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INTRODUCTION SIMULATION TECHNIQUE AS A MEANS FOR THE PREPARATION OF HOME ECONOMICS ADMINISTRATORS

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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1973

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ACKNOWLEDGMENTS

The author wishes to express her sincere appreciation to those persons whose assistance contributed to the study. To her major adviser, Dr. Julia I. Dalrymple, for her time, intellectual stimulation, guidance and encouragement throughout the study.

To Dr. Marie M. Dirks, Dr. Darrell L. Ward, Dr. J. Robert Warmbrod, Dr. Rachel M. Hubbard, and Dr. Elsie J. Alberty as members of her graduate committee, for their interest, advice and support.

To the officers and members of the Association of Administrators of Home Economics, who made the data collection possible.

To all of the home economists who participated in the simulation experience, for their helpful suggestions.

To Alwyn J. Rea, for his assistance in the preparation of the simulation packages.

To Madhukar B. Golhar and Patricia D. Saunders, for their invaluable assistance with the statistical analysis of data.

To Nancy J. Lares for typing the manuscript.

To my parents, Mr. and Mrs. Charles W. Noah, for their continuing interest and encouragement in all my endeavors.

And to my children, Cheri, Stephen, Christopher, and Charles, who provide a new educational experience every day.
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PUBLICATIONS

PUBLICATIONS--CONTINUED


PUBLICATIONS—CONTINUED


FIELDS OF STUDY

Major Field: Home Economics Education/Vocational Education

Studies in Home Economics Education. Dr. Julia I. Dalrymple and Dr. Marie M. Dirks

Studies in Vocational Education. Dr. Darrell L. Ward and Dr. J. Robert Warmbrod
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CHAPTER I

INTRODUCTION

Background of the Study

The need for administrative personnel for home economics programs in higher education is critical. Currently many colleges and universities are without deans, directors, and department chairmen for their home economics units. Due to a shortage of highly qualified personnel, individuals without previous preparation for administration often are recruited for these vacancies. Byrd (1972) states:

The idea that one can and should have specific educational preparation for academic administration is an established principle. Yet many administrators have been appointed, promoted or elected to such positions with only meager preparation and experience. The reasons for the choice of these persons have been numerous—demonstrated managerial ability, strength of character, leadership qualities, the best person available at a given time, temporary appointments which have been extended, rotation of leadership among the faculty, demonstrated administrative competence. (1)

Few opportunities exist for home economists to prepare for administrative roles. An Information Assistant of the Executive Director of the American Home Economics Association in reply to a request stated that it is difficult to
locate, in higher education institutions, courses specific to the preparation of home economics administrators. At the annual meeting of the National Council of Administrators of Home Economics, February, 1973, members were asked to list courses available at their institutions of higher education for the preparation of home economics administrators. Only four of the 119 participants indicated a course available at their institutions specifically for such preparation. However, a few members listed administration courses offered at their institutions either in the College of Education or the School of Business Administration. Participants in the current study verified the lack of availability of programs and/or courses specifically for the preparation of home economics administrators. This information supports what is apparent through an examination of college bulletins. As described by the conference participants and the college bulletins, the available administration courses in Colleges of Education seem to concentrate on the preparation of administrators for the public schools, and those in Business Administration prepare personnel for management positions in business. In the past most administration courses, either those offered in Colleges of Education, Business Administration, or those available in home economics units have tended to be theoretical and abstract in nature and have failed to provide an opportunity to apply the administrative theory before the learner is placed in a leadership
In an attempt to alleviate the shortage of highly qualified administrative personnel in the field of home economics perhaps new programs, courses, methods, and materials can be developed and existing ones can be improved and expanded. Leaders in the field are recognizing this need as evidenced by the sponsorship of an Administrative Leadership Workshop by the Association of Administrators of Home Economics July, 1973.

Materials which provide the potential or novice home economics administrator with a learning environment relevant to present or future administrative roles are in demand. Simulation materials have this potential and simulation techniques are rapidly evolving in fields other than home economics as instructional strategies for leadership development. Through simulation experiences the learner is involved in decision making and problem solving comparable to that encountered on the job. Versatility is another aspect of simulation experiences. They can help the learner develop insights about himself, expand concepts, and acquire needed skills. These discoveries and competencies are central to preparatory programs for administrators. In speaking about the preparation of educational administrators, Cunningham (1971) states:

My personal view of simulation is that it is the most promising, currently available, single innovation in administrator preparation. Much,
indeed most, of its potential remains to be activated; we have only begun to invent appropriate means for its usage...Most programs to prepare administrators are like they were two or three decades ago. Our schools cry out for vigorous new leadership. The several types of simulation available to us provide the most promising tool now known to meet that challenge. (26)

The need for simulation materials has been supported by the fact that members of two national organizations, the Association of Administrators of Home Economics and the National Council of Administrators of Home Economics requested and used such materials of an exploratory nature at their annual regional and national meetings. During the conference of the National Council of Administrators of Home Economics in Chicago, Illinois, February, 1973, 95 percent of the participants expressed a felt need for the preparation of home economics administrators and 84 percent indicated that the simulation technique may be a satisfactory means to employ in administrative preparation.

If potential and novice home economics administrators can be given experience in performing functions of leadership before, or shortly after they encounter the real world situation, a valuable teaching-learning tool has been created.

Statement of Problem

The major purpose of the investigator in this study was to examine the feasibility of using the interaction
simulation technique as a means for the preparation of potential and novice home economics administrators.

Through the conduct of the study an attempt was made to answer the following questions:

1. Is there a relationship between the simulation participants' a) level of education, b) amount of administrative experience, c) type of administrative preparation and their leadership
   1) confidence?
   2) simulation contribution to confidence?
   3) simulation contribution to knowledge?
   4) competence?
   5) simulation satisfaction?

2. Is there a relationship between any two of the following simulation participants' leadership factors
   1) confidence,
   2) simulation contribution to confidence,
   3) simulation contribution to knowledge,
   4) competence, and
   5) simulation satisfaction?

3. Is there a relationship between the simulation participants' leadership competence and their simulation role?

4. Do potential and novice home economics administrators have greater leadership confidence when they have been involved in a simulation experience?
5. What are some implications of the interaction simulation technique for the preparation of potential and novice home economics administrators?

The following research hypotheses were identified and tested:

1. The participants' level of education is related to their leadership
   1) confidence score.
   2) simulation contribution to confidence score.
   3) simulation contribution to knowledge score.
   4) competence score.
   5) simulation satisfaction score.

2. The participants' amount of administrative experience is related to their leadership
   1) confidence score.
   2) simulation contribution to confidence score.
   3) simulation contribution to knowledge score.
   4) competence score.
   5) simulation satisfaction score.

3. The participants' type of administrative preparation is related to their leadership
   1) confidence score.
   2) simulation contribution to confidence score.
   3) simulation contribution to knowledge score.
   4) competence score.
   5) simulation satisfaction score.
4. The participants' confidence score is related to their leadership
   1) simulation contribution to confidence score.
   2) simulation contribution to knowledge score.
   3) competence score.
   4) simulation satisfaction score.

5. The participants' simulation contribution to leadership confidence score is related to their leadership
   1) simulation contribution to knowledge score.
   2) competence score.
   3) simulation satisfaction score.

6. The participants' simulation contribution to leadership knowledge score is related to their leadership
   1) competence score.
   2) simulation satisfaction score.

7. The participants' leadership competence score is related to their simulation satisfaction score

8. The participants will show a significant gain in leadership confidence mean score from the pretest to the posttest.
Assumptions

The following assumptions are made:

1. Pre-service competency in performing leadership functions can contribute to a home economists' success as an administrator.

2. It is possible for potential home economics administrators to develop leadership competencies prior to being in the actual situation.

3. The sixteen identified leadership functions are important managerial competencies of a home economics administrator.

4. Decision-making and problem-solving processes are appropriate means for use in simulation experiences related to development of leadership functions.

5. A realistic learning environment can be provided through simulation techniques.

6. Potential and novice home economics administrators can be observed and assessed in their performance of leadership functions during a simulation experience.

Limitation

The following limitation was imposed in this study:

The assessment of the feasibility of using the
interaction simulation technique as a means for the preparation of potential and novice home economics administrators was limited to the instrument developed specifically for the research purpose in this study.

**Definition of Terms**

The following terms are defined as they are used in the study:

**Simulation.** The creation of a realistic environment with lifelike problem-solving experiences related to present or future work.

**Interaction Simulation Technique.** A learning experience in which each participant works individually with in-basket items for the particular role, then interacts with other participants in a role-playing situation to solve a common problem. The interaction simulation technique includes both in-basket and role-playing techniques.

**Role playing.** The spontaneous acting out of a given situation to give participants a "feel" for the real life experience.

**In-Basket Technique.** A simulation experience in which the participants' task is to consider stimulus items such as letters and memos, make a decision relative to a response, then make the response such as to write a letter,
make a telephone call, or schedule an interview.

**Simulation Package.** A package denotes a set of materials used by a participant to complete a simulation experience. The package used in this study included: 1) orientation materials, 2) in-basket items, 3) guidelines for the interaction and synthesis sessions, and 4) the data collection instrument.
CHAPTER II

REVIEW OF LITERATURE

Definition of Simulation

Many different definitions have emerged for simulation as it has developed as a teaching-learning technique. Churchman (1963: 1) says, "Everything there is can be thought of as a simulation of something." However, Koeninger and Ward (1971: 3) advocate a more precise definition, "Simulation is an operating representation of the central features of a real circumstance aimed at providing the learner with a relatively safe, simplified, and germane learning environment." According to Cunningham (1971: 5), "Definitions of simulation continue to be imprecise. The word has acquired a broad set of meanings. In its earliest usages it had a negative connotation. 'Pretense,' 'sham,' 'mock,' and 'misinterpret' were synonyms. More recently it has been used as an analogue or a developed, accurate representation of a particular reality."

Background and Uses of Simulation

The origin of the concept of simulation really is not known. In the military it dates back to the Spartan Wars
Robinson (1966: 95) reviewed the use of games and simulations in war, business and politics and concluded that the application of these techniques for teaching and training were usually secondary objectives of their developers and their educational use happened only by chance. The principal early purposes of simulation and gaming were for research—the investigation of a particular system, process, or set of behaviors. This was true also in the field of educational administration.

At present simulation is developing rapidly as a research and educational device, however, its potential remains relatively unexplored by educators. Simulation as a concept has moved rapidly into common usage. The simulation of the United States space program has not only expanded and refined its applications, but has brought it into the homes of the world through television. It has been used in the space programs as a way of pre-experiencing events, as a training device, and in the mass education of the world's viewing publics (Cunningham, 1971: 1-5).

Those persons most responsible for the early development and refinement of the concept of simulation in educational administration were Griffiths, Wynn, Davies, and McNally at Teachers College, Columbia. The thinking of these men in the mid-50's led to the well-known research project,
"The Development of Criteria for Success in School Administration." The University Council for Educational Administration (UCEA) has promoted the production and distribution of many simulation materials. The first uses of simulation research materials for instruction occurred in 1959, when the "Jefferson Township Public Schools" simulation materials became well known in the United States and other parts of the world.

These materials, an outgrowth from administrative training procedures more common in the business world, concentrate on a simulation of the behavior of school principals. A series of in-basket exercises, in addition to film and tape recordings of hypothetical situations and conversations, require the participant to assume the role of principal and offer the opportunity of practicing decision making. (Taylor and Walford, 1972: 31)

Although the Jefferson Township materials were widely used, it was evident by mid-1960's that the original materials were becoming obsolete and were not as compatible for instructional purposes as they might have been had they been designed specifically for that purpose. Consequently in 1967 UCEA developed expressly for instructional use a more up-to-date simulation of the same suburban school district renamed the "Madison School System." (Wynn, 1972: 3)

The Madison simulation includes written and filmed background dealing with the school system and community in
addition to specialized background material and in-basket problems for an elementary principal, secondary school principal, assistant superintendent for instructional services, assistant superintendent for business management, superintendent, administrator of vocational education and administrator for special education.

During 1970 - 71, UCEA developed the Monroe City Urban Simulation project (URBSIM). This simulation contains background material and problems that require participants to make decisions in the context of the district as a whole. Materials such as films, kinescopes, tapes and handbooks are designed for roles of elementary principals, junior high principals, senior high principals and superintendents. This simulation is the most ambitious reality-oriented material in the field of education. Its development was achieved through close cooperation of a large number of scholars of educational administration and related disciplines from universities and other agencies across the country. Many other simulation materials have been synchronized with the Monroe City Model. Developers have created simulation materials for the outcomes they desired, using the Monroe City background materials as a basis.

A simulation developed by Bolton at the University of Washington is designed to increase skill in various phases of the teacher selection process. The materials available through UCEA are designed for use in courses and workshops
dealing with decision-making generally or with personnel selection more specifically. It includes a description of a hypothetical school situation (using slides, tape recordings, and a programmed text.), a set of fictitious applicants, and response devices that require decisions.

The Special Education Administration Task Simulation (SEATS) game, developed by Sage at Syracuse University, 1969, helps students increase their skill in dealing with typical problems confronting special education administrators.

The Shady Acres Elementary Principalship, developed by McIntyre at the University of Texas in 1967, consists of a single in-basket with a minimum of background information and requires only two hours to complete. Thus, it can be seen that simulations can range from the very simple to the quite complex.

Pioneering in the development of simulation for teacher education, Kersh (1963) at the Teaching Research Laboratory of the Oregon System of Higher Education developed a Classroom Simulator based on behavior-shaping principles. The participants assume the role as student teacher working with Mr. Land, the supervising teacher. Sixty problem sequences are exposed to the student teacher using film. For each problem sequence the student teacher is requested to respond. Each problem sequence has alternative feedback sequences designed to provide decision-making consequential feedback. 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. Although there were reported weaknesses with the classroom simulator and instructional package, this initial project was quite successful and served as a basis for other developmental efforts in the field.

Vleck conducted a study in which he utilized Kersh's Classroom Simulator to: 1) test the effectiveness of classroom simulation in providing student teachers with experience in identifying and responding to classroom problems prior to student teaching, 2) the transfer value of the simulation experience, 3) the ability of the classroom simulation experience to instill self-confidence in the teacher-trainees in their ability to teach; and the participants' attitudes toward the simulation experience. Vleck concluded that

1. Awareness of classroom problems is not developed through classroom simulator experience.

2. Effective responses to classroom problems can be developed through classroom simulator experience prior to the teacher-trainee's student teaching assignment.

3. Principles which can be used in solving classroom problems can be developed through classroom simulator experience prior to the teacher-trainee's student teaching assignment.

4. Experiences gained in responding to problems within the classroom simulator do not transfer to the teacher-trainee's student teaching experience.
5. Principles developed for application in solving classroom problems do transfer to the teacher-trainee's student teaching experience.

6. Teacher-trainee confidence in ability to teach is increased through classroom simulator experience. (Vleck, 1965: 133-34)

The Inner City Simulation Laboratory (Cruickshank, 1969) brings to life a sixth grade classroom in the inner-city. The participants assume the role of Pat Taylor, a new sixth grade teacher, and are confronted with 34 critical teaching incidents that occur in the classroom. Each problem is presented either on film, through role plays, as a playlet, a written incident or a combination thereof.

Teaching Problems Laboratory (Cruickshank, Broadbent, Bubb, 1967) introduces participants to teaching problems encountered in every classroom. Participants assume the role of Pat Taylor, a new fifth grade teacher in a Longacre classroom.

The developers sought to determine the effectiveness of simulation in teacher preparation programs. The following summarizes the results of the study:

In conclusion, it can be said that the simulation training when tested under the most stringent conditions was an unqualified success as a teaching device that motivates and involves students; and that, although simulation was only partially successful in changing the student teachers' behavior, it was at least as effective as an equal amount of student teaching. Changes in the materials, placement in the program and in the role of the instructor promise to increase the overall effectiveness of this set of simulation materials.
in future trials. (Cruickshank, Broadbent, Bubb, 1969: 54)

Bogniard (1968) conducted a study designed to determine the feasibility of using simulation techniques for introducing home economics education students to student teaching. Simulation experiences that embodied the use of video tape, role playing, case studies, and written episodes for portraying high school home economics class management and communication problems were created. Seven prospective student teachers participated in the two week simulated teaching experience for the study. Significant positive change in ability to enact the desired response to assess the problem were found (1968: 106). The growth in confidence in ability to teach also was significant. Correlations did not indicate a relationship between personality factors and change in performance in this study. (1968: 110)

Simulation has experienced considerable impetus in the area of vocational education. Sybouts at the University of Nebraska used the UCEA Madison materials as a basis for the development of a simulation for preparing school administrators in the administration of occupational preparation programs. The in-basket materials in this simulation were tested in a training program for administrators at the University of Nebraska (1967: 7). Findings showed both the traditional and simulation technique yielded significant growth in the cognitive domain. Changes in attitude patterns
occurred in the experimental group having the simulated materials. The experimental group receiving traditional instruction in vocational education and the control group showed no significant changes in attitude. (1967: 7-9)

A series of simulation packages has been developed at The Center for Vocational and Technical Education by staff members Rice and Meckley (1970), Meckley, Valentine, and McCoy (1970), and Ward, Koeninger, and Scott (1971). An evaluation study (1972) conducted for Ward, Koeninger, and Scott's simulation, "An Interaction Simulation: Coordinated Local-State Vocational Education Planning," generated the following conclusions:

1. The simulation package did provide a realistic learning environment.

2. The simulation activities generated and maintained participants' involvement and enthusiasm throughout the simulation experience.

3. That the simulation activities generally increased the participants' self-confidence in being able to complete certain tasks. (1972)

Koeninger (1972) developed and tested a simulation package designed for the preparation of vocational teacher-coordinators. Based on this experimental study the following recommendations were made:
1. This simulation package should be implemented into vocational teacher preparation programs.

2. This researcher strongly recommends that any individual planning to incorporate the simulation package into the vocational teacher preparation program should obtain training from a qualified user.

3. Follow-up critiques for each in-basket response be provided.

In-Basket Technique

The in-basket technique gets its name from the stimulus items which are its key element. The in-basket materials include such items as letters, memoranda, and other papers which an administrator could find in his incoming mail or in-basket. The technique is basically a decision-making exercise structured around a model of a particular system in which participants assume the role of a decision-maker and are asked to react to stimuli provided them. Anderson (1971: 65) states that "The most common use of the technique requires that decision-makers react individually to the stimulus item in writing and identify their reasons for taking such action. Feedback from the instructor and other participants then becomes a vital element in the instructional technique." He continues to say that "the in-basket technique is generally used to teach or demonstrate certain skills,
Weinberger (1965: 81-84) found that professors reporting from ninety institutions in his survey on simulation felt that the most effective parts of the simulation experiences were the in-basket items. Although the in-basket technique was most frequently used in regular classes, professors surveyed strongly favored the workshop setting.

The Whitman School Simulator was used in a study with 232 elementary school principals in which they assumed the role of Marion Smith, the principal of Whitman School (Frederiksen, 1962). Background materials included both printed and visual materials. The in-basket technique was used to present administrative problems. The following evaluation of the simulation experience was offered:

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 (Frederiksen, 1962; 134).

The more complex in-basket packages such as the Madison School were designed for use in workshop settings of one to three weeks. Many users feel this kind of concentrated time involvement is essential if students are to take advantage of the wealth of materials available. Others claim to have used these complex simulations effectively in regular class sections meeting from one to three times per week.
"It is much more difficult under the latter arrangement to keep students in the role," so states Anderson (1971: 72). He continues, "Use of the less complex, shorter form of in-basket is much more varied. It is possible, for example, to deal with single set of concepts using a single in-basket item in a regular class period." Another setting in which in-basket materials are frequently used is in the field, such as to bring groups of administrators from the same organizational system together and have them play different roles in the organization. This provides them with insight into the other roles of personnel in the organization. Anderson (1971: 73) states that there is some research to support the hypothesis that players take more liberal and sympathetic attitudes toward these roles after such experiences. Boocock (1968: 107-133) reports that, "such role playing provides persons with a better feeling of political efficacy, a sense of being able to understand and control their environment."

Anderson states (1971: 74-75),

In order to understand the growing use of the in-basket for instructional purposes, one must examine some of the more recent assumptions underlying graduate programs in educational administration. Included among these assumptions are the following: most significant learning takes place (a) when subject matter is perceived by the learner as having relevance for his own purposes, (b) when learning is acquired through doing, (c) when learning is facilitated by active and responsible student participation in the learning process, (d) when learning involves the whole person—feelings as well as intellect, and (e) when self-criticism and self-evaluation are built into the learning process. The in-basket technique provides a vehicle for capitalizing
on the strengths claimed by such learning.

Greenlaw, Herron, and Rawdon (1962: 46) relate the rapid growth of simulation to an increase in knowledge about the process of learning and give the following learning concepts as examples:

1. **Contiguity.** The learner gets feedback as a result of his performance and this feedback provides reinforcement.

2. **Effect.** There is an intense involvement of participants in these exercises.

3. **Intensity.** Simulation provides an illusion of reality which results in a full range of human perception being brought into play.

4. **Organization.** Since simulation replicates reality, the learning experience is very relevant for the participants.

5. **Exercise.** The participant has an opportunity to practice some of the skills and knowledge previously acquired; this reported occurrence is favorable to learning.

Although research has furnished only inconclusive evidence about the value of in-basket simulation, Cherryholmes, after examining six major research efforts designed to test the value of simulation concluded (1966: 4):

1. Students are more interested in simulation activities than in conventional classroom exercises.

2. Students did not learn significantly more facts and principles in educational simulation than they did in conventional classroom exercises.

3. Students did not retain more information learned in simulation than in conventional classroom exercises.
4. Students did not gain more critical thinking or problem-solving skills than in conventional classroom exercises.

The most important reason for interest in simulation is the overwhelming excitement and involvement it creates in participants. Rogers (1967: 49) describes what happens during the involvement process:

What are the types of learning that would follow upon this simulation? First, each student would turn to factual resources to develop his own stance on the issue or to justify his point of view. There would be a degree of self-discipline involved in searching for this factual material. The student would find it necessary to make a personal decision based on his informed stand. He would be involved in handling the interpersonal relationships with those who hold different points of view. He would find himself bearing the responsibility for the consequences of his decisions and actions. Throughout the experience, there would be a disciplined commitment to learning, decision, action.

Cruickshank and Broadbent (1969: 5) summarize the advantages of simulation:

1. Simulations are relevant since they are based on the reference system.
2. Simulations permit the trainee to be himself.
3. Simulations are safe.
4. Simulations permit control of what happens to the trainee.
5. Simulations permit the wedding of theory and practice.
6. Simulations are economical when compared with laboratory experience.
7. Simulations are engaging psychologically.
8. Simulations promote knowledge of and skill in group dynamics.

According to Cruickshank and Broadbent (1969: 6) the disadvantages of simulation are:

1. Simulations do not fit neatly into the preparation program.
2. Simulations often fail to provide empirically derived feedback.
3. Simulation directors may not be well prepared.
4. Simulations may not be well founded or valid.

Wynn (1964: 170-173) lists the following limitations of the in-basket technique:

1. The use of simulation depends heavily upon the competence of the instructor using it.
2. Simulated materials are expensive to produce and are subject to obsolescence.
3. Considerable uninterrupted time is needed for full comprehension of the background materials before the in-basket items can be undertaken.
4. There is also a serious question of transferability of learning from the simulated situation to others.

Anderson cites that an important consideration is that of time or opportunity invested in utilization of in-basket devices. In calculating costs related to student time; to disregard such "opportunity costs" would be a serious omission in considering this particular feature. If one wants to impart large quantities of rote knowledge in short periods of time, the in-basket simulation technique is certainly not suitable. Anderson (1971: 77) also brings out that another
of the technique's limitations is that it may simplify the universe or system by singling out a few variables and dealing only with these. The lack of content in the material demands even more skill on the part of the instructor than many other instructional techniques. In spite of frequent warnings, some users tend to view the materials as if they held all the content to be covered rather than as simply stimulus items which can illustrate some of the content or concepts to be learned. Another disadvantage is the fact that in-baskets are not readily available for all the kinds of problems facing administrators. Also the fact must be faced that in reality administrators very seldom make decisions without conferring with other people or at least collecting data from them. The fact that participants are forced to act as individuals and do not come into contact with other persons in the simulation makes for an unrealistic situation. In Anderson's opinion the most critical limitation to in-basket materials is the fact that feedback is not built into the items. "While users can and normally do allow for feedback in the instructional setting, the materials are not developed to a point that feedback is automatic."

**Approaches to Simulation**

Cunningham (1971: 11-15) describes the following approaches to simulation—saturation, micro, gaming and non-materials-based.
In the saturation approach, attempts are made to simulate a comprehensive environment based on data comprehensiveness and multiple-decision stimuli. He believes that, "there is great value in saturation when sustained and intensive simulation is intended." Culbertson (1960: 43) also supports this viewpoint in the following:

Comprehensive background information based upon careful study of real school situations is essential to the effective use of simulated materials. Thus, if a letter which a principal has received, is used as an in-basket item, the context from which the letter came is pertinent to its value and an item for instruction. The rich background of facts against which a problem is analyzed and weighed is necessary to develop the student's ability to see the interrelated elements of the total situation. Such comprehensiveness simulates more nearly the 'Gestalt' of administration and increases the student's feeling for the 'reality' of the situation.

The micro approach is more manageable in terms of the reality required as well as the range of problem stimuli to be incorporated. Microteaching simulation is an example. Cunningham (1971: 12) believes micro techniques also are applicable for administrative preparation (e.g., administrator trainees can be given data relevant to the solution of a single problem. Then their problem-solving behavior can be observed for research or evaluative purposes).

At the opposite pole from the "saturation" concept of simulation are those who believe in the non-materials based approach. They maintain that you need not have carefully structured background materials, in-basket items or mechanical
simulators. These "purists" believe that you only really simulate when you improvise at the moment. For example, a group could invent their simulated setting, then develop simulated problems from their own experiences. These simulations are more flexible than the highly structured. Cunningham (1971: 13) says, "My experiences with this technique have tended to modify many of my former views about the instructional use of simulation. My belief in the need for extensive, carefully prepared simulated materials for training to be effective was sharply attired as were my perspectives on the necessity of continuity of experience in one simulated setting."

Issues Relating to Simulation

Issues concerning the use of simulation arise as to the incorporation of simulation approaches into pre-service preparation programs and also to the impact of simulated experiences on the individual.

Considerable emphasis has been placed on the importance of establishing purposes in the use of simulation. Cunningham (1971: 21) states that,

If simulation is to be used in training, it behooves professors to begin to specify in some detail the particular behavioral changes they hope to achieve. Simulation has potential for strengthening cognitive skills; it likewise has possibilities for effective changes in trainees' attitude and value structures. Furthermore, simulation can be used as a vehicle for
practicing leadership skills such as diagnosing organizational problems, refining communication skills, and acquiring group-process capabilities. The point is simple and obvious; we must focus more directly on purposes and the shaping of simulations in keeping with such objectives.

The evaluation issue relating to simulations has been an increasing problem. Cunningham (1971: 22) states, "We must find ways of adding up the impact of these methods on those who are exposed to them." Fern (1961) examined changes in participants' problem perception and problem-solving adequacy, and noted little change over the period of a three-week workshop. He encountered difficulty in defining the variables to examine and in constructing instruments to measure changes in behavior. Anderson (1967) studied the effect of simulated experiences on leadership behavior of elementary school administrators attending workshops where UCEA Whitman School materials were used. He concluded that little change in behavior could be detailed, possibly due to the brevity of the experience. He urged more emphasis be given to materials development and evaluation.

Many other issues exist relative to simulation. Cunningham (1971: 55) states, "The issue is whether or not team training or the incorporation of several professional roles into a single simulation is too complex to deal with appropriately. In my judgment it is not, but widespread experimentation is again called for before we settle prematurely on an issue position."
Carter (1962: 107-113) believes the realism issue relates to the specific purposes to be achieved. If the emphasis is on general principles which are thought to apply to many situations, then a great degree of exactness is not required. If precision in behavior is expected, greater attention to realism is required. Bolton (1971: 259) states that, "If simulation used to give individuals initial experience fails to mirror reality, erroneous views of administration are likely to occur. This appears to be especially true when the simulation is accepted to be reality rather than a model of reality, a problem which may be serious when simulations are used repeatedly for instruction."

Cruickshank and Broadbent (1969: 5) summarize the issues related to simulation that still need to be resolved as:

1. Feedback: nature, extent, and reliability.
2. Realism: physical vs. psychological.
3. Process vs. content: Is the intention of the simulations to replicate an environment in which the participant practices something learned elsewhere or is the simulation a teaching device itself?
4. Placement of a simulation in the training system.
5. Participation: massed vs. spaced.
7. Length of simulation.
8. Role of simulation director.
9. Selection of participants.
10. Evaluation of participant behavior.
11. Transfer.

Design and Development of Simulations

Cruickshank and Broadbent (1969) suggest the steps in the design and development of simulations include:

1. Defining the instructional problem.
2. Specifying what is to be learned in behavioral terms.
3. Determining the appropriateness of simulation as the instructional technique.
4. Developing specifications for the simulation.
5. Developing and trying out the prototype.

Anderson (1971: 81-84) gives the steps involved in construction of in-basket materials as, first, the gathering of information and building the basic materials, then creating and designing the actual stimulus items. For example, in the Development of Criteria for Success in School Administration project, the researchers attempted to identify those variables which they felt would contribute to a successful administrator (Hemphill, Griffiths, and Fredericksen, 1962). An excellent source of both background information and in-basket items is a real organizational system. In the Madison simulation, the background materials were built around an actual school system and assistance was gained from the persons in the field in providing potential in-basket items.
Anderson (1971: 85) believes that "to have students write their own in-basket items after they have some experience with such materials also has great payoff." "Participants are given opportunity to project their own problems and let colleagues respond to them." He continues, "In-basket materials are the most commonly used of all simulation materials in educational administrator preparation programs. In spite of the fact that available in-basket materials are limited, their impact on administrator training has been substantial.

**Simulation Trends**

Farquhar and Martin (1967: 29) believe simulation approaches are changing.

They are focusing more on the processes of administration such as educational planning, and less on a single role such as elementary school principalship; they are designed to develop anticipatory and proactive leadership styles rather than reactive, responsive styles; they are beginning to emphasize the concept of an administrative team, rather than that of the unilateral decision maker; their traditional descriptive material is being supplemented with interpretive and conceptual content to provide depth and meaning to the problems simulated; they are attempting to provide participants with meaningful feedback about their decision processes.
Twelker (1972: 152) wrote,

The brightest side of simulation just might be its potential for changing, not the student, but the teacher. This writer has seen teachers, bored and boring, become challenged with the potential of simulation. Their attitudes toward students, toward school, and toward themselves change. Teachers "turned on" by simulation become instructional managers interested not only in imparting information, but with creating an instructional climate that challenges the students' will to learn. And this aspect in itself would be worth all our efforts.

Taylor and Walford state, (1972: 60)

A final word seems appropriate to emphasize further the need to see simulation as but one component in educational development...An unvaried diet of simulations is also likely to lead to steadily diminishing returns (just as a non-stop programme of educational films or slide-shows blunts its own virtues). As with any technique, care is needed; simulation may be used efficiently or inefficiently.
CHAPTER III

METHOD

Described in this chapter are the research design and sample population selected for the study, variates and variables involved, data collection and analysis process, and procedures followed to conduct the study.

The study was designed to explore the feasibility of using the interaction simulation technique as a means for the preparation of potential and novice home economics administrators.

Research Design

The pre-experimental design provides a structure for this exploratory study through which the research questions can be answered.

The design for the main portion of the study is classified as a One-Shot Case Study Design, and is based on Pre-Experimental Design One as defined by Campbell and Stanley (1972:6). The design is indicated as follows:

\[ X \rightarrow 0 \]

\( X \) represents the exposure of participants to the treatment, which in this study was the interaction simulation technique.
O refers to observation or measurement which in this study was the measurement of satisfaction, confidence, competence, and simulation contribution to knowledge and confidence.

The One-Group Pretest-Posttest Design, based on Pre-Experimental Design Two as defined by Campbell and Stanley (1972:7), was used in one portion of the study to test the hypothesis:

The participants will show a significant gain in mean score on confidence in performing leadership functions from the pretest to the posttest.

The design is indicated as follows:

\[
0_1 \quad X \quad 0_2
\]

0₁ refers to the pretest measurement, which in this study consisted of a 16-item instrument for rating confidence.

X represents the exposure of participants to the treatment, which in this study was the interaction simulation technique.

0₂ refers to the posttest measurement, which in this study consisted of the same 16-item instrument for rating confidence as the pretest, except the items were arranged in a different order.

Approximately one-half of the participants in the study were administered a pretest, so that the posttest confidence scores of the participants receiving the pretest could be compared with those not receiving the pretest to determine whether internal validity was affected by the administration of a pretest.
The manipulable variate investigated in the study was the interaction simulation technique.

The non-manipulable variates investigated in the study were:

1. level of education.
2. amount of administrative experience.
3. type of administrative preparation.

The criterion variables investigated in the study were:

1. leadership confidence.
2. perceived simulation contribution to leadership confidence.
3. perceived simulation contribution to leadership knowledge.
4. leadership competence.
5. simulation satisfaction.

**Population and Sample**

The target population in this study was potential and novice home economics administrators. The experimentally accessible population included 107 potential and novice home economics administrators participating in an Administrative Leadership Workshop sponsored by the Association of
Administrators of Home Economics. The workshop was conducted July 23 - 27, 1973, at Zion, Illinois, with the interaction simulation technique being utilized on July 25, during the afternoon session from 1:00 - 5:00 p.m. All workshop participants attending the July 25 afternoon session were involved in the simulation experience as a part of their conference administrative preparation.

A review of the background information collected from all participants revealed that the potential and novice home economists comprising the experimentally accessible population were from all sections of the United States and either employed or enrolled in differing sizes of home economics units in institutions of higher education, thus making the group representative of the target population in these respects. (Table 1)

**TABLE 1**

COMPARISON OF PARTICIPANTS BY SIZE OF INSTITUTIONAL UNIT (HOME ECONOMICS ENROLLMENT)

<table>
<thead>
<tr>
<th>Undergraduate</th>
<th>Graduate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Majors/Minors</td>
<td>Subjects</td>
</tr>
<tr>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>1 - 100</td>
<td>3</td>
</tr>
<tr>
<td>101 - 500</td>
<td>21</td>
</tr>
<tr>
<td>500 +</td>
<td>73</td>
</tr>
<tr>
<td>No Response</td>
<td>10</td>
</tr>
</tbody>
</table>
Although all except two of the 107 participants had obtained the Master's degree or above, almost half of the participants had no administrative experience. (Table 2) An equal number of the participants indicated receiving some administrative preparation through formal classes as through informal means such as self-instruction or workshops. The greatest number of participants having some administrative preparation indicated that they had obtained it through actual on-the-job experiences, either through administrative internships or in-service preparation as they functioned in an administrative position.

TABLE 2

COMPARISON OF PARTICIPANTS BY LEVEL OF EDUCATION, TYPE OF ADMINISTRATIVE PREPARATION, AND ADMINISTRATIVE EXPERIENCE

<table>
<thead>
<tr>
<th>Level of Education</th>
<th>Adm. Preparation</th>
<th>Adm. Experience</th>
</tr>
</thead>
<tbody>
<tr>
<td>Degree N</td>
<td>Type* N</td>
<td>Years N</td>
</tr>
<tr>
<td>BS 2</td>
<td>Formal 64</td>
<td>0 52</td>
</tr>
<tr>
<td>MS - EdS 52</td>
<td>On-Job 74</td>
<td>1 - 2 36</td>
</tr>
<tr>
<td>PhD 53</td>
<td>Informal 64</td>
<td>3 + 19</td>
</tr>
</tbody>
</table>

*Each participant could check more than one type.

Almost half of the participants indicated that their administrative preparation was obtained prior to administrative appointment. (Table 3) However, approximately
one-third had received their preparation after appointment to an administrative position, and some participants indicated that they had received administrative preparation both before and after administrative appointment.

A majority of the participants had been involved in simulation experiences previous to this particular experience either through formal classes, workshops or other situations.

**TABLE 3**

**COMPARISON OF PARTICIPANTS BY TIME OF ADMINISTRATIVE PREPARATION AND PREVIOUS SIMULATION EXPERIENCE**

<table>
<thead>
<tr>
<th>Administrative Preparation in relation to appointment</th>
<th>Situation for Previous Simulation Experience</th>
</tr>
</thead>
<tbody>
<tr>
<td>Time</td>
<td>N</td>
</tr>
<tr>
<td>------</td>
<td>---</td>
</tr>
<tr>
<td>Prior</td>
<td>49</td>
</tr>
<tr>
<td>After</td>
<td>29</td>
</tr>
<tr>
<td>None</td>
<td>8</td>
</tr>
<tr>
<td>Both before and after</td>
<td>19</td>
</tr>
<tr>
<td>No Response</td>
<td>2</td>
</tr>
</tbody>
</table>

**Procedure**

While enrolled in the course, Home Economics Administration, offered in the Home Economics Education Department
of The Ohio State University, the investigator became concerned and challenged by the lack of available opportunities for the home economist to apply administrative theory before actually being involved in the process as an administrator. Therefore, as an independent study in administration, the investigator explored the possibility of using the interaction simulation technique for partially meeting this need.

Development of Simulation Package

To determine the feasibility of using the simulation technique as a means for the preparation of potential and novice home economics administrators, simulation materials were required. Such materials were developed by the investigator and subjected to scrutiny by 164 potential, novice, and experienced home economics administrators - both in formal classes and conference workshops.

The first set of simulation materials developed involved the participants in decision-making and problem-solving situations relative to home economics wage-earning curriculum development. Through preliminary use of the materials with four graduate students (potential home economics administrators) enrolled in the course, Home Economics Administration offered in the Home Economics Education Department of The Ohio State University during Spring Quarter 1971, it was discovered that the problem
was not universal enough to be used with participants of varying backgrounds. Based on feedback from participants and after consultation with several leaders in the field of home economics, it was decided to change the problem to one concerning finances which seems to be a universal and continuing concern. Several of the original in-basket items were deleted at this time and ones relevant to the new problem incorporated into the package. The number of simulated administrative roles was increased from five to seven.

The refined simulation package was used again March, 1972, at the regional meeting of the Association of Administrators of Home Economics held in Kansas City, Missouri. Thirty-two experienced home economics administrators were involved in the use of the simulation package at the meeting. Feedback suggestions from these experienced administrators proved quite valuable in the further refinement of the simulation materials. Based on their suggestions and those offered by five graduate students (potential home economics administrators) after use of the package in the course, Home Economics Administration offered in the Home Economics Education Department of The Ohio State University during the Spring Quarter, 1972, the simulation package was further refined.

When the request came for use of the simulation package at the national meeting of The National Council of
Administrators of Home Economics, the simulation materials were adapted to meet the particular needs of the group. A second set of in-basket items was added, and the entire package was structured to be programmed in nature to facilitate participant use. The simulation package was used by 119 members (novice and experienced home economics administrators) of the National Council of Administrators of Home Economics in Chicago, Illinois, February, 1973. This group of home economics administrators provided data on the priority of in-basket items that were incorporated into the simulation package as evaluative feedback.

Another preliminary test was conducted Spring Quarter, 1973, through the use of the simulation package by four graduate students (potential home economics administrators) enrolled in Home Economics Administration offered in the Home Economics Education Department of The Ohio State University. The only change made in the simulation package for use by this group was the adjustment of the schedule to adapt to class time limitations. The simulation experience is designed to be flexible in relation to time needed for completion. It may be condensed to fit in a shorter time period by eliminating the second set of in-basket items, or it may be expanded by providing more time for in-depth consideration of the problem.
After the five preliminary tests of the simulation package with differing kinds of home economics administrators - potential, novice, and experienced - and with feedback suggestions (oral and written) from each group for development and refinement of the simulation materials, the simulation package (see Appendix) used in the current study included the following:

1. Leadership approaches and functions information
2. Simulation process information
3. Two sets of in-basket items
4. Guidelines for small group interaction session
5. Guidelines for synthesis session
6. Data Collection Instrument

The setting for the simulation experience is a home economics unit in an institution of higher education. The administrative staff of the unit includes a director, associate director, and five department chairmen. The participant assumes one of these leadership roles and functions in that capacity throughout the simulation experience. The participants are involved in both in-basket items and role-playing activities during the simulation experience. Each participant receives in-basket items to provide direction, information, or to stimulate a response. After
working individually with the in-basket items, all administrators in the home economics unit meet in a role-playing session to interact on the financial problem presented.

The simulation experience was designed to be flexible for use in a variety of situations (e.g., classroom or workshop, and to accommodate varying numbers of participants).

Development of Data Collection Instruments

As the materials for the simulation package were developed and refined over a period of time, the data collection instruments went through the same process. The first version of the instrument consisted of only the portion for rating satisfaction with the simulation experience. The background information section was added to the instrument prior to the use of the simulation package by members of the National Council of Home Economics Administrators, February, 1973, in order to obtain data from participants related to possible background experiences that may have influenced administrative concepts and confidences. Other portions of the data collection instrument were developed and added prior to the last preliminary testing of the simulation package by the graduate students enrolled in the course, Home Economics Administration, Spring Quarter, 1973.
The final data collection instrument developed and refined for the collection of data in this study consisted of the following sections:

1. Background information
2. Simulation evaluations
3. Leadership confidence scale

The background information section of the data collection instrument was designed to secure needed information about the participants. The remainder of the instrument was designed to obtain data for testing the hypotheses in the study. The simulation assessments included the ratings of satisfaction with the simulation technique, contribution of the simulation experience to confidence, contribution of the simulation experience to knowledge of leadership functions, and competence in performing leadership functions.

The simulation satisfaction rating provided the participants an opportunity to express their feelings (either positive or negative) concerning involvement in the simulation experience. The participants used any of the 14 descriptive words (seven positive, seven negative) listed (or added others) to describe feelings toward the six major activities included in the simulation experience. Space was provided for write-in comments relative to each activity and for general comments (strengths, weaknesses, and suggestions for improvement) about the simulation experience.
The contribution of simulation to confidence and the contribution of simulation to knowledge of leadership functions provided the participants an opportunity to express their perception of their involvement in the simulation experience toward their confidence in performing leadership functions and their knowledge of leadership functions.

The leadership competence rating provided each participant the opportunity to rate each member of his simulation experience group on the degree of leadership competence exhibited, and also to do a self-rating. Thus, each participant was rated on competence by seven persons (six others and himself).

The leadership confidence scale consisted of 16 items based on the functions of leadership (Logan, 1966). On part A, the participant rated his confidence in performing each of the leadership functions, then in part B rated his perception of whether involvement in the simulation experience contributed to his confidence.

The pretest administered to approximately one-half of the participants in the study consisted of the same 16 items as the leadership confidence section of the final data collection instrument (posttest), except the items were listed in a different order.
Data Collection

The data collection procedure included the administration of a pretest to approximately one-half of the participants, and the administration of the treatment (interaction simulation technique) and a posttest to all participants.

All participants in the Administrative Leadership Workshop had received identical leadership instruction, a major purpose of the meeting, for two and one-half days prior to the administration of the simulation technique.

The experimental treatment and the data collection procedures can be summarized as follows:

Prior to the first session of the simulation experience, a pretest was administered to approximately one-half of the participants and for the other half a "placebo" questionnaire was administered.

First Session

First, in an introduction, approaches to and functions of leadership were clarified.

Second, participants were oriented to the simulation technique and procedures for the simulation experience.

A short planning session was included during which the participants established a frame of reference by which to function during the remainder of the simulation experience.
Third, an individual work session was conducted during which each participant responded individually to the in-basket items included in the simulation package, using a worksheet to establish priorities.

Fourth, a short synthesis session was conducted. Information was provided relative to how a group of experienced home economics administrators responded to the in-basket items.

Fifth, participants compared their decisions with those of experienced administrators in setting priorities for the in-basket items.

Second Session

Sixth, after a short break further orientation was provided for the second session of the simulation experience.

Seventh, a small group interaction session was conducted involving the participants in decision making concerning a problem related to finances.

Eighth, a synthesis session involved a regrouping according to the role played during the simulation experience (e.g., Dean, Associate Dean, etc.). Within the new groups feelings and comments were shared relative to the simulation experience. A short report was prepared and presented to the entire group of participants.

Ninth, a final evaluation of the simulation experience consisted of administering the posttest to obtain
vital background information about each participant and to obtain data to test the hypotheses in the study.

**Data Analysis**

All data collected for this study were analyzed through the services of The Ohio State University Computer Center. The investigator coded the data from the data collection instruments on optical scanning sheets. These numerical codes were transferred to computer cards for later analysis.

A one-way analysis of variance was applied to determine if relationships existed at a significant level between the participants' 1) level of education, 2) administrative experience, and 3) type of administrative preparation and their a) leadership confidence, b) perceived contribution of simulation to leadership confidence, c) perceived contribution of simulation to leadership knowledge, d) leadership competence, and e) satisfaction with the simulation technique. The P-STAT Manova Computer Program was used for this analysis. The program provided the means, standard deviations, degrees of freedom, sums of squares, and means squares from which F values were determined.

To determine if relationships existed at a significant level between and/or among the factors of participants' 1) leadership confidence, 2) perceived contribution of simulation to leadership confidence, 3) perceived contribution
of simulation to leadership knowledge, 4) leadership competence, and 5) satisfaction with the simulation technique. Pearson product-moment correlations were computed. The P-STAT Computer Program was used for this analysis.

The Fortran IV Computer Program was selected to compute t-statistics on pretest posttest scores to determine if there was significant gain in leadership confidence by participants as a result of being involved in the simulation experience. The program provided means, standard deviations, degrees of freedom and t-values.

The P-STAT Computer Program was selected to determine differences in posttest scores of the participants taking the pretest and those not taking the pretest. The program provided means, standard deviations, sum squares, degrees of freedom and mean squares from which F values were determined.

The comments of the participants involved in the simulation experience relative to the feasibility of using the technique for the preparation of home economics administrators did not require statistical analyses for interpretation, so are reported descriptively.
CHAPTER IV

FINDINGS AND DISCUSSION

The major purpose in this study was to examine the feasibility of using the interaction simulation technique as a means for the preparation of potential and novice home economics administrators.

To explore the feasibility of the simulation technique five research questions were developed from which research hypotheses were identified. The findings of the study are presented in four sections. The emphasis in section one is on the relationship of the simulation participants' level of education, amount of administrative experience, and type of administrative preparation to the simulation outcomes. The second section includes the findings concerning the relationship of the simulation outcomes to each other. Section three reveals the relationship between the participants' leadership competence and their simulation roles. Section four is focused on participants' gain in confidence as a result of their simulation experience.

The hypotheses identified in this study were tested at the .05 level of significance.
The participants' background factors of a) level of education, b) amount of administrative experience, and c) type of administrative preparation were isolated as non-manipulable variates having potential relationship to the simulation outcomes.

A series of analysis of variance tests was completed using each of the background factors as a variate to determine its relationship to the simulation outcomes (criterion variates).

Is there a relationship between the participants' a) level of education, b) amount of administrative experience, and c) type of administrative preparation and their leadership

1) confidence?
2) simulation contribution to confidence?
3) simulation contribution to knowledge?
4) competence?
5) simulation satisfaction?

The results of the analysis of data revealed that differences did exist at a significant level in the relationships between each of the three background factors and the simulation outcomes.
The level of education for the participants ranged from the bachelor's to the doctoral degree. However, since they were preparing for administration, there were only two with less than the master's degree.

The amount of administrative experience ranged from none to three years or more. However, the majority of the participants had two years or less of experience.

The types of administrative preparation included formal classes; a program major, or a minor in administration; hands-on internship or an actual administrative position; and informal self-instruction, workshops, or other means. Many participants had combinations of these types of preparation; therefore, analysis of variance tests were completed for the combination of types as well as the single types of preparation.

Level of Education

Five hypotheses were tested to determine the answer to the research question related to level of education.

The participants' level of education is related to their leadership

1) confidence score.
2) simulation contribution to confidence score.
3) simulation contribution to knowledge score.
4) competence.
5) simulation satisfaction.
Perceived leadership confidence was rated on a scale from one to four (1 = much, 2 = some, 3 = little, 4 = none) with the lowest score indicating much confidence and the highest indicating none. Therefore, when examining scores, the lower the mean the more confidence indicated by the participants. Those at the bachelor's level expressed the greatest confidence in performing leadership functions and those at the master's level least. (Table 4) The relationship between the level of education and leadership confidence approached but did not reach a significant level.

**TABLE 4**

ANALYSIS OF VARIANCE OF CONFIDENCE BY LEVEL OF EDUCATION

<table>
<thead>
<tr>
<th>Degree</th>
<th>N</th>
<th>M*</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>BS</td>
<td>2</td>
<td>1.625</td>
<td>0.088</td>
</tr>
<tr>
<td>MS - EdS</td>
<td>45</td>
<td>1.879</td>
<td>0.409</td>
</tr>
<tr>
<td>PhD</td>
<td>51</td>
<td>1.705</td>
<td>0.372</td>
</tr>
</tbody>
</table>

**Univariate F Test**

<table>
<thead>
<tr>
<th>F(2,95 df)</th>
<th>MS</th>
<th>P less than</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.579</td>
<td>0.388</td>
<td>0.081</td>
</tr>
</tbody>
</table>

*The lower the mean score, the greater the confidence.*
Perception of the simulation contribution to confidence was rated on a scale from one to four (1 = much, 2 = some, 3 = little, 4 = none) with the lowest score indicating the simulation experience contributed much to leadership confidence and the highest score indicating that the simulation experience made no contribution to leadership confidence. Therefore, the lower the mean score, the greater the participants' perception of the contribution of the simulation experience to their confidence in performing leadership functions. Their perception of the contribution of the simulation experience to leadership confidence was greatest for those at the doctoral level, and least for the master's level. (Table 5) The relationship between their level of education and simulation contribution to confidence existed at a significant level. Apparently participants at the three levels of education did have differing perceptions of how involvement in the simulation experience contributed to their leadership confidence.

Perception of the contribution of the simulation experience to leadership knowledge was rated on a range from one to four (1 = much, 2 = some, 3 = little, 4 = none) with the lowest score indicating they perceived that the simulation experience contributed much to their leadership knowledge and the highest score indicating the simulation experience made no contribution to their leadership knowledge. (Table 6) Therefore, the lower the mean score, the greater
the participants' perception of the contribution of the simulation experience to their knowledge of leadership functions. Their perception of the contribution of the simulation experience to leadership knowledge was greatest for those at the doctoral level and least for the master's level. However, the relationship between their level of education and simulation contribution to knowledge did not exist at a significant level.

**TABLE 5**

ANALYSIS OF VARIANCE OF SIMULATION CONTRIBUTION TO CONFIDENCE BY LEVEL OF EDUCATION

<table>
<thead>
<tr>
<th>Degree</th>
<th>N</th>
<th>M*</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>BS</td>
<td>2</td>
<td>2.625</td>
<td>0.530</td>
</tr>
<tr>
<td>MS - EdS</td>
<td>45</td>
<td>2.721</td>
<td>0.702</td>
</tr>
<tr>
<td>PhD</td>
<td>51</td>
<td>2.363</td>
<td>0.654</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>F(2,95 df)</th>
<th>MS</th>
<th>P less than</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.377</td>
<td>1.540</td>
<td>0.038</td>
</tr>
</tbody>
</table>

*The lower the mean score, the greater the simulation contribution to confidence.
TABLE 6

ANALYSIS OF VARIANCE OF SIMULATION CONTRIBUTION TO KNOWLEDGE BY LEVEL OF EDUCATION

<table>
<thead>
<tr>
<th>Degree</th>
<th>N</th>
<th>M*</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>BS</td>
<td>2</td>
<td>2.000</td>
<td>0.0</td>
</tr>
<tr>
<td>MS - EdS</td>
<td>41</td>
<td>2.073</td>
<td>0.848</td>
</tr>
<tr>
<td>PhD</td>
<td>40</td>
<td>1.800</td>
<td>0.608</td>
</tr>
</tbody>
</table>

Univariate F Test

<table>
<thead>
<tr>
<th>F(2,80 df)</th>
<th>MS</th>
<th>P less than</th>
</tr>
</thead>
<tbody>
<tr>
<td>1,406</td>
<td>0.759</td>
<td>0.251</td>
</tr>
</tbody>
</table>

*The lower the mean score, the greater the simulation contribution to knowledge.

Leadership competence exhibited by members of their simulation group was rated on a scale from one to four (1 = outstanding, 2 = superior, 3 = good, 4 = acceptable) with the lowest score indicating "outstanding" competence exhibited and the highest score indicating only "acceptable" competence displayed. Therefore, the lower the mean score, the more competence demonstrated. The mean scores for leadership competence were similar for the participants at the three levels of education (Table 7) However, the relationship between participants' level of education and leadership
competence did not exist at a significant level.

TABLE 7
ANALYSIS OF VARIANCE OF COMPETENCE BY LEVEL OF EDUCATION

<table>
<thead>
<tr>
<th>Degree</th>
<th>N</th>
<th>M*</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>BS</td>
<td>2</td>
<td>2.929</td>
<td>0.505</td>
</tr>
<tr>
<td>MS - EdS</td>
<td>45</td>
<td>2.821</td>
<td>0.551</td>
</tr>
<tr>
<td>PhD</td>
<td>51</td>
<td>2.948</td>
<td>0.985</td>
</tr>
</tbody>
</table>

Analysis of Variance

<table>
<thead>
<tr>
<th></th>
<th>SS</th>
<th>DF</th>
<th>MS</th>
<th>F</th>
<th>P less than</th>
</tr>
</thead>
<tbody>
<tr>
<td>Within</td>
<td>66.183</td>
<td>104</td>
<td>0.636</td>
<td>0.335</td>
<td>0.716</td>
</tr>
<tr>
<td>Between</td>
<td>0.426</td>
<td>2</td>
<td>0.213</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* The lower the mean score, the greater the leadership competence.

Satisfaction with the simulation technique was rated using 14 descriptive words (seven positive, seven negative) provided on the data collection instrument. Negative scores were subtracted from positive scores to obtain a satisfaction score for each person. In this instance, the higher the mean score the greater the satisfaction with the simulation technique expressed by the participants. The greatest satisfaction was expressed by those at the bachelor's level.
and lowest for the master's degree participants. (Table 8) However, the relationship between their level of education and their satisfaction with the simulation technique did not exist at a significant level.

**TABLE 8**

ANALYSIS OF VARIANCE OF SATISFACTION BY LEVEL OF EDUCATION

<table>
<thead>
<tr>
<th>Degree</th>
<th>N</th>
<th>M*</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>BS</td>
<td>2</td>
<td>1.417</td>
<td>1.296</td>
</tr>
<tr>
<td>MS - EdS</td>
<td>45</td>
<td>0.810</td>
<td>0.738</td>
</tr>
<tr>
<td>PhD</td>
<td>51</td>
<td>1.023</td>
<td>0.849</td>
</tr>
</tbody>
</table>

Univariate F Test

<table>
<thead>
<tr>
<th>F(2,95 df)</th>
<th>MS</th>
<th>P less than</th>
</tr>
</thead>
<tbody>
<tr>
<td>1,206</td>
<td>0.782</td>
<td>0.304</td>
</tr>
</tbody>
</table>

*The higher the mean score, the greater the satisfaction.

In summary, the relationship between the simulation participants' level of education and the outcomes of the experience existed at a significant level only in terms of simulation contribution to confidence and approached a significant level for actual leadership confidence. Apparently participants at the three levels of education did
have differing perceptions of how involvement in the simulation experience contributed to their leadership confidence. The relationship between their level of education and three factors—contribution to knowledge, leadership confidence, satisfaction—did not exist at a significant level.

'Amount of Administrative Experience

Five hypotheses were tested regarding administrative experience. The simulation participants' amount of administrative experience is related to their leadership

1) confidence score.
2) simulation contribution to confidence score.
3) simulation contribution to knowledge score.
4) competence score.
5) simulation satisfaction score.

These five hypotheses were tested to answer the research question related to administrative experience.

The greatest leadership confidence was expressed by those with three or more years of administrative experience and decreased as the years of experience decreased. (Table 9) The relationship of amount of administrative experience and leadership confidence did not exist at a significant level, but it did approach that level.
TABLE 9
ANALYSIS OF VARIANCE OF CONFIDENCE BY ADMINISTRATIVE EXPERIENCE

Means and Standard Deviations

<table>
<thead>
<tr>
<th>Years</th>
<th>N</th>
<th>M*</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>49</td>
<td>1.850</td>
<td>0.389</td>
</tr>
<tr>
<td>1 - 2</td>
<td>32</td>
<td>1.779</td>
<td>0.397</td>
</tr>
<tr>
<td>3 +</td>
<td>17</td>
<td>1.599</td>
<td>0.366</td>
</tr>
</tbody>
</table>

Univariate F Test

<table>
<thead>
<tr>
<th>F(2,95 df)</th>
<th>MS</th>
<th>P less than</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.643</td>
<td>0.397</td>
<td>0.076*</td>
</tr>
</tbody>
</table>

*The lower the mean score, the greater the confidence.

Those with three or more years of administrative experience perceived that the simulation experience made the greatest contribution to their confidence and those with one to two years of experience the least. (Table 10) The relationship between amount of administrative experience and simulation contribution to confidence did not exist at a significant level.
TABLE 10
ANALYSIS OF VARIANCE OF SIMULATION CONTRIBUTION TO CONFIDENCE BY ADMINISTRATIVE EXPERIENCE

<table>
<thead>
<tr>
<th>Years</th>
<th>N</th>
<th>M*</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>49</td>
<td>2.581</td>
<td>0.692</td>
</tr>
<tr>
<td>1 - 2</td>
<td>32</td>
<td>2.593</td>
<td>0.646</td>
</tr>
<tr>
<td>3 +</td>
<td>17</td>
<td>2.279</td>
<td>0.757</td>
</tr>
</tbody>
</table>

Univariate F Test

<table>
<thead>
<tr>
<th>F(2,95 df)</th>
<th>MS</th>
<th>P less than</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.391</td>
<td>0.660</td>
<td>0.254</td>
</tr>
</tbody>
</table>

*The lower the mean score, the greater the simulation contribution to confidence.

Individuals with three or more years of administrative experience perceived that the simulation made the greatest contribution to their leadership knowledge, and those with no experience least. (Table 11) The relationship between amount of administrative experience and simulation contribution to knowledge did not exist at a significant level, however, persons with three or more years administrative experience displayed the greatest leadership competence and those with no experience least. (Table 12) The
relationship between amount of administrative experience and competence score did not exist at a significant level.

Participants in this group with maximum years experience expressed the greatest satisfaction with the simulation technique, and those with no experience expressed the least satisfaction. (Table 13) However, the relationship between their amount of administrative experience and their satisfaction with the simulation technique did not exist at a significant level.

**TABLE 11**

**ANALYSIS OF VARIANCE OF SIMULATION CONTRIBUTION TO KNOWLEDGE BY ADMINISTRATIVE EXPERIENCE**

<table>
<thead>
<tr>
<th>Means and Standard Deviations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Years</td>
</tr>
<tr>
<td>-------</td>
</tr>
<tr>
<td>0</td>
</tr>
<tr>
<td>1 - 2</td>
</tr>
<tr>
<td>3 +</td>
</tr>
</tbody>
</table>

**Univariate F Test**

<table>
<thead>
<tr>
<th>F(2,80 df)</th>
<th>MS</th>
<th>P less than</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.160</td>
<td>0.089</td>
<td>0.853</td>
</tr>
</tbody>
</table>

*The lower the mean score the greater the simulation contribution to knowledge.*
### TABLE 12
ANALYSIS OF VARIANCE OF COMPETENCE BY ADMINISTRATIVE EXPERIENCE

<table>
<thead>
<tr>
<th>Years</th>
<th>N</th>
<th>M*</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>52</td>
<td>2.915</td>
<td>1.017</td>
</tr>
<tr>
<td>1 - 2</td>
<td>36</td>
<td>2.896</td>
<td>0.487</td>
</tr>
<tr>
<td>3 +</td>
<td>19</td>
<td>2.789</td>
<td>0.546</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>SS</th>
<th>DF</th>
<th>MS</th>
<th>F</th>
<th>p less than</th>
</tr>
</thead>
<tbody>
<tr>
<td>Within</td>
<td>66.384</td>
<td>104</td>
<td>0.638</td>
<td></td>
</tr>
<tr>
<td>Between</td>
<td>0.225</td>
<td>2</td>
<td>0.112</td>
<td>0.176</td>
</tr>
</tbody>
</table>

*The lower the mean score, the greater the competence.*

### TABLE 13
ANALYSIS OF VARIANCE OF SATISFACTION BY ADMINISTRATIVE EXPERIENCE

<table>
<thead>
<tr>
<th>Years</th>
<th>N</th>
<th>M*</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>49</td>
<td>0.816</td>
<td>0.741</td>
</tr>
<tr>
<td>1 - 2</td>
<td>32</td>
<td>0.988</td>
<td>0.707</td>
</tr>
<tr>
<td>3 +</td>
<td>17</td>
<td>1.167</td>
<td>1.109</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Univariate F Test</th>
</tr>
</thead>
<tbody>
<tr>
<td>F(2,95 df)</td>
</tr>
<tr>
<td>1.306</td>
</tr>
</tbody>
</table>

*The higher the mean score, the greater the satisfaction.*
In summary, a relationship did not exist at a significant level between participants' amount of administrative experience and their leadership confidence, simulation contribution to confidence, simulation contribution to knowledge, leadership competence, nor simulation satisfaction. However, the relationship between amount of administrative experience and confidence did approach a significant level.

**Type of Administrative Preparation**

The simulation participants' type of administrative preparation is related to their leadership

1) confidence score.

2) simulation contribution to confidence score.

3) simulation contribution to knowledge score.

4) competence score.

5) simulation satisfaction score.

These five hypotheses were tested to answer the research question related to type of previous administrative preparation.

When only one of three types of preparation was indicated by respondents, leadership confidence was greatest for those who had obtained administrative preparation through formal means such as classes and/or a program major or minor, next for those with hands-on preparation such as
internship or an actual administrative position, and least for those with informal preparation such as self-instruction and workshops. (Table 14) However, for the combinations of types of administrative preparation, participants' confidence was greatest for those with hands-on and informal preparation, next for those with formal and hands-on preparation, next for those with a combination of all three - formal, hands-on, and informal - and least for those with some of both formal and informal preparation. A relationship between type of administrative preparation and leadership confidence existed at a significant level only for the hands-on type of preparation. Apparently participants with the hands-on type of administrative preparation perceived their leadership confidence differently after involvement in the simulation experience than those with other types of preparation.

Contribution of the simulation experience to leadership confidence was perceived as greatest when preparation had been obtained through formal means and least with hands-on preparation. (Table 15) For the combinations of types of administrative preparation, those with formal and hands-on preparation felt the simulation experience contributed to their confidence the most with formal and informal the least. A relationship between participants' type of administrative preparation and their simulation contribution to leadership confidence existed at a significant level for
the combination of formal and informal preparation. Apparently participants with both formal and informal preparation perceived the simulation contribution to leadership confidence differently than those with other types of preparation.

TABLE 14

ANALYSIS OF VARIANCE OF CONFIDENCE BY TYPE OF ADMINISTRATIVE PREPARATION

<table>
<thead>
<tr>
<th>Type</th>
<th>N</th>
<th>M*</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>E</td>
<td>12</td>
<td>1.828</td>
<td>0.364</td>
</tr>
<tr>
<td>F</td>
<td>9</td>
<td>1.956</td>
<td>0.523</td>
</tr>
<tr>
<td>G</td>
<td>4</td>
<td>2.031</td>
<td>0.036</td>
</tr>
<tr>
<td>EF</td>
<td>11</td>
<td>1.722</td>
<td>0.394</td>
</tr>
<tr>
<td>EG</td>
<td>7</td>
<td>1.938</td>
<td>0.656</td>
</tr>
<tr>
<td>FG</td>
<td>18</td>
<td>1.576</td>
<td>0.359</td>
</tr>
<tr>
<td>EFG</td>
<td>27</td>
<td>1.725</td>
<td>0.304</td>
</tr>
<tr>
<td>None</td>
<td>4</td>
<td>1.875</td>
<td>0.255</td>
</tr>
</tbody>
</table>

Univariate F Test

<table>
<thead>
<tr>
<th></th>
<th>F(1,84 df)</th>
<th>MS</th>
<th>P less than</th>
</tr>
</thead>
<tbody>
<tr>
<td>E</td>
<td>0.021</td>
<td>0.003</td>
<td>0.884</td>
</tr>
<tr>
<td>F</td>
<td>4.026</td>
<td>0.603</td>
<td>0.048</td>
</tr>
<tr>
<td>G</td>
<td>0.620</td>
<td>0.093</td>
<td>0.433</td>
</tr>
<tr>
<td>EF</td>
<td>0.387</td>
<td>0.058</td>
<td>0.535</td>
</tr>
<tr>
<td>EG</td>
<td>2.671</td>
<td>0.400</td>
<td>0.106</td>
</tr>
<tr>
<td>FG</td>
<td>1.876</td>
<td>0.281</td>
<td>0.174</td>
</tr>
<tr>
<td>EFG</td>
<td>1.211</td>
<td>0.181</td>
<td>0.274</td>
</tr>
</tbody>
</table>

*The lower the mean score, the greater the confidence.

Code: E formal preparation (classes and/or major minor)
      F "Hands-on" preparation (internship or actual job)
      G informal preparation (self-instruction, workshops, other)
### TABLE 15

**ANALYSIS OF VARIANCE OF CONTRIBUTION OF SIMULATION TO CONFIDENCE BY TYPE OF ADMINISTRATIVE PREPARATION**

<table>
<thead>
<tr>
<th>Type</th>
<th>N</th>
<th>M*</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>E</td>
<td>12</td>
<td>2.279</td>
<td>0.548</td>
</tr>
<tr>
<td>F</td>
<td>9</td>
<td>3.164</td>
<td>0.605</td>
</tr>
<tr>
<td>G</td>
<td>4</td>
<td>2.574</td>
<td>0.232</td>
</tr>
<tr>
<td>EF</td>
<td>11</td>
<td>2.364</td>
<td>0.661</td>
</tr>
<tr>
<td>EG</td>
<td>7</td>
<td>2.554</td>
<td>0.772</td>
</tr>
<tr>
<td>FG</td>
<td>18</td>
<td>2.399</td>
<td>0.713</td>
</tr>
<tr>
<td>EFG</td>
<td>27</td>
<td>2.497</td>
<td>0.657</td>
</tr>
<tr>
<td>None</td>
<td>4</td>
<td>2.656</td>
<td>0.472</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>F (1, 84 df)</th>
<th>MS</th>
<th>P less than</th>
</tr>
</thead>
<tbody>
<tr>
<td>E</td>
<td>2.370</td>
<td>0.127</td>
</tr>
<tr>
<td>F</td>
<td>0.196</td>
<td>0.659</td>
</tr>
<tr>
<td>G</td>
<td>0.720</td>
<td>0.398</td>
</tr>
<tr>
<td>EF</td>
<td>0.037</td>
<td>0.848</td>
</tr>
<tr>
<td>EG</td>
<td>7.072</td>
<td>0.009</td>
</tr>
<tr>
<td>FG</td>
<td>1.128</td>
<td>0.291</td>
</tr>
<tr>
<td>EFG</td>
<td>0.692</td>
<td>0.408</td>
</tr>
</tbody>
</table>

*The lower the mean score, the greater the contribution of simulation to confidence.

**Code:**
- **E** formal preparation (classes and/or major or minor)
- **F** hands-on preparation (internship or actual job)
- **G** informal preparation (self-instruction, workshops, other)
Perception of the contribution of the simulation experience to leadership knowledge for this group was greatest for those with informal preparation and least for those with hands-on preparation. (Table 16) For participants with combinations of types of administrative preparation, those with the combination of all three types - formal, hands-on, informal - perceived that the simulation experience made the greatest contribution to their leadership knowledge while those with formal and informal combination least. A relationship between type of administrative preparation and their simulation contribution to leadership knowledge existed at a significant level only for those participants having a combination of all three types of preparation. Apparently participants with a combination of all three types of administrative preparation perceived the simulation contribution to their leadership knowledge differently than those with other types of preparation.

Leadership competence was greatest for those who had obtained administrative preparation through hands-on preparation and least for those with informal preparation. (Table 17) For the combinations of types of administrative preparation, those with administrative preparation through a combination of hands-on and informal preparation was greatest and least for those with a combination of the three types - formal, hands-on, informal. The relationship between type of administrative preparation and leadership
competence existed at a significant level for those with a combination of the three types and for those with both formal and hands-on preparation. Apparently those with a combination of the three types and those with both formal and hands-on preparation were perceived to display different competence than those with other types of preparation.

**TABLE 16**

**ANALYSIS OF VARIANCE OF SIMULATION CONTRIBUTION TO KNOWLEDGE BY TYPE OF ADMINISTRATIVE PREPARATION**

<table>
<thead>
<tr>
<th>Type</th>
<th>N</th>
<th>M*</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>E</td>
<td>10</td>
<td>1.600</td>
<td>0.516</td>
</tr>
<tr>
<td>F</td>
<td>6</td>
<td>2.000</td>
<td>0.632</td>
</tr>
<tr>
<td>G</td>
<td>4</td>
<td>1.500</td>
<td>0.577</td>
</tr>
<tr>
<td>EF</td>
<td>8</td>
<td>2.125</td>
<td>0.354</td>
</tr>
<tr>
<td>EG</td>
<td>6</td>
<td>2.167</td>
<td>0.753</td>
</tr>
<tr>
<td>FG</td>
<td>15</td>
<td>1.933</td>
<td>0.884</td>
</tr>
<tr>
<td>EFG</td>
<td>25</td>
<td>1.880</td>
<td>0.726</td>
</tr>
<tr>
<td>None</td>
<td>5</td>
<td>2.200</td>
<td>0.837</td>
</tr>
</tbody>
</table>

**Univariate F Test**

<table>
<thead>
<tr>
<th>Type</th>
<th>F(1.71 df)</th>
<th>MS</th>
<th>P less than</th>
</tr>
</thead>
<tbody>
<tr>
<td>E</td>
<td>0.047</td>
<td>0.023</td>
<td>0.830</td>
</tr>
<tr>
<td>F</td>
<td>0.366</td>
<td>0.183</td>
<td>0.547</td>
</tr>
<tr>
<td>G</td>
<td>0.168</td>
<td>0.084</td>
<td>0.683</td>
</tr>
<tr>
<td>EF</td>
<td>0.041</td>
<td>0.020</td>
<td>0.841</td>
</tr>
<tr>
<td>EG</td>
<td>0.949</td>
<td>0.474</td>
<td>0.333</td>
</tr>
<tr>
<td>FG</td>
<td>0.481</td>
<td>0.241</td>
<td>0.490</td>
</tr>
<tr>
<td>EFG</td>
<td>3.747</td>
<td>1.873</td>
<td>0.057</td>
</tr>
</tbody>
</table>

*The lower the mean score, the higher the contribution to knowledge.

Code: E formal preparation (classes and/or major or minor)
F hands-on preparation (internship or actual job)
G informal preparation (self-instruction, workshops)
# TABLE 17

**ANALYSIS OF VARIANCE OF COMPETENCE BY TYPE OF ADMINISTRATIVE PREPARATION**

## Means and Standard Deviations

<table>
<thead>
<tr>
<th>Type</th>
<th>N</th>
<th>M*</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>E</td>
<td>12</td>
<td>2.861</td>
<td>0.409</td>
</tr>
<tr>
<td>F</td>
<td>10</td>
<td>2.752</td>
<td>0.622</td>
</tr>
<tr>
<td>G</td>
<td>4</td>
<td>4.214</td>
<td>3.244</td>
</tr>
<tr>
<td>EF</td>
<td>11</td>
<td>2.760</td>
<td>0.345</td>
</tr>
<tr>
<td>EG</td>
<td>7</td>
<td>2.718</td>
<td>0.678</td>
</tr>
<tr>
<td>FG</td>
<td>20</td>
<td>2.665</td>
<td>0.517</td>
</tr>
<tr>
<td>EFG</td>
<td>30</td>
<td>3.009</td>
<td>0.475</td>
</tr>
<tr>
<td>None</td>
<td>7</td>
<td>2.731</td>
<td>0.742</td>
</tr>
</tbody>
</table>

## Analysis of Variance

<table>
<thead>
<tr>
<th>Type</th>
<th>SS</th>
<th>DF</th>
<th>MS</th>
<th>F</th>
<th>P less than</th>
</tr>
</thead>
<tbody>
<tr>
<td>E</td>
<td>0.062</td>
<td>1</td>
<td>0.062</td>
<td>0.104</td>
<td>0.748</td>
</tr>
<tr>
<td>F</td>
<td>0.400</td>
<td>1</td>
<td>0.400</td>
<td>0.668</td>
<td>0.416</td>
</tr>
<tr>
<td>G</td>
<td>1.052</td>
<td>1</td>
<td>1.052</td>
<td>1.754</td>
<td>0.189</td>
</tr>
<tr>
<td>EF</td>
<td>2.412</td>
<td>1</td>
<td>2.412</td>
<td>4.023</td>
<td>0.048</td>
</tr>
<tr>
<td>EG</td>
<td>0.298</td>
<td>1</td>
<td>0.298</td>
<td>0.496</td>
<td>0.483</td>
</tr>
<tr>
<td>FG</td>
<td>0.669</td>
<td>1</td>
<td>0.669</td>
<td>1.115</td>
<td>0.294</td>
</tr>
<tr>
<td>EFG</td>
<td>4.311</td>
<td>1</td>
<td>4.311</td>
<td>7.188</td>
<td>0.009</td>
</tr>
</tbody>
</table>

*The lower the mean score, the greater the competence.

Code:  
E formal preparation (classes and/or major or minor)  
F hands-on preparation (internship or actual job)  
G informal preparation (self-instruction, workshops, other)
Satisfaction with the simulation technique was greatest for those with hands-on preparation and least for those with informal preparation. (Table 18) For those participants with combinations of types of preparation, those with hands-on and informal preparation had the greatest satisfaction, those with a combination of all three types next, those with formal and hands-on next, and those with formal and informal least. The relationship between the participants' type of administrative preparation and their satisfaction with the simulation technique did not exist at a significant level. However, the relationship did approach a significant level for the formal type of preparation.

In summary, a relationship between participants' type of administrative preparation and simulation outcomes existed at a significant level for: 1) leadership confidence and hands-on preparation, 2) simulation contribution to leadership confidence and the combination type of formal and informal preparation, 3) contribution of simulation to leadership knowledge and a combination of all three types of preparation, 4) leadership competence and the combination of all three types of preparation, and 5) leadership competence and both formal and hands-on preparation. A relationship between participants' satisfaction with the simulation technique and type of preparation did not exist at a significant level. However, it did approach a significant level for the formal type of preparation.
**TABLE 18**

**ANALYSIS OF VARIANCE OF SATISFACTION BY TYPE OF ADMINISTRATIVE PREPARATION**

<table>
<thead>
<tr>
<th>Type</th>
<th>N</th>
<th>M*</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>E</td>
<td>12</td>
<td>0.819</td>
<td>1.719</td>
</tr>
<tr>
<td>F</td>
<td>9</td>
<td>1.407</td>
<td>1.326</td>
</tr>
<tr>
<td>G</td>
<td>4</td>
<td>0.500</td>
<td>0.680</td>
</tr>
<tr>
<td>EF</td>
<td>11</td>
<td>0.712</td>
<td>0.654</td>
</tr>
<tr>
<td>EG</td>
<td>7</td>
<td>0.429</td>
<td>0.371</td>
</tr>
<tr>
<td>FG</td>
<td>18</td>
<td>1.083</td>
<td>0.803</td>
</tr>
<tr>
<td>EFG</td>
<td>27</td>
<td>0.973</td>
<td>0.664</td>
</tr>
<tr>
<td>None</td>
<td>4</td>
<td>1.083</td>
<td>0.616</td>
</tr>
</tbody>
</table>

Univariate F Test

<table>
<thead>
<tr>
<th>F(1,84 df)</th>
<th>MS</th>
<th>P less than</th>
</tr>
</thead>
<tbody>
<tr>
<td>E</td>
<td>2.798</td>
<td>1.659</td>
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<tr>
<td>F</td>
<td>2.494</td>
<td>1.479</td>
</tr>
<tr>
<td>G</td>
<td>0.711</td>
<td>0.422</td>
</tr>
<tr>
<td>EF</td>
<td>0.164</td>
<td>0.097</td>
</tr>
<tr>
<td>EG</td>
<td>1.400</td>
<td>0.830</td>
</tr>
<tr>
<td>FG</td>
<td>1.938</td>
<td>1.149</td>
</tr>
<tr>
<td>EFG</td>
<td>0.254</td>
<td>0.151</td>
</tr>
</tbody>
</table>

*The higher the mean, the greater the satisfaction.*

Code:  
E formal preparation (classes and/or major or minor)  
F hands-on preparation (internship or actual job)  
G informal preparation (self-instruction, workshops, other)
Is there a relationship between any two of the following participants' leadership factors:

1) confidence,
2) simulation contribution to confidence,
3) simulation contribution to knowledge,
4) competence,
5) simulation satisfaction?

To answer the above question, the following series of research hypotheses were tested:

The participants' leadership confidence score is related to their leadership

1) simulation contribution to confidence score.
2) simulation contribution to knowledge score.
3) competence score.
4) simulation satisfaction score.

Although statistically significant correlations were observed for other simulation outcomes, only those correlations greater than .30 will be considered of practical significance in the study.

A significant relationship was observed between the participants' leadership confidence and their simulation contribution to confidence. (Table 19) It appears that the participants felt that involvement in the simulation experience contributed both to their confidence and knowledge of
leadership functions. No practical significant relationships were detected between leadership confidence and simulation contribution to knowledge, competence, or simulation satisfaction.

TABLE 19
PEARSON PRODUCT-MOMENT CORRELATIONS OF SIMULATION OUTCOMES

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Confidence (Conf.)</td>
<td>1.00</td>
<td>0.32*</td>
<td>0.15</td>
<td>0.11</td>
<td>0.26*</td>
</tr>
<tr>
<td>Contribution to Confidence</td>
<td>0.32*</td>
<td>1.00</td>
<td>0.56*</td>
<td>0.04</td>
<td>0.21*</td>
</tr>
<tr>
<td>(C. Conf.)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Contribution to Knowledge</td>
<td>0.15</td>
<td>0.56*</td>
<td>1.00</td>
<td>0.08</td>
<td>0.28*</td>
</tr>
<tr>
<td>(Know.)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Competence (Comp.)</td>
<td>0.11</td>
<td>0.04</td>
<td>0.08</td>
<td>1.00</td>
<td>0.15</td>
</tr>
<tr>
<td>Satisfaction (Satis.)</td>
<td>0.26*</td>
<td>0.21*</td>
<td>0.28*</td>
<td>0.15</td>
<td>1.00</td>
</tr>
</tbody>
</table>

*205 P < .05 (90 df)

The participants' simulation contribution to leadership confidence score is related to their leadership
1) simulation contribution to knowledge score.
2) competence score.
3) simulation satisfaction score.

A significant relationship was observed between the simulation contribution to leadership confidence and
simulation contribution to knowledge. (Table 19) Apparently the participants felt that involvement in the simulation experience contributed to their knowledge of leadership functions. No practical significant relationships were detected between the simulation contribution to leadership confidence and competence or simulation satisfaction.

The participants' simulation contribution to leadership knowledge score is related to their leadership competence score.

1) competence score.

2) simulation satisfaction score.

No significant relationships were observed between the participants' simulation contribution to leadership knowledge and their competence or simulation satisfaction. (Table 19)

The participants' leadership competence score is related to their simulation satisfaction score.

No significant relationship was observed between the participants' leadership competence and their simulation satisfaction. (Table 19)

---

Leadership Competence In Relation To Simulation Role

Is there a relationship between the participants' leadership competence and their simulation role?

Each simulation participant in a group assumed one of seven identified administrative roles (Director, Associate Director, etc.). The simulation materials provided for the individuals in specific roles included some that were alike,
some similar, and some distinctly different.

The ratings (Table 20) reveal that competence did differ with the simulation role. These differences might be explained by the fact that participants possibly could have had more difficulty identifying with and playing certain roles than others. Also, since individuals assuming each role were provided simulation materials that differed in certain aspects, this could have elicited differing responses. Since the participants playing the role of director received the fewest high ratings, it is possible that this particular role was the most difficult to assume and/or that the materials for this role were the most difficult to use.

### TABLE 20

**PARTICIPANT RATINGS ON LEADERSHIP COMPETENCE**

<table>
<thead>
<tr>
<th>Role</th>
<th>1</th>
<th>2 (Frequency)</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Director</td>
<td>3</td>
<td>25</td>
<td>49</td>
<td>29</td>
</tr>
<tr>
<td>Associate Director</td>
<td>14</td>
<td>20</td>
<td>32</td>
<td>30</td>
</tr>
<tr>
<td>Chairmen:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Clothing and Textiles</td>
<td>4</td>
<td>29</td>
<td>48</td>
<td>25</td>
</tr>
<tr>
<td>Family and Child Development</td>
<td>7</td>
<td>29</td>
<td>38</td>
<td>26</td>
</tr>
<tr>
<td>Foods and Nutrition</td>
<td>7</td>
<td>27</td>
<td>46</td>
<td>21</td>
</tr>
<tr>
<td>Home Economics Education</td>
<td>8</td>
<td>32</td>
<td>40</td>
<td>19</td>
</tr>
<tr>
<td>Housing, Management, Equipment</td>
<td>11</td>
<td>22</td>
<td>48</td>
<td>19</td>
</tr>
</tbody>
</table>
Leadership Confidence

Do potential and novice home economics administrators have increased leadership confidence after they have been involved in a simulation experience?

To answer this question the following hypothesis was tested.

The simulation participants will show a significant gain in leadership confidence mean score from the pretest to the posttest.

Although the simulation experience was of short duration due to time limitations imposed by the workshop schedule, an examination of the data revealed that the 56 participants who were administered a pretest showed a significant gain in leadership confidence from the pretest to the posttest. (Table 21) Apparently, involvement in the simulation experience gave participants a feeling of security in being able to perform the leadership functions.

To determine whether the pretest influenced the internal validity of the study by giving participants practice in test taking a comparison of the posttest mean scores of the participants administered a pretest with those not taking the pretest was made. No differences existed at a significant level between the posttest mean scores of the participants taking the pretest and those who did not. (Table 22)
Therefore, it appears that the pretest did not influence the validity of the study to any significant degree.

**TABLE 21**

**PRETEST-POSTTEST ON CONFIDENCE**

<table>
<thead>
<tr>
<th>Test</th>
<th>N</th>
<th>M*</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pretest</td>
<td>56</td>
<td>29.84</td>
<td>5.73</td>
</tr>
<tr>
<td>Posttest</td>
<td>56</td>
<td>28.20</td>
<td>7.02</td>
</tr>
</tbody>
</table>

*The lower the mean score, the greater the confidence.

T value = -1.91

DF = 55

Significant = -1.67 (P .05)

**TABLE 22**

**COMPARISON OF SUBJECTS TAKING PRETEST ON CONFIDENCE AND THOSE NOT TAKING PRETEST**

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>M*</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pretest</td>
<td>55</td>
<td>1.813</td>
<td>0.350</td>
</tr>
<tr>
<td>No Pretest</td>
<td>51</td>
<td>1.747</td>
<td>0.435</td>
</tr>
</tbody>
</table>

**Analysis of Variance**

<table>
<thead>
<tr>
<th>SS</th>
<th>DF</th>
<th>MS</th>
<th>F</th>
<th>P less than</th>
</tr>
</thead>
<tbody>
<tr>
<td>16.058</td>
<td>104</td>
<td>0.154</td>
<td>0.746</td>
<td>0.390</td>
</tr>
<tr>
<td>0.115</td>
<td>1</td>
<td>0.115</td>
<td>0.746</td>
<td>0.390</td>
</tr>
</tbody>
</table>

*The lower the mean score, the greater the confidence.*
Satisfaction With Simulation Technique

Not only did the participants have increased leadership confidence after being involved in the simulation experience, but they also expressed satisfaction with the technique. Ninety-four of the 107 participants indicated that they would like additional instruction through simulation, and 101 of the 107 indicated that they would recommend the use of this simulation package for the preparation of home economics administrators. (Table 23)

**TABLE 23**

**PARTICIPANT SATISFACTION WITH SIMULATION TECHNIQUE**

<table>
<thead>
<tr>
<th>Would Like More Instruction Through Simulation</th>
<th>Would Recommend Simulation Package</th>
</tr>
</thead>
<tbody>
<tr>
<td>Response</td>
<td>N</td>
</tr>
<tr>
<td>Yes</td>
<td>94</td>
</tr>
<tr>
<td>No</td>
<td>6</td>
</tr>
<tr>
<td>No response</td>
<td>7</td>
</tr>
</tbody>
</table>

The following statements are illustrative of the reasons given by the participants for wanting more instruction through simulation:

It seems to be an exciting tool to use.

Best idea of what administration is like that I have received yet.
It is very helpful to one who has never been an administrator.

It is more realistic and valuable than being talked to.

It provides opportunity to function in roles and perform tasks not otherwise possible, also good use of time.

Would utilize with my classes and share with department.

It is very helpful in identifying attitudes.

It helps develop insights, perspective, philosophy.

In trying to solve real problems, it is an interesting and valuable experience in miniature.

It's realistic, interesting, fun - and eye opening.

It helps me understand a role and the decision making involved.

You learn without tension of the real thing.

It helps point up the "real" situation -- not the ideal.

Only six negative responses were made relative to additional instruction through simulation:

Other methods less time consuming.

Same basic principles.

Confusing.

Need to be applying it on the job at this point in time.

I'm not sure how valuable the learning was.

Does not seem realistic enough to be really worthwhile.
The following affirmative statements are illustrative of those given by participants in response to the question, "Would you recommend the use of this simulation package for the preparation of home economics administrators?"

Effectiveness of this method.
Most administrators are subject matter trained and have very little training in administration.
With some changes and as part of a larger experience.
It represents a somewhat "real-life" situation; gives experience in decision making, in team interaction.
It is more effective than lectures or informal learning.
It is helpful to see how it "feels" to be in a role.
But a more extensive course.
It represents just a small piece of the experience that confronts administrators.
But need other types of instruction also.
Learn without tension of the real thing.
Need good educational tools.
Effective and efficient.
Gives a good basis for discussion of principles of administration.
Provides examples of experiences one would face on the job.
Only six negative comments were made relative to recommendation of the simulation package for the preparation of home economics administrators:

Did not cover anything that I had not encountered as a county extension home economist.
Most of them (administrators) would be insulted.

Needs to be revamped in some areas (number of faculty, etc.).

Not unless changed to include more information.

Directions, instructions, etc. may be vague.

Not sufficient emphasis on what constitutes special traits for a person to recognize they have a trait - need more study prior to activity.

Illustrative comments given by participants relative to the strengths of the simulation technique were:

Well organized - directions specific - good experience in limited time and time was right - more information and time would have cluttered the process.

Great! I usually don't go for games, but thoroughly enjoyed this activity. Excellent design makes a difference.

One of the best of dozens I have experienced or used.

Gives a quick insight to many aspects of administration - trials and rewards.

Created most involvement of any of the workshop sessions.

The preparation, organization and skill in conducting this session was par-excellent.

Please don't be discouraged by the constant request for more structure - please do not include such detail as scripts, etc.-it will destroy the experiences of finding your own way. For those who want more detail and structure, there are workbooks and programmed learning.

Realistic and extremely stimulating.

Interesting chance to observe interaction of various people and see different values and ideas.
Illustrative comments given by participants relative to weaknesses of the simulation technique and suggestions for improvement were:

Needed more background information about the situation.

In-basket activities could be more challenging.

Need clearer directions on how to proceed - need to clarify roles of participants.

Instructions slightly confusing.

Need to have a better defined situation or instructions as to the amount of interpretation we may do - also need more time.

Need more follow-up discussion.

Need more descriptive information pertaining to the roles.

Need more budget information.

Budget information unrealistic. Need more data regarding university and department.

An examination of the recommendations for methods most helpful for securing administrative preparation indicated that the participants felt internships, formal classes and workshops were most helpful, and the majority recommended the use of the simulation package either before or after administrative appointment. (Tables 24 and 25) The flexibility of the simulation experience provides an opportunity to incorporate it into any of the methods advocated and at the time most suited to the needs of the participants.
TABLE 24  
RECOMMENDATIONS FOR SECURING ADMINISTRATIVE PREPARATION

<table>
<thead>
<tr>
<th>Method</th>
<th>Good</th>
<th>Average</th>
<th>Poor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Internship</td>
<td>78</td>
<td>10</td>
<td>2</td>
</tr>
<tr>
<td>Formal Classes</td>
<td>42</td>
<td>40</td>
<td>9</td>
</tr>
<tr>
<td>Workshops</td>
<td>33</td>
<td>59</td>
<td>1</td>
</tr>
<tr>
<td>Administrative Position</td>
<td>26</td>
<td>40</td>
<td>25</td>
</tr>
<tr>
<td>Self-Instruction</td>
<td>22</td>
<td>33</td>
<td>53</td>
</tr>
</tbody>
</table>

TABLE 25  
RECOMMENDATIONS FOR TIME TO USE SIMULATION PACKAGE FOR ADMINISTRATIVE PREPARATION

<table>
<thead>
<tr>
<th>Time</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prior to Administrative Appointment</td>
<td>35</td>
</tr>
<tr>
<td>After Administrative Appointment</td>
<td>2</td>
</tr>
<tr>
<td>Either Before or After Administrative Appointment</td>
<td>64</td>
</tr>
</tbody>
</table>

Based on the large majority of positive responses to items on the evaluation instrument relating to satisfaction with the simulation technique, it seems that, in general, the participants accepted the simulation technique as a feasible means for the preparation of home economics administrators.
CHAPTER V

SUMMARY AND IMPLICATIONS

A brief review of the study, the major findings, and the implications discovered as a result of the study are included in this chapter.

Summary

The study was designed to determine the feasibility of using the interaction simulation technique as a means for the preparation of potential and novice home economics administrators.

Through the conduct of the study an attempt was made to answer the following questions:

1. Is there a relationship between the simulation participants' a) level of education, b) amount of administrative preparation and their leadership

   1) confidence?
   2) simulation contribution to confidence?
   3) simulation contribution to knowledge?
   4) competence?
   5) simulation satisfaction?

2. Is there a relationship between any two of the
following simulation participants' leadership factors

1) confidence,
2) simulation contribution to confidence,
3) simulation contribution to knowledge,
4) competence, and
5) simulation satisfaction?

3. Is there a relationship between the simulation participants' leadership competence and their simulation role?

4. Do potential and novice home economics administrators have greater leadership confidence when they have been involved in a simulation experience?

5. What are some implications of the interaction simulation technique for the preparation of potential and novice home economics administrators?

The data were collected during an Administrative Leadership Workshop sponsored by the Association of Administrators of Home Economics.

The participants in the study were involved in an interaction simulation experience providing opportunity for the application of leadership functions. The simulation package developed by the investigator specifically for the study included the following:

1) Leadership approaches and functions information.
2) Simulation process information.
3) Two sets of in-basket items.
4) Guidelines for small group interaction session.
5) Guidelines for synthesis session.
6) Data collection instrument.

The instrument developed and refined for the final collection of data in this study consisted of the following sections:

1) Background information
2) Simulation evaluations
3) Leadership confidence scale

The pretest used in the study consisted of the leadership confidence scale only.

The research designs used in the study are defined by Campbell and Stanley (1972: 6-7) as the One-Shot Case Study Design and the One-Group Pretest Posttest Design. The first design was used for treatment of data to test the hypotheses relative to association of participants' level of education, amount of administrative experience, and type of administrative preparation and simulation outcomes. The second design was used to test the hypothesis relative to participants' gain in leadership confidence.

Data were used to test the following research hypotheses:

1. The participants' level of education is related to their leadership confidence score.

2) simulation contribution to confidence score.
3) simulation contribution to knowledge score.
4) competence score.
5) simulation satisfaction score.

2. The participants' amount of administrative experience is related to their leadership
   1) confidence score.
   2) simulation contribution to confidence score.
   3) simulation contribution to knowledge score.
   4) competence score.
   5) simulation satisfaction score.

3. The participants' type of administrative preparation is related to their leadership
   1) confidence score.
   2) simulation contribution to confidence score.
   3) simulation contribution to knowledge score.
   4) competence score.
   5) simulation satisfaction score.

4. The participants' confidence score is related to their leadership
   1) simulation contribution to confidence score.
   2) simulation contribution to knowledge score.
   3) competence score.
   4) simulation satisfaction score.
5. The participants' simulation contribution to leadership confidence score is related to their leadership
   1) simulation contribution to knowledge score.
   2) competence score.
   3) simulation satisfaction score.

6. The participants' simulation contribution to leadership knowledge score is related to their leadership
   1) competence score.
   2) simulation satisfaction score.

7. The simulation participants' leadership competence score is related to their simulation satisfaction score.

8. The simulation participants will show a significant gain in leadership confidence mean score from the pretest to the posttest.

For hypotheses which determined the relationships between the background factors and simulation outcomes, analyses of variance were computed. For hypotheses which determined the relationships of the simulation outcomes to each other, correlations were computed. For the hypothesis to determine participants' confidence gain from pretest to posttest, t-statistics were utilized. The major findings in the study were:

1. The relationship between participants' level of education and simulation outcomes existed at a significant
level for simulation contribution to confidence only. The doctoral level participants' perception of the contribution of the simulation experience to confidence was the greatest of the three levels. No other relationship existed at a significant level between participants' level of education and the simulation outcomes.

2. No relationship existed at a significant level between participants' amount of administrative experience and the simulation outcomes.

3. Relationships existed at a significant level between simulation participants' type of administrative preparation and the simulation outcomes for the following: 1) hands-on preparation and confidence, 2) a combined formal/informal type preparation and simulation contribution to leadership confidence in this experience, 3) a combination of formal/hands-on/informal types of preparation and simulation contribution to knowledge, 4) a combination of formal/hands-on preparation and competence, 5) a combination of the three types of preparation - formal, hands-on, informal - and competence. No difference at a significant level existed between the type of administrative preparation and simulation satisfaction. However, the participants with the hands-on type of experience had the highest satisfaction mean score, possibly indicating that participants who had performed in an actual administrative role were more satisfied with the technique for the preparation of home
economics administrators than those who had no actual administrative experience.

4. Significant correlations were found to exist between the participants' simulation contribution to leadership confidence score and their 1) leadership confidence and the 2) contribution to knowledge. Apparently, the higher the participants rated the simulation contribution to confidence, the higher they also rated their confidence and simulation contribution to knowledge.

5. Participants' leadership competence did differ with the simulation role assumed in the experience. Possibly participants had more difficulty identifying with and playing certain roles than others. Perhaps, one who had assumed an actual role previously was reluctant to assume a differing type of role in this experience.

6. There was a significant increase in leadership confidence after involvement in the simulation experience. Even though the simulation experience was of short duration, it seemed to increase the participants' security in performing leadership functions.

7. Through their comments, participants indicated a satisfaction with the interaction simulation technique. Ninety-four of the 107 participants indicated that they would like additional instruction through simulation and 101 of the 107 participants recommended the use of the package during the preparation of home economics
administrators. A majority of the participants recommended the use of the simulation package either before or after administrative appointment.

8. All participants indicated a need for the preparation of home economics administrators. They ranked internships, formal classes and workshops (in that order) as ways they felt were most helpful in securing administrative preparation.

9. The interaction simulation technique was considered one feasible technique to use in the preparation of potential and novice home economics administrators based on participants: 1) expressed satisfaction with the technique, 2) desire for additional instruction through simulation, 3) recommended use of the simulation package during the preparation of home economics administrators, and 4) apparent gain in leadership confidence after involvement in the simulation experience.

Implications

Due to the critical need for leaders with expertise in the field of home economics, now and in the foreseeable future, as many means as possible must be explored for the preparation of administrators. It seems desirable for potential home economics administrators to have opportunity to make application of theory before being placed in
administrative positions.

Having established the feasibility of using the interaction simulation technique as a means for the preparation of home economics administrators, the results of this study can be expanded in two directions - further development of simulation materials and further research relative to the preparation of home economics administrators.

1. Due to its flexibility, the interaction simulation technique can be incorporated into varying situations designed for the preparation of potential home economics and novice home economics administrators.

2. The interaction simulation technique has potential for use in determining competency as a basis of recommendation and selection of personnel for administrative positions.

3. The interaction simulation technique has potential for giving home economists a "feel" for administration before selecting it as a field of study or accepting an administrative position.

4. There is a need for further development of instruments and techniques for the evaluation of administrative competencies.

5. As a first step in the development of other simulation packages, specific administrative competencies needed by home economics administrators must be identified. Although it is realized that all home economics administrators will not need identical competencies, it seems that
certain competencies would be universal in nature.

6. In relation to the development and use of simulation experiences:

1) The extension of time allocation for the simulation experience might be desirable to reduce undue pressures.

2) Careful consideration needs to be given to means of improving the orientation of participants to the simulation experience to decrease initial anxiety and frustration.

3) The inclusion of additional background information for participants to use as a basis for decision making warrants consideration.

4) Follow-up critiques for each in-basket response could be provided to reinforce the participants' response or provide immediate direction for modification of behavior.

7. Controlled experimental investigations could be conducted profitably to provide insight into questions generated in relation to the simulation technique as a means for the preparation of home economics administrators.

8. Longitudinal research studies to determine carry-over of leadership competency to the real world administrative position would be desirable.
APPENDIX

SIMULATION MATERIALS

The materials included in the appendix are examples from the simulation package tested in this study. The entire package is not included since it is under further development by the investigator.
SCHEDULE OF ACTIVITIES

**First Session**

1:00  Introduction and Orientation

1:45  Individual Work Session

2:30  Synthesis

**Break**

2:45

**Second Session**

3:00  Orientation

3:15  Small Group Interaction Session

4:00  Synthesis

4:30  Evaluation

5:00  Closure
MANAGERIAL FUNCTIONS OF LEADERSHIP

PLANNING--Works cooperatively with group members to make short-range and long-range plans and schedules the tasks for the accomplishment of designated goals.

ORGANIZING--Makes sure that all the manpower and material called for in the plan are available when needed.

GUIDING--Directs the work of the group so that each member will know his duties and the manner in which they should be performed.

COMMUNICATING--Is aware of the information needed by the group and provides for a two-way communication about what is going on and how changes will affect group members in their activities.

INITIATING--Introduces new and different methods of doing things in order to improve group operations.

INTEGRATING--Seeks constantly to develop the group activity into a team effort.

IDENTIFYING--Shows pride in being a member of the group and provides for informal interaction in the group.

PRODUCING--Facilitates the achievement of the objectives for which the organization has been brought together and prods members toward accomplishment.

DEFENDING--Maintains vigilance to assure himself that the well-being of the group is shielded against outside intervention.

REPRESENTING--Serves as the representative of the group in stating its position to outside groups or individuals.

EVALUATING--Appraises the productivity of the group and keeps it informed of its progress or lack of progress.

RECOGNIZING--Gives appropriate recognition and awards for individual achievement and expresses disapproval of poor work in private.

ADDITIONAL FUNCTIONS OF LEADERSHIP IDENTIFIED BY PARTICIPANTS--

Interaction Simulation Experience
Shirley A. Chase - Julia I. Dalrymple

Each participant will be assuming a leadership or expediting role in the following imaginary institutional setting, and should be seeking opportunities to fulfill this role as the simulated activities progress.

Institutional Setting
Lettler State University
School of Home Economics
Blythe Hall
Spring City, Lettler

Administrative Roles*

Director
Associate Director
Department Chairmen
Clothing and Textiles
Family and Child Development
Foods and Nutrition
Home Economics Education
Housing, Management, and Equipment

Secretaries

Sue Barnes
Pat Williams
Dee Niles
Julia Jones
Carol Evans
Sally Smith
Betty Darrow

*Insert the participants' own first names as they assume their roles for the simulation experience.
Dr. ______ Milford, Director  
School of Home Economics  
Lettler State University  
Blythe Hall  
Spring City, Lettler  

Dear Dr. Milford:  

Our graduate class in home economics administration has been discussing the challenges and concerns of administration in higher education.  

It is my privilege to invite you to attend one of our classes and discuss with us your insights concerning home economics administration today.  

Our class meets at 9:00 a.m. on Tuesday and Thursday in Room 311 Blythe Hall. Please inform me if you will speak to our class and the date most convenient for you.  

We certainly hope you have time in your busy schedule to meet with us.  

Sincerely,  

Patricia Brown
Interaction Simulation Experience
Shirley A. Chase - Julia I. Dalrymple

In-Basket Item #9

Date March 19

Mr. James

WHILE YOU WERE OUT

Mr. B. J. James, Vice-President
Academic Affairs

Called You by Telephone  At 9:30 o'clock

Was in to See You

Message:
He scheduled an emergency meeting at 4:30 p.m. today in his office.

Wants you to call him. Telephone No. 461-2368

Signed PA. T

You have an appointment at 4:15.
BIBLIOGRAPHY


