical teaching problems by studying and analyzing them before they are presented in an actual teaching situation.

Behaviors Which a Prospective Teacher Will Be Expected to Improve

1. In problems involving rules of procedure, defers to authority.

2. Shows supporting manner when dealing with pupils having a problem.

3. When pupils appear disinterested or confused, assumes a more active interested response.

4. When a problem arises, is attentive to entire class as well as to the individual.

5. Discourages undesirable behavior.

6. When direct action is required to control a disruptive group (or individual) acts quickly.

7. To control a disruptive group (or individual), communicates at close range.
8. When pupils exhibit deviant behavior, deals with the individual(s) directly with minimal disruption of instructional continuity.

9. Encourages student initiative to learn.

10. When pupils appear to make an inappropriate response, encourages pupils to replace it immediately with an appropriate response.

11. When confronted with conflicting parent-school interests, maintains a neutral behavior.

**Types of Experiences Which Will Be Provided or Available to Develop Competence in Teacher Behaviors**

**Expected**

1. You will be exposed to problems that require the identified behaviors necessary to cope with them by viewing models on video tape, by seeing them enacted by role playing, or by written descriptions of the incidents. You take over and enact the teaching behaviors required in the problem.

2. Media and learning activities are arranged so that you will have an opportunity to perform the desired new behaviors.

3. You will demonstrate proficiency in recognizing, assessing, and applying the principles underlying the objectives which provide the standards for the behaviors needed to meet the video taped or written problems presented to you. Problems will be reviewed, discussed, and evaluated with experimenter and supervisor. This will be repeated until criterion behaviors are achieved.

4. You will develop teaching situations of your own that are illustrative of each of the objectives and present them to the group. These will be video taped for analysis and evaluation by the group.

**Description of Processes for Individual Assessment**

The primary judge of whether or not a person has the prerequisites or qualities needed for teaching is the teacher herself. The key to rational and fair judgment is evidence. Evidence is provided here in the form of personally supportive feedback by means of video tapes of the prospective teacher in action.

Because perceptions of yourself are so vital to your perceptions of others, every effort is made to provide opportunities for each of you to receive supportive "feedback," both subjective (self-evaluation and supervisor evaluation) and objective (video tape of you in action). Teaching is a human enterprise and its primary rewards are in the
personal, helping relationships which occur in open and non-threatening situations. Teachers usually can elicit favorable responses from students if they are sensitive to student needs, have personal resources available to meet student needs, and can communicate effectively with students. These problems are selected and planned to help you develop these competencies before you are in an actual teaching situation confronted with these problems.

Program Adaptations Made in Caring for Individual Differences

It is recognized that learning to teach is individual, i.e., the adaptation of your unique talents to particular teaching tasks. The plan for these simulated experiences is to help you in assessing your talents and developing them. Provision is made to provide feedback, discussion and analysis of each problem as many times as necessary for you to become familiar and comfortable with a method that is yours as you study the principles involved in each problem. You will be encouraged and expected to think of ways of developing behaviors that are effective in each of the teaching situations presented.

Nature and Extent of "Feedback"
Activities in the Problems

Feedback will be of two types:

1. **Student behavior** to be expected as a consequence of your teaching behavior.

2. **Your behavior** on video tape in order for you to see yourself as the class sees you, and thus having an objective and live view of yourself. Often undesirable and distracting mannerisms are made clear to you for the first time. You also may notice that you have a very nice smile—use it! We will be very interested in your voice, and looking for any improvements needed here.

Resources Available to Help You

1. The simulated problems to be analyzed and practiced will be the main source of information to help you be more ready for student teaching.

2. Your instructors will work individually with you during individual conference time and other times as needed to iron out problems and clarify areas that you don't understand. We will suggest activities to obtain practice in areas where you seem to need to develop competence, such as viewing model teacher behavior on video tape, practice by role playing, observing a teacher in the classroom, conferences with an experienced teacher, etc.
3. The packet of 4 case studies of the over-achiever, the under-achiever, the slow student, and the high ability student will be useful in helping you to understand these types of students and how to cope with problems involving each of these types of students. The students in the simulated problems are mainly these four students—Grace, the high ability student; Alvertia, the low ability student; Kathy, the underachiever; and Agatha, the overachiever. These should also help to familiarize you with the type of information that is available to you in the school system about students, and how it can help you in guiding and working with students.

4. Your two booklets used in methods course TIPS TO TEACHERS and THE TEACHER'S SURVIVAL GUIDE, as well as your methods textbook may provide some new insights for you as you actually experience some of the things you talked about in methods class.

5. Two hours a day is allowed for role playing and practicing and evaluating teaching situations among yourselves with an instructor present to act as consultant for you.
APPENDIX K

PRINCIPLES AROUND WHICH PROBLEMS WE ARE STUDYING ARE BUILT

1. The effective student teacher defers to authority in problems involving rules of procedure (correct use) vs. establishes own rules (incorrect use)

2. The student teacher is most effective when she shows a supporting manner vs. shows non-supporting manner

3. When learner(s) appear disinterested or confused, the effective student teacher stimulates a more active interested response vs. makes no effort to change the learner's response

4. The effective student teacher is attentive to entire class as well as the individual vs. is attentive to either the individual or class

5. The effective student teacher discourages undesirable behavior vs. encourages undesirable behavior

6. The effective student teacher acts quickly when direct action is required to control a disruptive group vs. delays

7. The effective student teacher communicates at close range to control a disruptive individual(s) vs. communicates from a distance

8. The effective student teacher encourages student initiative to learn vs. discourages student initiative to learn

9. The effective student teacher deals with the individual(s) directly with minimal disruption of instructional continuity when learners exhibit deviant behavior vs. disrupts instruction

10. The effective student teacher encourages learners to replace an inappropriate response immediately with an appropriate response vs. does not encourage change

11. The effective student teacher maintains a neutral behavior when confronted with conflicting parent-school interests.
APPENDIX L

STUDENT TEACHER PROBLEM AND SUPPLEMENTARY INFORMATION GUIDE

Program I Written problem 1

Situation

This is a planning session soon after lunch. You have a group of 4 girls working together at a table slightly to the left of your desk. Others in the class are working in their seats. Mrs. Ace has left the room with you in charge. Agatha is just bringing her plans to you to check them. (Seat yourself at the desk, now, and read the PROBLEM SCENE below. You become the teacher and take care of the problem that has arisen as soon as you finish reading THE PROBLEM SCENE.)

Problem scene:

While Agatha is coming forward, Mary at the next table (to the right of your desk) starts talking about the groovy new biology teacher to Sue.

Mary: "Sue, have you seen the groovy new biology teacher?"

The other 3 girls at the table stop working and begin listening to Mary.

SUPPLEMENTARY INFORMATION

Mary is a capable and a good student. She will become aggressive if embarrassed. She is fair-minded and recognizes when she has overstepped bounds of correct behavior. She is sometimes immune to social feeling. She is a good one to have on the teacher's side. The girls in the class like her.
APPENDIX M

SCORING INSTRUMENT FOR JUDGES

Name

<table>
<thead>
<tr>
<th>Program I</th>
<th>Program II</th>
</tr>
</thead>
<tbody>
<tr>
<td>Problem 1</td>
<td>Problem 1</td>
</tr>
<tr>
<td>Score (circle one)</td>
<td>Score (circle one)</td>
</tr>
<tr>
<td>1 2 3</td>
<td>1 2 3</td>
</tr>
<tr>
<td>Comment:</td>
<td>Comment:</td>
</tr>
</tbody>
</table>

| Problem 2 | Problem 2  |
| 1 2 3 | 1 2 3 |
| Comment: | Comment: |

| Problem 3 | Problem 3  |
| 1 2 3 | 1 2 3 |
| Comment: | Comment: |

| Problem 4 | Problem 4  |
| 1 2 3 | 1 2 3 |
| Comment: | Comment: |

| Problem 5 | Problem 5  |
| 1 2 3 | 1 2 3 |
| Comment: | Comment: |

| Problem 6 | Problem 6  |
| 1 2 3 | 1 2 3 |
| Comment: | Comment: |

| Problem 7 | Problem 7  |
| 1 2 3 | 1 2 3 |
| Comment: | Comment: |

| Problem 8 | Problem 8  |
| 1 2 3 | 1 2 3 |
| Comment: | Comment: |

| Problem 9 | Problem 9  |
| 1 2 3 | 1 2 3 |
| Comment: | Comment: |

| Problem 10 | Problem 10  |
| 1 2 3 | 1 2 3 |
| Comment: | Comment: |
APPENDIX N

STUDENT TEACHER RESPONSE FORM

Problem No.______  Date____________________

1. Identify the problem.

2. Why do you think the problem arose?

3. What do you think your IMMEDIATE goal should be?

4. What are some alternative courses of action that would lead to your immediate goal?
5. Which courses of action would you take? Why?

6. Describe in writing EXACTLY what you would say or do at the end of the incident.

7. What are some alternative ways to prevent the problem from arising again?

8. What information did you find that helped you better understand the student involved?

9. What other information would you like to have? How could it be obtained?
<table>
<thead>
<tr>
<th>Description of Technique or Principle</th>
<th>Number Reporting</th>
<th>Frequency of Use(^a)</th>
<th>Number Reporting</th>
<th>Frequency of Occurrence(^b)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Student deferred to authority when necessary</td>
<td></td>
<td>3 2 1 1 0</td>
<td></td>
<td>0 1 6 0 0</td>
</tr>
<tr>
<td>2. Student was attentive to entire class as well as to individual in instructional situations</td>
<td></td>
<td>1 4 1 1 0</td>
<td></td>
<td>2 0 5 0 0</td>
</tr>
<tr>
<td>3. Student was attentive to entire class as well as to individual in problem situations</td>
<td></td>
<td>1 4 2 0 0</td>
<td></td>
<td>0 4 2 1 0</td>
</tr>
<tr>
<td>4. Student maintained neutral position in conflicting parent-school interests situations</td>
<td></td>
<td>3 2 0 0 2</td>
<td></td>
<td>0 0 1 4 2</td>
</tr>
<tr>
<td>5. Student encouraged immediate replacement of inappropriate response with appropriate response</td>
<td></td>
<td>1 4 0 2 0</td>
<td></td>
<td>0 3 1 3 0</td>
</tr>
<tr>
<td>6. Student dealt with disruptive situations with minimal disruption of instructional continuity</td>
<td></td>
<td>1 2 3 1 0</td>
<td></td>
<td>0 3 4 0 0</td>
</tr>
<tr>
<td>7. Student encouraged student initiative to learn</td>
<td></td>
<td>2 2 1 2 0</td>
<td></td>
<td>0 3 4 0 0</td>
</tr>
<tr>
<td>8. Student moved in and communicated at close range when direct action was required</td>
<td></td>
<td>0 6 1 0 0</td>
<td></td>
<td>1 1 4 1 0</td>
</tr>
<tr>
<td>9. Student discouraged undesirable behavior</td>
<td></td>
<td>2 2 2 0 1</td>
<td></td>
<td>0 1 2 4 0</td>
</tr>
<tr>
<td>Description of Technique or Principle</td>
<td>Frequency of Use</td>
<td>Frequency of Occurrence</td>
<td></td>
<td></td>
</tr>
<tr>
<td>--------------------------------------</td>
<td>------------------</td>
<td>-------------------------</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10. Student acted quickly when direct action was needed</td>
<td>1 3 1 2 0</td>
<td>0 1 2 3 1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11. Student stimulated a more active interested response when learners were disinterested or confused</td>
<td>0 3 2 1 1</td>
<td>1 2 3 1 0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>12. Student was non-directive in instruction</td>
<td>0 3 1 2 1</td>
<td>0 6 1 0 0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>13. Student publicly called attention to pupils’ shortcomings</td>
<td>0 0 0 1 6</td>
<td>0 0 2 1 4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>14. Student anticipated classroom management problems</td>
<td>0 4 2 1 0</td>
<td>1 3 2 1 0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>15. Student maximized active participation of class members</td>
<td>0 5 1 1 0</td>
<td>0 6 1 0 0</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* Frequency of use
  1. always
  2. often
  3. sometimes
  4. seldom
  5. never

* Frequency of occurrence
  1. very often
  2. often
  3. sometimes
  4. seldom
  5. never
# APPENDIX Q

## REACTIONS OF FACULTY TO SIMULATED EXPERIENCE PROGRAM

<table>
<thead>
<tr>
<th>Reaction and Aspect of Program to Which It Was Made</th>
<th>Number of Faculty Responses&lt;sup&gt;a&lt;/sup&gt;</th>
<th>Degree of Feeling</th>
<th>Total Number Responding&lt;sup&gt;a&lt;/sup&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>low</td>
<td>high</td>
<td>low</td>
</tr>
<tr>
<td><strong>A. Production of Video Tapes</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Use of high school students and teachers</td>
<td>1</td>
<td>5</td>
<td>1</td>
</tr>
<tr>
<td>2. Use of television equipment to produce incidents</td>
<td>2</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>3. Use of a high school classroom</td>
<td>6</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>4. Amount of time used (1 full day)</td>
<td>2</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>5. Choice of timing (all at one time)</td>
<td>1</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>6. Preparation of performers prior to VTR</td>
<td>1</td>
<td>4</td>
<td>1</td>
</tr>
<tr>
<td>7. Audio was clear and understandable</td>
<td>4</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>8. Picture clear and free from unnecessary detail</td>
<td>3</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>9. Problem incident length was suitable</td>
<td>1</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>10. Video portrayed problem incident adequately</td>
<td>2</td>
<td>4</td>
<td>1</td>
</tr>
<tr>
<td><strong>B. Try-out of Materials</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Try-out of materials to become familiar with scoring procedure</td>
<td>1</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td><strong>C. Pre-test and Post-test</strong></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>1. Use of pre-test and post-test forms to evaluate student teacher behavior</td>
<td>1</td>
<td>1</td>
<td>4</td>
</tr>
</tbody>
</table>

<sup>a</sup> Number of faculty responses and total number responding are based on a scale where 1 = low, 2 = medium, and 3 = high.
<table>
<thead>
<tr>
<th>Reaction and Aspect of Program to Which It Was Made</th>
<th>Number of Faculty Responses</th>
<th>Degree of Feeling</th>
<th>Total Number Responding</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Acceptable</td>
<td>Effective</td>
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<tr>
<td></td>
<td></td>
<td>low 3 4 1 2</td>
<td>3 4 1 2</td>
</tr>
<tr>
<td>2. Use of panel of judges to evaluate behavior</td>
<td></td>
<td>1 1 4</td>
<td>1 2 3</td>
</tr>
<tr>
<td>3. Use of video tape to portray problem incidents</td>
<td></td>
<td>1 5 2 4</td>
<td>6</td>
</tr>
<tr>
<td>4. Use of role played incidents to portray problem incidents</td>
<td></td>
<td>1 3 2</td>
<td>1 3 2</td>
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<tr>
<td>D. Instructional Procedure Form</td>
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<td></td>
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</tr>
<tr>
<td>1. Their use to evaluate student behavior</td>
<td></td>
<td>1 3 2</td>
<td>1 3 2</td>
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<tr>
<td>E. Individual Conferences</td>
<td></td>
<td></td>
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<tr>
<td>1. Their use as an instructional procedure</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>F. Supplementary Work Done</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Use of case studies</td>
<td></td>
<td>1 2 1 2</td>
<td>3</td>
</tr>
<tr>
<td>2. Use of written analysis of problem situations</td>
<td></td>
<td>1 2 1 1</td>
<td>3</td>
</tr>
<tr>
<td>3. Students write and solve problems of own creation</td>
<td></td>
<td>1 1 1</td>
<td>2</td>
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<tr>
<td>G. Group Seminars</td>
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<tr>
<td>1. Use as an instructional procedure</td>
<td></td>
<td>3 3 3</td>
<td>3</td>
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</table>

*Total number varies according to item because some faculty members were not involved in all phases of the study.*
**APPENDIX R**

**MEAN PRE-TEST AND POST-TEST RATINGS ON PERFORMANCE TESTS**

<table>
<thead>
<tr>
<th>Student Behavior</th>
<th>Pre-test Scores&lt;sup&gt;a&lt;/sup&gt;</th>
<th>Post-test Scores</th>
<th>Change</th>
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<tbody>
<tr>
<td></td>
<td>Judge 1</td>
<td>Judge 2</td>
<td>Judge 3</td>
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<tr>
<td>Student 1</td>
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<tr>
<td>Enact</td>
<td>1.6</td>
<td>1.6</td>
<td>1.7</td>
</tr>
<tr>
<td>Verbalize</td>
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<td>1.7</td>
<td>1.6</td>
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<tr>
<td>Total</td>
<td>2.6</td>
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<tr>
<td>Student 2</td>
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<tr>
<td>Enact</td>
<td>1.5</td>
<td>1.9</td>
<td>2.1</td>
</tr>
<tr>
<td>Verbalize</td>
<td>1.0</td>
<td>1.2</td>
<td>1.6</td>
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<tr>
<td>Total</td>
<td>2.5</td>
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<tr>
<td>Student 3</td>
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<tr>
<td>Enact</td>
<td>1.9</td>
<td>2.0</td>
<td>1.6</td>
</tr>
<tr>
<td>Verbalize</td>
<td>1.2</td>
<td>1.9</td>
<td>1.3</td>
</tr>
<tr>
<td>Total</td>
<td>3.1</td>
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<td>2.9</td>
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<td>Student 4</td>
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<td>Enact</td>
<td>1.4</td>
<td>1.9</td>
<td>2.3</td>
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<tr>
<td>Verbalize</td>
<td>.8</td>
<td>1.5</td>
<td>1.3</td>
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<tr>
<td>Total</td>
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<td>2.2</td>
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<td>1.3</td>
<td>1.5</td>
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<tr>
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<td>Student 6</td>
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<tr>
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<td>2.0</td>
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<tr>
<td>Verbalize</td>
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<td>1.4</td>
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<td>Student 7</td>
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<td>1.8</td>
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<tr>
<td>Verbalize</td>
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<td>1.5</td>
<td>1.9</td>
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<tr>
<td>Total</td>
<td>3.8</td>
<td>3.3</td>
<td>3.7</td>
</tr>
</tbody>
</table>

<sup>a</sup>Perfect enacted response score 3.0
Perfect verbalized response score 2.0
Perfect total response score 5.0
REFERENCES

Books


Articles and Periodicals


Reports


Unpublished Material


Other Sources
