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A STUDY OF TEACHERS' PERCEPTIONS AND UTILIZATION OF SIMULATIONS IN PUBLIC SECONDARY SOCIAL STUDIES CLASSROOMS IN OHIO

DISSERATION

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

By

Jeffrey James Blaga, B.S., M.A.

* * * * *

The Ohio State University

1978

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Chapter I
INTRODUCTION

Historical Perspective

During the past twenty years there has been a dramatic influx in the development of simulations as an instructional tool. Educators at all levels increasingly have experimented with simulation-type activities in an attempt to enhance their teaching. Although the recent flurry of interest may lead one to believe that simulations are a contemporary phenomenon, their origins can be traced back thousands of years.

The first simulation appears to have been modeled after wartime activities. (Raser, 1969, p. 46) In the ancient games of "Chaturanga" in India, "Wei Hai" in China, and "Shogi" in Japan, for example, the players modeled war situations and learned from the consequences of their actions. As play in war games evolved, people began engaging in an activity where pieces on a board, representing symbolic equivalents of warfare, were manipulated. This 2000-year-old activity developed into what we call chess. (Tansey and Unwin, 1969, p. 1)

Two types of ancient simulations, one involving role-playing and the other symbol manipulation, persisted. In 1798, the Prussians
developed "Neu Kriegspiel" at the Kriegearedem (War School). (Raser, 1969, p. 47) This war game provided officers with the opportunity to sharpen decision-making skills within a complicated war environment. An effective and safe laboratory for the study of war had been developed. Rigid games, using playing pieces, a playing board and specific rules, and non-rigid games utilizing human beings in military roles, were both characteristic of Prussian war games of the 1800's.

The use of war games in the United States began about 1880 and became increasingly popular in the 19th and 20th centuries, proving beneficial for training during both World War I and World War II. (Tansey and Unwin, 1969, p. 6) In the 1940's simulations took on new form with the creation of Edwin Link's training device. The Link Trainer was a physical reproduction of the cockpit of a World War II fighter, and provided an economical low-risk environment for the learning and practice of potentially dangerous wartime flying activities. The Link Trainer was called a man-machine simulation, as the Air Force pilot interacted with a complicated mechanism, and was actively involved in the operation of the model. (Tansey and Unwin, 1969, p. 6)

Today flight simulations have been expanded to provide training for navigators, pilots, and even stewardesses. The American Airlines Boeing 747 flight simulator, for example, is used to train hundreds of persons each year for a variety of airline roles. Though the simulator cost $3 million to construct, it has freed $50 million worth of real planes for scheduled service. Stewardess training alone has been cut from six weeks to only ten days. (Moran, 1971, pp. 1-4)
After World War II the idea of using simulations as a learning tool spread to the business world. In 1956 the American Management Association developed the highly successful "Top Management Decision Simulation." (Raser, 1969, pp. 54-55) The AMA simulation provided business executives with a microcosm of industrial competition without the risks that normally accompany high-level investment decisions. Trainees were placed in teams in the roles of executives in competing companies. Data from a computer supplied the teams with information on company activities, and based on the data, the teams were required to make pricing, marketing, and budgeting judgments. A simulated fiscal year required approximately four hours to complete, and provided participants with a wide range of realistic and risk-free decision-making experiences. (Tansey and Unwin, 1969, pp. 4-5)

The AMA simulation proved to be an overwhelming success, and had a significant impact on the budding simulation field. It provided the impetus and served as an example for the development of a multitude of simulations in other fields, including education. In 1958, Harold Guetzkow and his colleagues at Northwestern University developed the "Inter-Nation Simulation" for use with students in political science. (Carlson, 1967, p. 63) The "Inter-Nation Simulation," by having students assume roles in governing fictitious but realistic nations, focuses on the concept of inter-dependency. Participants make decisions for their nations and are able to find out the international implications of their action.

Educators in other fields soon began to follow the lead of such early pioneers as Guetzkow, and by the early 1960's dozens of
simulations had been created for use in classrooms at all levels. A variety of reasons can be cited to account for the rapid increase of simulations for teaching. Raser, for example, states the following:

Simulation is 'In' also because it seems to offer intriguing possibilities as an effective teaching tool in an era when disillusionment with traditional teaching methods is widespread. Finally, simulation is 'In,' because it is an activity offering intellectual challenge second to none, and because it is gripping, exciting, and fun, an enthralling activity. (1969, p. ix)

Gilliom sees the increased use of simulations in the classroom as complementing several other trends in education. He states:

The rapid influx of simulations appears to parallel and likely reflects several other current trends in education--the desire to involve students more actively in the learning process, the attempt to make learning increasingly relevant, the changing perceptions of the teacher's primary role from that of purveyor of knowledge to that of a guide and stimulator of ideas, the desire to add variety to the curriculum, and the movement to emphasize the development of students' skills of reflective analysis. These trends are reflected in the curriculum by a heightened interest in issues of current controversy and concern, and by the creation of teaching techniques designed to foster student inquiry. (1974, p. 269)

Other writers see the surge of interest in simulations as evidence of a reappearance of the educational philosophy of John Dewey. Boocock, for example, believes that Dewey's concept of progressivism provides the rationale for today's use of play and games in education. According to Boocock, two of Dewey's books, Human Nature and Conduct (1922) and Democracy and Education (1928), provide an abundance of examples of Dewey's general theory of games as learning tools. Boocock summarizes her feelings by noting:

The core principles of the techniques--e.g., the active and simultaneous participating of all students in an educational game, with the teacher in the role of aid
rather than judge; the internal rather than external locus of regards, and thus motivation, in a game; and the linking of the student to the outside world through the simulated environment, which by 'reproducing the conditions of real life' within the classroom allows him to practice taking the kinds of roles and making the kinds of decisions he will face in his own later life--can all be traced to one or another of Dewey's works. (1968, p. 56)

Although the fervor surrounding simulations appears to have an almost mystic-cult quality, simulation have not been accepted by everyone. Whereas many educators welcomed the appearance of simulations enthusiastically, others viewed them suspiciously. Reacting to the sometimes extravagant claims being made about simulations, the editor of Media and Methods sarcastically remarked:

Simulation games will revolutionize teaching (What won't?). Students will freak out on them (thus solving the drug problem), low tracks will suddenly become hypermotivated, teachers will become guides (referees, one supposes), and we will lockstep toward Nirvana with a pair of dice in hand. (Livingston and Stoll, 1973, p. 31)

As interest in the use of simulations for educational purposes has increased, a wide variety of agencies have become involved in producing them, and in researching their effectiveness. Textbook publishers, elementary and secondary schools, federal agencies, and universities, have become involved in the creation and use of simulations. Whereas some private companies have been formed to market simulations for a "profit", others have operated on a non-profit basis. Real World Learning, Inc., of San Carlos, California, for example, has been established as a non-profit company whose sole purpose is the research, development, and dissemination of simulation materials. (Zuckerman and Horn, 1973, p. 56)

In the mid 1960's gaming centers were established at the University of Michigan and Johns Hopkins University for the purpose of
systematically inquiring into learning theory of games. The Johns Hopkins Game Center, founded in 1966 as part of the Center for Social Organization of Schools, launched an investigation of the ways in which games create and influence learning. Some of the first experiments matching traditional teaching methods with a gaming approach took place here. A number of simulations such as "Democracy," "Ghetto," "High School," "Life Career," and "Trade and Develop," were created at the Johns Hopkins Center, with many of them being based on Dewey's educational philosophy. (Boocock, 1968, p. 57)

During the 1960's and early 1970's several professional organizations were established to facilitate communication within the fast growing simulation field. One such organization is the Simulation and Gaming Association (SAGA), headquartered in Lebanon, Ohio. SAGA was formed in 1972, operates on a non-profit basis, and is controlled solely by teachers. SAGA publishes a journal four times a year, and sponsors or co-sponsors workshops on the design and use of simulations throughout the United States. The SAGA Journal contains descriptions and reviews of simulations, in addition to information about sources and availability of simulations. (Stadsklev, 1974, p. 310)

The development of simulations for use in the social studies classroom gained momentum in the early 1960's as a result of massive funding to support the so-called "New Social Studies." During that period, academicians across the United States supported by private and federal grants developed over one hundred instructional projects for the social studies. The completed projects covered a wide range of subjects, and either contained or advocated a number of instructional
tools, including audiovisual aids, case studies, documents, newspapers, and simulations. The simulations "Portsville" and "Farming," for example, were developed as part of the High School Geography Project, while the simulation "Influence" was created for use with the American Political Behavior Project. (Charles and Stadsklev, 1973, pp. 69, 83, 109)

Teachers today have a large number of commercially produced simulations from which to choose. The tremendous growth in the field is reflected by The Guide to Simulations/Games for Education and Training, a comprehensive analysis of currently available simulations compiled by Zuckerman and Horn. When first published in 1970, The Guide contained descriptions of 400 simulations. The third edition, published in 1977, describes well over 1200 simulations. The field of simulation is still growing as measured by their commercial availability.

Judging from the volume and scope of activities involved in the development of simulations for education since the early 1960's, it appears that teacher demand for simulations is high. Despite this demand, however, there are currently little data available regarding their actual use in classrooms. Questions concerning teachers' perceptions of and use of simulations have not been seriously pursued. As a result of this lack of data, individuals active in the field have been left to conjecture about teachers' use of simulations. If more were known about the use of simulations, active professionals would be guided in directions that ultimately would enhance the learning potential of simulations.
A study conducted by Chapman and Cousins in 1973 stands as one attempt to analyze the perceptions of teachers who were currently using simulations. This study, however, had two serious limitations. First, it surveyed only those teachers known to have used simulations in their classes. No attempt was made to survey those teachers not using simulations to identify reasons prohibiting their use. Second, the study surveyed only one hundred and thirteen social studies teachers in eight states, thereby limiting its statistical significance. Recognizing the need for a survey encompassing more social studies teachers, Chapman and Cousins state:

Nor was there an attempt to determine how extensively or widespread simulation/games are used in the social studies. In order to have collected such data, it would have been necessary to conduct a much larger and more expensive study. (1974, p. 37)

It appears that an extensive evaluation of the impact simulations have had in the social studies is clearly warranted. It is the purpose of this study to carry out such an evaluation through an examination of current practices with regard to simulations in selected public secondary social studies classrooms in Ohio.

Statement of the Problem

The problem to be dealt with in this study is twofold: (1) to examine perceptions held by selected Ohio public secondary social studies classroom teachers concerning simulations, and (2) to assess the nature and extent of simulation usage among selected public secondary social studies classroom teachers in Ohio.
More specifically, the following questions suggest the scope and focus of this study:

1. To what extent do the selected teachers use simulations?
2. What are the major reasons for the selected teachers use or non-use of simulations?
3. To what extent do the selected teachers feel they will be using simulations in the future?
4. Are the simulations being used by the selected teachers produced commercially or individually?
5. Is there a relationship between the personal, professional, and geographical characteristics of the selected teachers, and whether or not they are users or non-users of simulations?
6. In what areas of the simulation field do the selected teachers using simulations feel work needs to be done?

Terminology

There is a great deal of confusion among educators as to what constitutes a simulation. Many terms, such as educational game, role-playing, social simulation, and simulation game are commonly associated with and used interchangeably for the term simulation. For this study, simulation will be defined as: A teaching strategy where an operating model of a social process has been created to be played out by participants in order to provide them with life-like problem-solving
experiences.*

During the discussion of the survey, attention will be focused on teachers' use of social simulations (where a social process, not a physical process, is the portion of reality modeled) and simulation games. A social studies teacher, for example, engaging his class in role-playing activities as part of a hypothetical city council meeting, would be considered to be using a simulation. Likewise, a social studies teacher utilizing the simulation game "Starpower" with his American history class would be using a simulation.

Assumptions

For the purpose of this study, it has been assumed that:

1. those secondary principals involved in the distribution of surveys will randomly distribute them to members of their social studies faculties.

2. social studies teachers will respond honestly to a survey of this type.

3. sending one survey for every one hundred and fifty students per school accurately estimates the number of social studies teachers per school.

*A variety of definitions of simulation currently exist in the professional literature. This definition represents a synthesis of the definitions set forth by Cruickshank (1968, pp. 190-191) and Gilliom (1977, pp. 84-85).
Limitations

The following limitations will be taken into consideration when the data from this study are interpreted:

1. The population was limited to social studies teachers (grades seven through twelve) in Ohio public schools. Accordingly, the population of social studies teachers chosen is not necessarily representative of the total population or universe of social studies teachers.*

2. The data for this study were obtained by using a survey conducted through the mail, and is therefore subject to the limitations inherent in this research technique.

Overview of Study

This study is an examination of selected public secondary social studies teachers' perceptions and utilization of simulations. A survey consisting of twenty-seven questions was designed and mailed to 149 public secondary principals, asking them to distribute the surveys randomly to members of their social studies faculties. Chapter I has included an introduction to the study; statement of the problem; terminology; assumptions; limitations; and an overview.

Chapter II is a review of the related literature regarding simulation research.

*See page 29 (Chapter III) for a further explanation of this limitation.
Chapter III provides an extensive explanation of the procedures followed to achieve the purpose of this study.

Chapter IV includes an analysis of the data of the survey.

Chapter V consists of the summary and interpretation of the study including implications for further research.
Chapter II

REVIEW OF THE LITERATURE

Introduction

Increased interest in educational simulations during the past decade prompted researchers to investigate the effectiveness of using this instructional tool in classroom settings. A large part of this research has been undertaken by doctoral students utilizing experimental designs involving treated and controlled groups. Fletcher, in his examination of the nature of simulation research, states:

Research on games is still in this 'shotgun' stage. It consists predominantly of single studies on particular games, each using its own battery of tests to measure different sets of possibly relevant dependent and independent variables. (1971b, p. 427)

The following review of the relevant literature on simulation research has been classified into four categories and will be discussed using this framework: (1) studies that have investigated the impact of simulations on cognitive learning (2) studies that have investigated the impact of simulations on affective learning (3) studies that have analyzed teachers' perceptions of simulations, and (4) studies that have examined other aspects of learning with simulations. The research most relevant to the purpose of this study is contained in
category #3, regarding teachers' perceptions of simulations. However, the remaining categories have been included to provide a general notion of the scope and level of the available research on simulations, and also, to provide a context in which category #3 may be viewed. The following four reviews of simulation research were used extensively in the formulation of this chapter: Cherryholmes (1966); Fletcher (1971b); Wentworth and Lewis (1973); and, Heitzman (1976).

Simulations and Cognitive Learning

Most of the studies on simulations have concentrated on the cognitive and affective results of student participation in simulation-type activities. (Wentworth and Lewis, 1973, p. 435) In the cognitive domain, as with the majority of research on simulations in categories #2-#4, the findings have been largely inconclusive, vague, and conflicting. The following studies have been chosen as examples of the general level and type of research which has investigated the impact of simulations on students' cognitive growth.

In 1966, Allen and his associates engaged a group of students in the educational game "Wff 'N Proof," a game designed to provide students with practice in abstract thinking, and to help develop more favorable attitudes toward symbol handling. The researchers in this study found that students using "Wff 'N Proof" scored significantly better on the California Test for Mental Maturity than did a control group. (1966, p. 24) Allen's study involved fifty-seven junior high school students in the public school system of Burbank, California. The results of this study are highly suspect since, by the author's own admission,
the study was plagued with several methodological problems. The teacher of the experimental group, for example, was different from those of the control group, and the control group was taught during the regular school year while the experimental group received instruction in the summer. In addition, the researchers state:

With respect to the classroom situation it should be noted that the game was played under conditions quite unlike those of an ordinary class; the teacher knew that he was utilizing a new method, and in the course of the class he presumably became more committed to the use of the game. (1966, p. 24)

Bowen (1969) used the same simulation with fourth grade honor students (IQ range of 131-159) and found no significant differences in mathematical performance in those who used the simulation and those who did not.

In his dissertation study entitled "A Comparative Study of Textbook and Simulation Approaches in Teaching Junior High American History," Baker (1968) was concerned with determining if a difference in the method of teaching, i.e. simulation versus "read the textbook and discuss" method, would increase the immediate learning and retention of the materials presented. For Baker's study, one hundred and thirty-two eighth grade students in Lincolnwood, Illinois, were separated randomly into four groups. Two of the groups were taught with the more traditional method, and two were taught using a simulation dealing with the pre-Civil War era. Baker found a significant difference in the amount of immediate learning by the children taught by simulation.

Stadsklev's masters thesis was a study similar to the Baker study in design, operation, implementation, and duration. Stadsklev taught
two classes of tenth grade students for two weeks at Concordia Teachers College Laboratory School. One class participated in the simulation "Constitution Today," while the other class was exposed to the "lecture-discussion" method. Based on a 70-item pre- and post-test, Stadsklev concluded:

This study provided no statistical evidence to support the hypothesis that simulation games enhance the ability of the student to acquire more factual and conceptual knowledge. In fact, the evidence indicates that the control group performed slightly better on the content tests than did the experimental sample. (1969, p. 73)

A more complicated study using greater controls than the studies previously mentioned was carried out by Boocock. She collected data from seven experiments each using a different simulation. The experiments were conducted during a 4-H convention using the students attending the convention as the population (which may reflect a bias in favor of high ability students). Using pre- and post-tests she developed, Boocock concluded that the study provided empirical evidence of four types of learning: (1) vicarious experience (2) inducement to student motivation and learning (3) intellectual learning, and (4) changes in students' attitudes. (1966, pp. 183-189) She also concluded that performance in a simulation is not necessarily related to performance on standard paper and pencil tests. (1966, p. 189)

Garvey and Seiler's (1966) study of "The Effectiveness of Different Methods of Teaching International Relations to High School Students" showed statistical evidence that the group using the "Inter-Nation Simulation" acquired any more factual or conceptual knowledge than did the control group. Their finding was based on the results of
multiple-choice tests designed to measure content understanding.

Robinson and his colleagues used the same simulation and found:

No direct and unmediated relation occurred between simulation and fact-mastery or principles learning. . . .
(1966, p. 64)

Targ (1967) used a modified version of the "Inter-Nation Simulation" with elementary students and found similar results.

Many of the studies measuring student growth in cognitive terms, such as those mentioned above, have found simulations to be neither significantly better nor worse than other learning experiences on student cognitive achievement. A few studies have, however, concluded that students taught using more traditional methods of instruction have outperformed students participating in a simulation, as indicated by scores on tests measuring cognitive gains. Wentworth's (1972) study, for example, found that students engaged in the simulation "Marketplace" in introductory economics courses scored lower on tests recalling content than did students in control classes. His study involved college students in a number of two-year colleges in Minnesota.

It is nearly impossible to draw any valid generalizations concerning the effects of simulation activities on cognitive learning. This, to a large extent, can be attributed to the variety of simulations, and the methodologies employed in these studies.

Simulations and Affective Learning

A number of studies have undertaken the task of determining the affective gains made by students participating in simulations. Most, but not all of these studies, indicate that simulations have proven
successful in generating positive attitudes about the particular
issue(s) a simulation treats.

In 1976, Heitzman analyzed and synthesized the results of twenty-
nine studies dealing with the affective outcomes of using simulations.
Heitzman first looked at sixteen studies that support the contention
of positive affective growth resulting from instruction using a simu-
lation. Representative of this group of studies is the one made by
DeKock and his self-made simulation, "Sunshine." DeKock administered
the simulation dealing with "current racial problems in a typical
American city" (1969, p. 181) to 398 junior high school students between
1965-1968 at El Captain High School, Lakeside, California. Using pre-
and post-attitude tests developed at San Diego State University and the
Western Behavioral Sciences Institute, he concluded: "participating in
'Sunshine' does change students. Their attitudes are affected." (1969,
p. 183) Newman conducted a dissertation study using the same simu-
lation but in a different setting, and found: "the simulation was
concluded to be an effective method of generating more positive atti-
tudes toward the subject of ethnic studies." (1974, p. 86)

The second part of Heitzman's analysis is an examination of
thirteen studies that in general indicate affective achievement is not
influenced by participation in a simulation. Typical of the research
conducted in this area is the dissertation study by Lovelace in 1975.
He administered the simulation "Sunshine" to six ninth grade social
studies classes in a desegregated upper-middle class suburban junior
high school. In total, six classes composed of 156 students partici-
pated in the study. Based on the results of the tests administered by
Lovelace, the following conclusion was stated:

No statistically significant differences were found among the two treatment groups on the attitude posttest and delayed posttest. (1975, p. xi)

As with the studies involving the measuring of cognitive growth, the studies dealing with the affective learning do not allow one to generalize with any confidence about the overall impact of simulations on students' attitudes and interests. Many of the studies used different simulations and drew conclusions from data obtained by instruments developed by the researcher to measure a wide variety of dependent and independent variables. This lack of standardized procedures for conducting research on simulations has made replication of these studies virtually impossible. After reviewing the research on simulations and affective learning in a 1973 issue of Social Education, Wentworth and Lewis remarked:

The research on attitudes leaves us in a paradoxical situation: It demonstrates the most promising results to date, but most of the findings cannot be generalized beyond the situation that was investigated. (1973, p. 438)

**Teachers' Perceptions of Simulations**

Three studies have attempted to examine simulations from the standpoint of the classroom teacher. A dissertation study by Mountain in 1960 appears to be the first attempt to analyze teachers' attitudes regarding simulations. She sent 100 simulations (some were produced commercially, some were developed by teachers, and others were originated or adapted by her) to sixteen Pennsylvania public school teachers. These teachers conferred with Mountain before and after each
class in which a simulation was used. She made notes on the opinions the teachers expressed, and in addition, teachers completed questionnaires after each class involving a simulation. Three "hypotheses" (1960, p. 81) served as the basis for this study:

1. Educational games can serve as useful teaching aids in introducing and reinforcing knowledge, attitudes, and skills in language arts, arithmetic, and social science.

2. Educational games can be used effectively for purposeful learnings in grades one through twelve.

3. Educational games can capture, hold, broaden, and deepen the interests of pupils. (1960, p. 81)

According to an analysis of the completed questionnaires, all 100 simulations did introduce or reinforce the various subject areas; all 100 simulations were evaluated as useful on one or more grade levels; and, 97 of the 100 simulations did interest the pupils. (1960, pp. 82-83) This study used few research controls, and most of the results were based on the subjective statements of the teachers. Moreover, the teachers who participated in this study were not selected randomly. Rather, they were teachers who had volunteered to participate in the study.

In 1966, the Western Behavioral Sciences Institute conducted an investigation using a simulation in several junior and senior high school classrooms in the San Diego County Schools. On the basis of student responses to a questionnaire, staff observations, and teacher interviews, a list of hypotheses generated by the study was compiled and called "An Inventory of Hunches About Simulations as Educational Tools." The hypotheses drawn in light of the teachers' perceptions are listed below.
Simulations are 'motivators.' Their main payoff may be that they generate enthusiasm for or commitment to:
(a) learning in general, (b) social studies or some other subject area, (c) a specific discipline like history, (d) a specific course, or (e) a specific teacher.

The teacher sees his students as more able than he had thought before, and the result may be that he looks to himself more to explain failures in the classroom.

Simulations—like any new technique—cause teachers to look at their normal teaching methods with a more critical eye. (1966, p. 29)

Few research controls were used in this study and the hypotheses were based on highly subjective responses. The study's two main objectives, to investigate if simulations could fit within the time, space, administrative, and curriculum constraints of the schools, and to develop hypotheses about the use, effects, and potential value of simulations, were clearly met.

The third study to examine teachers' perceptions of simulations was conducted in 1973 by Chapman and Cousins. The expressed purpose of this study was to provide needed critical information on simulation usage in classrooms, thereby closing the "analytical gap." (1974, p. 2) One hundred and thirteen social studies teachers in eight states took part in this study. Teachers were chosen by "contact persons" (1974, p. 2), social studies professionals who favored the use of simulations. In addition to identifying teachers who had experience with simulations, the contact persons administered and collected three forms from each teacher which served as the data for the study. One form dealt with teacher background information, another with the use and placement of simulations in the curriculum, and the third form asked
about teacher use of specific simulations. Chapman and Cousins found that "Many teachers, including most of those in this study, have found simulation/games to be of interest and promise for a variety of reasons. . . ." (1974, pp. 40-41) They also found simulations to be more difficult to use than other curricular materials; require substantial preparation by the teacher; can be very costly; and may require arrangement of school time and/or space not usually part of a school routine.

The three studies mentioned above stand as initial attempts to examine simulations from a teacher's perspective. All three studies used few research controls and dealt primarily with teachers' subjective comments.

Other Aspects of Learning With Simulations

The fourth and final category of simulation research is undoubtedly the most nebulous one to deal with. Studies in this category represent a wide variety of designs, ranging from rigidly controlled experiments to studies with open-ended surveys. The remaining studies have been classified into two sub-categories and are discussed within this framework: (1) studies that have examined the personal characteristics of participants as related to performance in the simulation, and (2) studies that have investigated the behavior of participants during simulation activities.
**Personal Characteristics of Participants**

Studies in this first sub-category have attempted to investigate the relationship of the personal characteristics of the participants to success in simulations. Once again, studies in this area have conflicting findings.

Fletcher, in a study of elementary students participating in two social studies simulations, found that boys usually outperformed girls as measured by the attainment of the most points on tests developed to assess seven different categories of learning. (1971a, p. 283)

However, independent cognitive tests showed that girls learned just as much as boys. Wentworth's (1972) study of college students in Minnesota found no differences in performance between males and females on tests designed to measure cognitive achievement. A dissertation study completed by Anderson (1969) using the simulation "Consumer," contradicts the findings of Fletcher and Wentworth that girls learned just as much as boys during a simulation. Anderson found that the simulation was more effective than the conventional approach for teaching males specific cognitive skills.

Data from these studies are quite contradictory. Fletcher's review of simulation research in this area indicates:

Most studies should be able to gather standard information such as age, sex, grades in school, or standardized achievement scores. However, we really know very little about whether any of these is likely to account for much of the variance in the impact of various changes in the learning environment of simulation games. (1971b, pp. 450-451)
Behavior of Participants Exhibited During Simulations

Studies making up this category have been concerned with the types of individual behavior simulations encourage. Several studies have, with mixed success, tried to identify important behaviors exhibited during simulations and to subject them to analysis.

Feldmiller's study at The Ohio State University, and Inbar's at Johns Hopkins University are representative of this sub-category. Feldmiller recorded, coded, and categorized the verbal behavior of participants in "Choice and Chance," a home economics simulation. She concluded that the participants did ask more directional and procedural questions as a result of their involvement in this simulation. Throughout the activity, she found participants made statements and asked questions referring to the situation, the real world, and particular concepts, suggesting that simulations can involve students in higher level questioning. (1970, pp. 83-84) Although the study utilized a number of research controls, participants were not selected randomly since they were home economics teachers studying in summer school at three different institutions who had volunteered their time.

Inbar (1966) identified three factors in relation to students participating in the "Community Disaster" simulation that might influence participants' behavior in a simulation: (1) variations in the players' personal characteristics (2) differences in their predispositions toward playing a game, and (3) differences in the characteristics of the groups of which they were members. He found that the major factors related to participant behavior were the
characteristics of the group, particularly group size.

Questions concerning the relationship of participants' behavior to success in simulated activities have not been seriously explored. The identification, isolation, and testing of key variables that might influence behavior in simulations has been particularly difficult to do.

Conclusion

Research investigating the effectiveness of using simulations for educational purposes is still in its infancy. However, several common threads can be identified based on the research conducted to date. First, simulations do not appear to have any clear advantage in teaching cognition, at least on a consistent basis. Second, the research suggests that simulations may have their greatest impact on students' attitudes. Cherryholmes' (1966, pp. 4-8) review of simulation research in 1966, Fletcher's (1971b, pp. 447-448) in 1971, Wentworth and Lewis' (1973, pp. 437-438) in 1973, and Heitzman's (1976, p. 6) in 1976, concur on this point. Third, little is known about teachers' perceptions and utilization of simulations. Three studies have examined teachers' attitudes regarding simulations, but in limited ways. To this writer's knowledge no study has been conducted to measure how many teachers are using simulations and the reasons responsible for their use. Fourth, little is known about the effects of personal characteristics of participants in simulations, such as their sex, on the quality of the learning experience received. Finally, few studies have systematically examined the behavior of students participating in simulations. Some important unanswered questions persist. For example: Do students who
are usually leaders in the classroom also dominate simulation situations or do new leaders emerge? What unique behaviors are observed when people participate in simulations? Does the level of cognitive functioning among participants of a simulation change at various stages of the exercise?

What should the next step be in simulation research? Fletcher believes a structure should be imposed on all future research on simulations, since filling journals with studies analyzing various independent and dependent variables, using different instruments, resulting in findings that are neither cumulative nor comparable, is very unproductive. Fletcher's organizational plan to implement what he calls a "program of systematic research on simulation" is quite extensive and worth listing here:

1. To select a set of games which everyone will agree are games. While we may have trouble verbally defining 'game,' I would suggest that we would very rapidly identify a sufficient number of examples of things everyone would agree are games. We should weed out any which are not completely debugged, and from the remaining ones that we know can be used in a consistent fashion across different experimental sites, select, at random if no other way, ten of fifteen which represent the range of the available games.

2. To select and define a set of 'important' characteristics to vary systematically. I have proposed one set in this paper. I am more interested in seeing a set selected than the particular ones I have proposed.

3. To determine the degrees of variation in each of the characteristics chosen for systematic experimental manipulation.

4. To incorporate, for each of the selected games, these degrees of variation into the game, producing different versions of the game, each incorporating a different variation.
5. To define the player characteristics which we think are most important to record, and the dependent variable we feel are most important to explore. Again, I am more concerned that we identify a set than anything else, and my discussion of some of the dependent variable was designed to indicate how critical it is that we carefully define them, as well as to indicate how difficult it will be.

6. To develop instruments which are comparable across the set of games, yet, particularly in the case of the dependent variables, are specific to each game.

7. To set up standard data-handling procedures.

(1971b, pp. 451-452)

A plan such as the one proposed by Fletcher would require collaboration and cooperation among many researchers, but would add significantly to a greater understanding of the benefits and shortcomings of using simulation as an instructional tool.

Although the educational value of simulations has yet to be fully weighed and determined, it does appear as if simulations provide a tremendous potential for those educators who want to make their teaching more meaningful, relevant, and effective. In the words of Hall T. Sprague formerly of the Western Behavioral Sciences Institute:

We must keep some sense of balance in our appraisal of simulations until we know a great deal more. However, let me add my personal feelings, uncontaminated by hard-data findings, that participation in a simulation—compared to hearing a lecture, reading a book, sitting in a group discussion, watching a film, working through a programmed text, pushing buttons on a computer console, or listening to a tape recorder—offers more opportunities for individual learning and growth than any technique I have ever seen. I urge you to give it a try. (1969, p. 29)

Chapter II has reviewed the relevant research on simulations. Chapter III provides a description of the methodology used in this study.
Chapter III

METHODOLOGY

This chapter contains a description of the methodology employed in the study. Specifically, a description of the following areas are included: the population, formulation of the survey, the pilot test, the follow-up, and the complications of the study.

Population

The population for this study was comprised of social studies teachers in public secondary (grades seven through twelve) schools in Ohio. Since there was no method available for contacting Ohio secondary social studies teachers directly, a cluster sampling technique was used in which principals of the schools selected to participate in the study were asked to distribute the surveys randomly to members of their social studies faculties.

For this study, a secondary school was defined as a school (regardless of the charter held*) containing at least one-half of its

*A decision regarding what constituted a secondary school needed to be made since Ohio schools containing any combination of grades K-8 may apply for either an elementary or junior high school charter.
grades on the junior high (7, 8, or 9) and/or senior high school levels. Lyken Elementary School of Crawford, Ohio, for example, is composed of grades five through eight and was considered a secondary school, while Lincolnview Marsh Elementary School located in Van Wert, Ohio, contains grades four through eight, but because at least half of its grades are not on the secondary level, was not included in the list of secondary schools. Vocational, and special needs* schools were not included in the list of secondary schools.

The Ohio Educational Directory was used to identify a list of secondary schools. Thirteen hundred and forty-five schools made up this list, of which 149 were randomly chosen to participate in the study. The total number of social studies teachers was estimated to be equal to one social studies teacher per 150 students per school. Using this method, the 149 secondary schools contained 752 social studies teachers.

An effort was made to ensure that the sample of social studies teachers within the 149 schools represented a wide range of the population of social studies teachers in Ohio by using random sampling procedures to determine the sample, and conducting a thorough follow-up after the original mailing. Also, an attempt to ascertain the representativeness of the sample obtained was made; however, demographic

*The Ohio Department of Education grants special needs charters to schools that offer educational programs for students possessing physical or mental impairments, and also, for schools with special programs for students with extreme social problems. Adult evening schools also receive special needs charters.
data to be used in matching the sample obtained with the total popula-

tion of Ohio social studies teachers were unavailable. Contacts made

with Mr. Gary Orr of the Ohio Department of Education's computer

services indicated that to retrieve demographic data on Ohio social

studies teachers would be too costly.

Formulation of the Survey

Since the population was geographically scattered throughout the

state of Ohio, a mail survey was judged to be the most appropriate

method of collecting the data. The survey consisted of five parts,

and was designed to elicit information regarding selected social

studies teachers' perceptions and utilization of simulations. Part A
determined whether or not teachers have used simulations. If a

teacher indicated non-use of simulations, he was directed to answer a

question concerning why he had chosen not to use them. Teachers

indicating they have used simulations were instructed to continue on
to Part B. Part B differentiated between those teachers who have used

simulations but decided to discontinue their use, and those teachers

who have used them regularly. This section also determined how often

teachers used simulations (ranked according to light, occasional, or

heavy use), and the number of different simulations used per year. Part

C asked specific questions of those social studies teachers who have

used simulations on a regular basis. Two of the questions, for example,

identified teachers' perceptions of the advantages and disadvantages of

using simulations. Part D provided teachers with the opportunity to
describe the last class in which a simulation was used. This open-ended
part of the survey was intended to be a validation of teachers' use and understanding of simulations. The final section, Part E, dealt with teachers' responses to specific personal and professional questions, such as their age and number of years of teaching experience, along with questions regarding the location and size of their schools. All teachers, regardless of whether they have used a simulation, were asked to complete this section.

The studies carried out by Chapman and Cousins (1974) and Turner and Haley (1975), involving surveys conducted through the mail to social studies teachers, served as models for the formulation of the survey. The Chapman and Cousins study proved most beneficial in the construction of the questions relating to teachers' perceptions and utilization of simulations, such as the question dealing with the various sources of information about simulations. The Turner and Haley study served as a guide in the overall organization of the survey. Turner and Haley, for instance, designed their survey into nine sets of questions which differentiated between users and non-users of "New Social Studies" curriculum materials. The simulation survey was also designed to identify users and non-users of simulations. A number of the responses to the questions on the simulation survey were drawn from the professional literature in addition to the writer's classroom experience with simulations. Several of the responses to the two questions dealing with the advantages and disadvantages of using simulations were, for example, drawn from the ones listed by Heyman in Simulation Games for the Classroom (1975, pp. 8-9) and the ones identified by Heitzman in Educational Games and Simulations (1974,
The fifty-seven simulations listed on page five of the survey were the ones described in four professional books.* Only those simulations that appeared in at least three of the four books were included in the list of fifty-seven commercially produced simulations. Finally, Kish's (1967) Survey Sampling and Erdos' (1970) Professional Mail Surveys, provided numerous practical ideas regarding the organizational format of the survey and the wording of the questions and their responses.

The original draft of the survey was circulated among three professors of Social Studies Education, and two Professors of Curriculum and Foundations, all of whom were on the faculty of The Ohio State University. In addition, the survey was circulated among four of the writer's graduate colleagues in the College of Education at The Ohio State University. Seven of the professionals made comments in writing concerning their reaction to the survey. Verbal reactions to the survey were obtained from the four remaining professionals. The reactions to the original draft varied, with the majority of criticisms dealing with organizational problems. One professional felt that the definition of simulation appearing on page one of the survey needed further explication. Other suggestions made by the professors and graduate students were incorporated in the refinement of the survey.

*The following books were used to derive the list of commercially produced simulations: The Guide to Simulation/Games for Education and Training. 3rd Edition, by Zuckerman and Horn; Practical Methods for the Social Studies, by Gilliom; Handbook of Simulation Gaming in Social Education, by Stadsklev; and, Learning with Games: An Analysis of Social Studies Educational Games and Simulations, by Charles and Stadsklev.
On January 31, 1978, the original draft of the survey was sent to the Human Subjects Review Committee* of The Ohio State University Research Foundation. A letter requesting a waiver of the informed consent rule was also sent to the committee (See Appendix A). On February 9, 1978, the Human Subjects Review Committee approved the request for this study. Therefore, those individuals participating in this study were not required to sign a liability form prior to completing the survey.

**Pilot Test**

The revised version of the survey was mimeographed and distributed to fourteen secondary social studies teachers in the Columbus, Ohio, area. Eleven of the teachers were asked to complete the survey, making written comments in the margins where appropriate as to the clarity and organization of the instrument. Three teachers completed the survey in the presence of the writer, allowing for immediate feedback concerning any confusing and/or ambiguous parts. Most of the teachers completed the survey without encountering problems, and the average time needed to complete a survey was twelve minutes. Only two questions, involving the rank ordering of the advantages and disadvantages of using simulations, posed minor problems. All suggestions made by the teachers during the pilot test were taken into consideration in constructing

*Any study using human subjects at The Ohio State University must have the approval of the Research Foundation. The Research Foundation requires participants to sign a consent form releasing the University of any liability prior to their participation in a study.*
the final version of the survey.

On March 7, 1978, Mr. Alvin Stutz of Systems Engineering at The Ohio State University reviewed the survey in terms of its adaptability to statistical and computer analysis. With the aid of Mr. Stutz, each question of the survey was assigned a numeric code according to the instructions for the SPSS computer program. In addition, Mr. Stutz made suggestions to help in the coding of the returned surveys.

The survey was printed in its final form by The Ohio State University Printing Facility on March 10, 1978 (See Appendix B). On March 14, 1978, the surveys were mailed to the participating schools. The mailing included a letter of introduction/explanation to the principal, and a specified number of four-page surveys and cover letters for the social studies teachers (Appendix B). Stamped, self-addressed envelopes were provided to teachers for the return of the surveys.

An important part of the study involved the distribution of the surveys by the principals to the various social studies teachers. The letters of introduction/explanation to the principals were carefully written to insure that the principals understood the surveys were to be distributed randomly to members of their social studies faculties. Also, a brief explanation of how schools were chosen and some background information about the study were included in this letter. Finally, assurances were made to each principal that names of teachers and the name of his school would not be mentioned.
Follow-Up

By April 14, 1978, four weeks after the original mailing, a return of 38.6 percent (291 surveys) was received. Of the 149 schools sent surveys, 102 returned at least one survey, and 47 did not return any surveys. On April 17, 1978, a follow-up was conducted of those 47 schools.

Eight of the schools originally sent seven or more surveys were personally called. All eight principals were contacted and were requested to assist in the return of the surveys. Only one principal indicated he did not receive surveys, so additional surveys were mailed to him.

Thirty-nine of the schools that had not returned any surveys had originally been sent from one to six surveys. Letters explaining the nature of the follow-up were sent to principals of these thirty-nine schools (See Appendix C). Principals in need of additional surveys were requested to call the writer using a collect telephone call. Three principals did call to request additional surveys, which were promptly mailed to them.

Of the 102 schools that had returned at least one survey after the original mailing, twenty-three had returned less than 50 percent of the surveys mailed to them. On May 2, 1978, a follow-up mailing was made to these twenty-three schools. The mailing included a letter to all twenty-three principals requesting their help in returning the surveys (Appendix C).
The above efforts produced a return of 36 surveys, making the total number of surveys completed by social studies teachers 327. Unfortunately, it is difficult to determine the actual response rate for this study, since the number of surveys sent to a particular school was based on an estimated number of social studies teachers, and the number of surveys which actually ended up in the hands of social studies teachers cannot be determined. Based on the 752 surveys sent, the response rate was 43.5 percent.

Complications of the Study

Two unforeseen problems arose after the surveys were originally mailed. First, fifteen schools in three separate school systems required prior permission before the principals could distribute the surveys. The proper documents were filed with two of the school systems, with only one eventually approving the study. No effort was made to contact the third system since several principals of the schools in this system had already distributed the surveys.

Second, a small number of the schools to whom surveys had been originally sent were in the midst of teacher strikes and/or financial crises. This could possibly have influenced the rate of return from those schools.

Conclusion

The data for this study were collected from a randomized cluster sample of public secondary social studies teachers in Ohio using a mail survey. The data were placed on coding sheets and analyzed by computer.
This chapter has defined the population, described the designing, refining, and pilot test of the survey, and explained some of the complications encountered with the distribution and completion of some of the surveys. Chapter IV analyzes the findings of the study.
Chapter IV
DATA ANALYSIS

As indicated in Chapter III, 752 surveys were mailed to the principals of 149 public secondary schools in Ohio to be distributed to members of their social studies faculties. A total of 327 social studies teachers returned the surveys. The analysis of these 327 surveys is the major focus of this chapter. For clarity, the chapter has been divided into three parts. Part I examines the personal and professional characteristics of the teachers, along with the geographical characteristics of the schools in which they taught. Part II analyzes teachers' perceptions (both users and non-users) of simulations, and Part III analyzes the data regarding the nature and extent of teachers' utilization of simulations.

Part I: Characteristics of the Teachers

Personal Characteristics

The data contained in Table 1 show the sex of the teachers responding to the survey.
TABLE 1: DISTRIBUTION OF FREQUENCIES AND PERCENTAGES FOR TEACHERS' SEX

<table>
<thead>
<tr>
<th>Sex</th>
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<tr>
<td>Female</td>
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<td>29</td>
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<tr>
<td>Male</td>
<td>232</td>
<td>71</td>
</tr>
<tr>
<td>Total</td>
<td>327</td>
<td>100</td>
</tr>
</tbody>
</table>

Table 1 indicates that a large percentage of the teachers surveyed (71 percent) were males, while 29 percent were females.

Table 2 shows the age of teachers responding to the survey, according to nine age brackets.

TABLE 2: DISTRIBUTION OF FREQUENCIES AND PERCENTAGES FOR TEACHERS' AGE

<table>
<thead>
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<th>Years</th>
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<td>61-65</td>
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</tr>
<tr>
<td>Total</td>
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</tbody>
</table>
As can be seen from this table, the teachers surveyed represented a wide range of age groups. The greatest concentration of teachers was between the ages of twenty-six to thirty, while the smallest concentration of teachers was between the ages of sixty-one to sixty-five. Twenty-two percent of the teachers were over the age of forty-five.

Professional Characteristics

Table 3 shows respondents in relation to their number of years of teaching experience, which included the present year of teaching.

<table>
<thead>
<tr>
<th>Years</th>
<th>No.</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-5</td>
<td>73</td>
<td>22</td>
</tr>
<tr>
<td>6-10</td>
<td>111</td>
<td>34</td>
</tr>
<tr>
<td>11-15</td>
<td>56</td>
<td>18</td>
</tr>
<tr>
<td>16-20</td>
<td>44</td>
<td>13</td>
</tr>
<tr>
<td>21 or more</td>
<td>43</td>
<td>13</td>
</tr>
<tr>
<td>Total</td>
<td>327</td>
<td>100</td>
</tr>
</tbody>
</table>

As Table 3 indicates, teachers were fairly well experienced, with one-third of the teachers having from six to ten years of teaching experience, and 26 percent of the teachers having at least sixteen years of teaching experience.

Table 4 shows the breakdown of teachers according to the professional positions they held.
Table 4 indicates a majority of teachers responding to this survey were social studies teachers. In addition, fifty-four teachers (16 percent) were leaders of their departments, thirteen teachers (4 percent) taught social studies and at least one course in another discipline, and three teachers (1 percent) had teaching and administrative duties.

Table 5 displays the information regarding the degrees held by teachers.

### Table 4: Distribution of Frequencies and Percentages for Teachers' Professional Positions

<table>
<thead>
<tr>
<th>Position</th>
<th>No.</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Social Studies Teacher</td>
<td>259</td>
<td>79</td>
</tr>
<tr>
<td>Department Chairperson/Coordinator</td>
<td>52</td>
<td>16</td>
</tr>
<tr>
<td>Social Studies Teacher + Other Discipline</td>
<td>13</td>
<td>4</td>
</tr>
<tr>
<td>Social Studies Teacher + Administrator</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>327</td>
<td>100</td>
</tr>
</tbody>
</table>

### Table 5: Distribution of Frequencies and Percentages for the Degrees Held by Teachers

<table>
<thead>
<tr>
<th>Degree</th>
<th>No.</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bachelors</td>
<td>167</td>
<td>51</td>
</tr>
<tr>
<td>Masters</td>
<td>156</td>
<td>48</td>
</tr>
<tr>
<td>Doctorate</td>
<td>4</td>
<td>1</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>327</td>
<td>100</td>
</tr>
</tbody>
</table>
Table 5 shows that all teachers surveyed had at least one post-high school degree, of which 167 (51 percent) held Bachelors, 156 (48 percent) held Masters, and 4 teachers (1 percent) held doctorates. Some teachers indicated they had earned special certificates, such as Supervisors' or Principals' Certificates, however, only the highest degree earned was included in this tabulation.

Table 6 shows the teachers in relation to their memberships in professional organizations.

**TABLE 6: DISTRIBUTION OF FREQUENCIES AND PERCENTAGES FOR TEACHERS' MEMBERSHIPS IN PROFESSIONAL ORGANIZATIONS**

<table>
<thead>
<tr>
<th>Number of Organizations</th>
<th>No.</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
<td>44</td>
<td>14</td>
</tr>
<tr>
<td>One</td>
<td>31</td>
<td>9</td>
</tr>
<tr>
<td>Two</td>
<td>46</td>
<td>14</td>
</tr>
<tr>
<td>Three</td>
<td>105</td>
<td>33</td>
</tr>
<tr>
<td>Four or More</td>
<td>95</td>
<td>29</td>
</tr>
<tr>
<td>No Response</td>
<td>6</td>
<td>1</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>327</td>
<td>100</td>
</tr>
</tbody>
</table>

There were forty-four teachers (14 percent) who indicated they were not affiliated with any professional organization. Table 6 also shows that the greatest concentration of teachers belonged to three professional organizations.

Teachers were asked what grade level(s) they were teaching. There was no limit to the number of grade levels a teacher could indicate.
Table 7 shows the results of this question.

**TABLE 7: DISTRIBUTION OF FREQUENCIES FOR THE GRADE LEVEL(S) TAUGHT BY TEACHERS (N = 327)**

<table>
<thead>
<tr>
<th>Grade Level</th>
<th>No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Seventh</td>
<td>88</td>
</tr>
<tr>
<td>Eighth</td>
<td>97</td>
</tr>
<tr>
<td>Ninth</td>
<td>48</td>
</tr>
<tr>
<td>Tenth</td>
<td>92</td>
</tr>
<tr>
<td>Eleventh</td>
<td>122</td>
</tr>
<tr>
<td>Twelfth</td>
<td>121</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>568</strong></td>
</tr>
</tbody>
</table>

The largest number of teachers were teaching at least one course at the eleventh grade, and a cross-tabulation showed that the course most frequently taught at the eleventh grade was American history. The number of grade levels taught by teachers varied, ranging from 60 teachers teaching just one grade level to 3 teachers teaching grades seven through twelve.

Teachers were then asked what courses they were teaching. Table 8 shows this breakdown.
TABLE 8: DISTRIBUTION OF FREQUENCIES FOR THE COURSES TAUGHT BY TEACHERS (N = 327)

<table>
<thead>
<tr>
<th>Course</th>
<th>No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>American History</td>
<td>170</td>
</tr>
<tr>
<td>World History</td>
<td>60</td>
</tr>
<tr>
<td>Geography</td>
<td>60</td>
</tr>
<tr>
<td>Economics</td>
<td>22</td>
</tr>
<tr>
<td>Anthropology</td>
<td>5</td>
</tr>
<tr>
<td>Psychology</td>
<td>22</td>
</tr>
<tr>
<td>Government</td>
<td>97</td>
</tr>
<tr>
<td>Social Studies</td>
<td>57</td>
</tr>
<tr>
<td>Sociology</td>
<td>34</td>
</tr>
<tr>
<td>Ohio History</td>
<td>59</td>
</tr>
<tr>
<td>Others</td>
<td>67</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>653</strong></td>
</tr>
</tbody>
</table>

American history is clearly the most frequently taught subject among respondents, with 170 of the 327 teachers indicating they taught one or more such courses. Anthropology was the least often course taught by these teachers, with 5 of the 327 teachers indicating they taught one or more such courses. The "other" category was made up of a variety of courses usually taught on an elective basis for one semester.

The last professional characteristic of teachers dealt with whether or not teachers held permanent contracts. Table 9 shows the
results of this tabulation.

TABLE 9: DISTRIBUTION OF FREQUENCIES FOR THOSE TEACHERS HOLDING PERMANENT CONTRACTS

<table>
<thead>
<tr>
<th>Yes or No</th>
<th>No.</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>187</td>
<td>57</td>
</tr>
<tr>
<td>No</td>
<td>140</td>
<td>43</td>
</tr>
<tr>
<td>Total</td>
<td>327</td>
<td>100</td>
</tr>
</tbody>
</table>

The data in Table 9 indicate that a majority of the teachers surveyed did hold permanent contracts.

Geographical Characteristics

Teachers were asked two questions regarding the location of their schools and one question regarding the student populations of their schools. Table 10 shows the breakdown of teachers relative to the location of their schools.
As can be seen from Table 10, the greatest concentration of teachers were from suburban schools. Two teachers felt that their schools did not fit into the provided classification scheme, so they left this question blank.

Teachers were also asked how far their schools were from a teacher training institution such as a college or university. The following table provides the results of this question.
TABLE 11: DISTRIBUTION OF FREQUENCIES AND PERCENTAGES FOR THE LOCATION OF TEACHERS' SCHOOLS FROM A TEACHER TRAINING INSTITUTION

<table>
<thead>
<tr>
<th>Miles</th>
<th>No.</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-10</td>
<td>189</td>
<td>58</td>
</tr>
<tr>
<td>11-50</td>
<td>123</td>
<td>38</td>
</tr>
<tr>
<td>Over 50</td>
<td>15</td>
<td>4</td>
</tr>
<tr>
<td>Total</td>
<td>327</td>
<td>100</td>
</tr>
</tbody>
</table>

Table 11 indicates that over half the teachers (189, 58 percent) taught in schools that were within 10 miles of a teacher training institution, 123 teachers (38 percent) taught in schools that were 11-50 miles from a teacher training institution, and 15 teachers (4 percent) taught in schools that were over 50 miles from a teacher training institution.

Finally, teachers were asked about the number of students attending their schools. Table 12 shows the student populations of the teachers' schools, based on four categories.
Table 12 shows that there were 139 teachers (42 percent) who taught in schools with populations in excess of 1000 students, 113 teachers (35 percent) who taught in schools with student populations ranging from 600 to 1000 students, and 74 teachers (22 percent) who taught in schools with student populations under 600 students.

Significance of These Characteristics

Chi square tests were applied to the personal, professional, and geographical characteristics of teachers in relation to teachers' use of simulations. No characteristic proved to be related significantly (at the .05 level) to the utilization of simulations. Only one variable, the location of teachers' schools, was close to being related statistically (at the .05 level) to teachers' use of simulations.
Part II: Teachers' Perceptions of Simulations

Table 13 indicates the total number of teachers who returned surveys according to three groups: (1) teachers who have never used a simulation (2) teachers who at one time used simulations, but decided to discontinue their use, and (3) teachers who are regular users of simulations on either a light, occasional, or heavy basis.

Table 13: DISTRIBUTION OF FREQUENCIES AND PERCENTAGES FOR TEACHERS' USE OF SIMULATIONS BY GROUPS

<table>
<thead>
<tr>
<th>Simulation Usage</th>
<th>No.</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Never Used Simulations</td>
<td>120</td>
<td>37</td>
</tr>
<tr>
<td>Discontinued Use</td>
<td>19</td>
<td>5</td>
</tr>
<tr>
<td>Light Regular User</td>
<td>107</td>
<td>33</td>
</tr>
<tr>
<td>Occasional Regular User</td>
<td>65</td>
<td>20</td>
</tr>
<tr>
<td>Heavy Regular User</td>
<td>16</td>
<td>5</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>327</td>
<td>100</td>
</tr>
</tbody>
</table>

As can be seen from the table above, 120 teachers had never used a simulation, 19 used simulations, but chose to discontinue their use, and 188 teachers were regular users of simulations. Respondents in each of the three major groups were asked about their perceptions of simulations. The 120 non-users of simulations were asked the following question: WHAT IS (ARE) THE MAJOR REASON(S) FOR NOT USING SIMULATIONS? Table 14 summarizes the data obtained from this question, in order of the frequency of response.
<table>
<thead>
<tr>
<th>Reasons</th>
<th>No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. I question their educational benefit</td>
<td>44</td>
</tr>
<tr>
<td>2. They are too expensive</td>
<td>32</td>
</tr>
<tr>
<td>3. My students are not receptive to this type of strategy</td>
<td>17</td>
</tr>
<tr>
<td>4. The subject matter I deal with is not conducive to this type of strategy</td>
<td>17</td>
</tr>
<tr>
<td>5. Never heard of them before</td>
<td>8</td>
</tr>
<tr>
<td>6. Administration frowns on their use</td>
<td>5</td>
</tr>
<tr>
<td>7. The teachers who use them have noisy classes</td>
<td>3</td>
</tr>
<tr>
<td>8. The department chairperson/coordinator frowns on their use</td>
<td>2</td>
</tr>
<tr>
<td>9. Others</td>
<td></td>
</tr>
<tr>
<td>Time involved</td>
<td>26</td>
</tr>
<tr>
<td>Unfamiliar with them</td>
<td>10</td>
</tr>
<tr>
<td>Doesn't fit my teaching style</td>
<td>10</td>
</tr>
<tr>
<td>Miscellaneous</td>
<td>21</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>195</strong></td>
</tr>
</tbody>
</table>
Teachers questioning the educational benefit of simulations appears to be the major obstacle inhibiting usage. The "other" category accounted for nearly a third of the responses to this question. The responses, "time involved," "unfamiliar with them," and "doesn't fit my teaching style," might have been checked more often by teachers had they been originally listed as options for this question.

As Table 13 indicated, nineteen of the respondents used simulations at one time, but chose to discontinue their use. These teachers were asked the following question: WHAT IS (ARE) THE MAJOR REASON(S) FOR CHOOSING NOT TO USE SIMULATIONS AGAIN? Teachers could choose up to three responses, and Table 15 shows the results of this question.

<table>
<thead>
<tr>
<th>Reasons</th>
<th>No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Required too much preparation and work to properly execute</td>
<td>5</td>
</tr>
<tr>
<td>2. Students associated simulations with free time</td>
<td>4</td>
</tr>
<tr>
<td>3. It was too difficult to find simulations for some subject areas</td>
<td>4</td>
</tr>
<tr>
<td>4. I question their educational benefit</td>
<td>3</td>
</tr>
<tr>
<td>5. Others</td>
<td></td>
</tr>
<tr>
<td>Miscellaneous</td>
<td>11</td>
</tr>
<tr>
<td>Total</td>
<td>27</td>
</tr>
</tbody>
</table>

The data do not indicate a clear-cut reason why these nineteen teachers decided to discontinue the use of simulations. The largest
number of responses were contained in the "other" category, with all eleven responses being different. One teacher wrote, "I personally, am not comfortable with them--prefer dialogues, discussing, and research," while another stated, "I do not have the patience to properly use them." Three of the nineteen teachers discontinued the use of simulations because they questioned the educational benefit of them.

One hundred and eighty-eight teachers, as indicated by Table 13 used at least one simulation a year. These teachers were asked four questions relating to their perceptions of simulations as learning tools based on their experience with them. The first question this group responded to was: HOW DID YOU FIND OUT ABOUT SIMULATIONS? Teachers could choose a maximum of three responses, and the data from this question are contained in the following table.
TABLE 16: DISTRIBUTION OF FREQUENCIES REGARDING TEACHERS' SOURCES OF INFORMATION ABOUT SIMULATIONS (N = 188)

<table>
<thead>
<tr>
<th>Sources</th>
<th>No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Professional social studies publication, such as a book or a journal</td>
<td>57</td>
</tr>
<tr>
<td>2. Colleague</td>
<td>45</td>
</tr>
<tr>
<td>3. Workshop or institute</td>
<td>44</td>
</tr>
<tr>
<td>4. College or university undergraduate course</td>
<td>42</td>
</tr>
<tr>
<td>5. Advertisement from a publisher</td>
<td>40</td>
</tr>
<tr>
<td>6. College or university graduate course</td>
<td>40</td>
</tr>
<tr>
<td>7. Professional meeting</td>
<td>21</td>
</tr>
<tr>
<td>8. Department chairperson/ coordinator</td>
<td>17</td>
</tr>
<tr>
<td>9. Librarian</td>
<td>17</td>
</tr>
<tr>
<td>10. Others</td>
<td></td>
</tr>
<tr>
<td>Miscellaneous</td>
<td>22</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>345</td>
</tr>
</tbody>
</table>

It appears from Table 16 that a large number of the teachers surveyed learned about simulations from professional social studies publications. A large number of teachers chose the "other" category. The responses contained in this category were quite varied, with no clear patterns emerging. Four teachers indicated they had thought of simulations on their own and decided to use them, and one teacher indicated he had seen a simulation being used successfully in a foreign classroom while traveling abroad.
Teachers were then asked the following question: IN WHAT AREA(S) OF THE SIMULATION FIELD DOES WORK NEED TO BE DONE? Teachers had seven responses to choose from in addition to an "other" category, and they could choose no more than three responses. Table 17 shows the data from this question.

**TABLE 17: DISTRIBUTION OF FREQUENCIES FOR TEACHERS' PERCEPTIONS REGARDING NEEDED WORK IN THE SIMULATION FIELD (N = 188)**

<table>
<thead>
<tr>
<th>Need</th>
<th>No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Publishing simulations in specific subject areas</td>
<td>81</td>
</tr>
<tr>
<td>2. Sponsoring of more workshops and institutes</td>
<td>77</td>
</tr>
<tr>
<td>3. Reducing the costs of simulations</td>
<td>77</td>
</tr>
<tr>
<td>4. Developing methods to disseminate information about simulations</td>
<td>46</td>
</tr>
<tr>
<td>5. Publishing more simulation journals</td>
<td>27</td>
</tr>
<tr>
<td>6. Informing administrators of the potential educational worth of simulations</td>
<td>23</td>
</tr>
<tr>
<td>7. Informing department chairpersons/ coordinators of the potential educational worth of simulations</td>
<td>23</td>
</tr>
<tr>
<td>8. Others</td>
<td></td>
</tr>
<tr>
<td>Evaluating of learning outcomes with simulations</td>
<td>8</td>
</tr>
<tr>
<td>Reducing the time needed to execute</td>
<td>6</td>
</tr>
<tr>
<td>Miscellaneous</td>
<td>9</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>377</td>
</tr>
</tbody>
</table>
Over half of the responses, as indicated by Table 17, dealt with three needs: "Publishing simulations in specific subject areas," "Sponsoring more workshops and institutes," and "Reducing the costs of simulations." Eight teachers wrote in the "other" category that they felt work needed to be done in evaluating student achievement resulting from participation in a simulation, and six teachers wrote in this category that work needed to be done to reduce the time needed to execute a simulation. If evaluation and time had been options for this question, one might wonder if they would have been checked by more respondents. The remaining comments in the "other" category were varied. One teacher wrote, "Need to design simulations for specific grade levels--many seem very advanced and complicated," while another teacher commented, "Developing materials (instructions) for teachers to be able to develop their own simulations--I took a course on this and it was helpful."

The last two questions dealing with teachers' perceptions of simulations were concerned with the rank ordering of the advantages and disadvantages of using simulations. Teachers had sixteen advantages to choose from, in addition to an "other" category. Table 18 reports the data regarding the five highest rated advantages as perceived by teachers.
### Table 18: Mean Ranking for the Five Highest Rated Advantages of Using Simulations (N = 188)

<table>
<thead>
<tr>
<th>Advantage</th>
<th>Mean Ranking</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Provides variety (change of pace) for students</td>
<td>2.0</td>
</tr>
<tr>
<td>2. Students become motivated</td>
<td>2.1</td>
</tr>
<tr>
<td>3. Students spend less time listening and more time 'doing.'</td>
<td>2.2</td>
</tr>
<tr>
<td>4. Students gain a more practical view of the subject matter</td>
<td>2.3</td>
</tr>
<tr>
<td>5. Involves more students</td>
<td>2.4</td>
</tr>
</tbody>
</table>

Teachers could choose and rank a maximum of four advantages, and the five advantages listed in Table 14 were the ones that consistently received the highest priority for all four rankings.* "Provides variety (change of pace) for students" received the highest priority of all the possible responses, and "Gives me a break in teaching" received the lowest overall ranking among the responses listed on the survey.

Table 19 shows the five disadvantages receiving the highest priority from teachers. For this question, teachers could choose from nine possible disadvantages plus an "other" category. A maximum of

*Priority was computed by summing the rankings for each item and dividing by the number of respondents ranking the item. This could produce a range of values from 1.00 to 4.0, with 1.00 being the highest possible ranking, 4.0 being the lowest, and 2.5 being the midpoint on the scale.
four disadvantages were to be chosen and ranked (refer to footnote on page 56).

**TABLE 19: MEAN RANKING FOR THE FIVE HIGHEST RATED DISADVANTAGES OF USING SIMULATIONS (N = 188)**

<table>
<thead>
<tr>
<th>Disadvantages</th>
<th>Mean Ranking</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Requires a great deal of preparation and work to properly execute</td>
<td>2.0</td>
</tr>
<tr>
<td>2. Can only use simulations with certain groups of students</td>
<td>2.1</td>
</tr>
<tr>
<td>3. Difficult to find a simulation in some subject areas</td>
<td>2.12</td>
</tr>
<tr>
<td>4. Students associate simulations with free time</td>
<td>2.3</td>
</tr>
<tr>
<td>5. Class become too noisy</td>
<td>2.5</td>
</tr>
</tbody>
</table>

Table 19 reveals that the disadvantage to receive the highest priority was "Requires a great deal of preparation and work to properly execute." The disadvantages receiving the lowest priority among the ones listed on the survey dealt with the administration and department chairperson/coordinator frowning on the use of simulations.

Teachers were then asked: IN WHAT COURSE DO YOU MOST FREQUENTLY USE SIMULATIONS? The data obtained from this question are shown in the following table.
Table 20: DISTRIBUTION OF FREQUENCIES AND PERCENTAGES FOR THE COURSES IN WHICH SIMULATIONS WERE USED MOST FREQUENTLY (N = 134)

<table>
<thead>
<tr>
<th>Course</th>
<th>No.</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. American History</td>
<td>64</td>
<td>48</td>
</tr>
<tr>
<td>2. Government</td>
<td>28</td>
<td>21</td>
</tr>
<tr>
<td>3. World History</td>
<td>9</td>
<td>7</td>
</tr>
<tr>
<td>4. Ohio History</td>
<td>7</td>
<td>5</td>
</tr>
<tr>
<td>5. Geography</td>
<td>5</td>
<td>4</td>
</tr>
<tr>
<td>6. Social Studies</td>
<td>5</td>
<td>4</td>
</tr>
<tr>
<td>7. Economics</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>8. Sociology</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>9. Psychology</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>10. Others</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Miscellaneous</td>
<td>6</td>
<td>4</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>134</td>
<td>100</td>
</tr>
</tbody>
</table>

Table 20 shows that teachers used simulations the most in American History. Two courses, Anthropology and Black Studies, failed to register any responses. A number of teachers could not decide on the course in which they used simulations the most, and therefore entered more than one responses for this question. Those teachers who chose more than one response were not included in the tabulation appearing in Table 20. The "other" category was comprised of six different mini-courses usually taught on a semester basis.
To find out the grade level in which simulations were used the most, the following question was asked of teachers: WITH WHAT GRADE LEVEL OF STUDENTS DO YOU MOST FREQUENTLY USE SIMULATIONS? Table 21 displays the data obtained from this question.

**TABLE 21: DISTRIBUTION OF FREQUENCIES AND PERCENTAGES FOR THE GRADE LEVEL IN WHICH SIMULATIONS WERE USED MOST FREQUENTLY (N = 142)**

<table>
<thead>
<tr>
<th>Grade Level</th>
<th>No.</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Eighth</td>
<td>42</td>
<td>30</td>
</tr>
<tr>
<td>2. Eleventh</td>
<td>32</td>
<td>22</td>
</tr>
<tr>
<td>3. Twelfth</td>
<td>26</td>
<td>18</td>
</tr>
<tr>
<td>4. Ninth</td>
<td>17</td>
<td>12</td>
</tr>
<tr>
<td>5. Seventh</td>
<td>15</td>
<td>10</td>
</tr>
<tr>
<td>6. Tenth</td>
<td>10</td>
<td>8</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>142</td>
<td>100</td>
</tr>
</tbody>
</table>

Table 21 indicates that 30 percent of the teachers most frequently used simulations on the eighth grade level. As with the previous question, several teachers entered more than one response, thus voiding their answers to this question.

**Part III: The Nature and Extent of Teachers' Use of Simulations**

Part III is concerned with analyzing the data regarding the nature and extent of simulation usage among the teachers surveyed. This part deals solely with the responses to selected questions by the
188 regular users of simulations.

These teachers were asked: FOR HOW MANY YEARS HAVE YOU BEEN USING SIMULATIONS? Table 22 shows the results of this question.

TABLE 22: DISTRIBUTION OF FREQUENCIES AND PERCENTAGES FOR THE NUMBER OF YEARS TEACHERS HAVE BEEN USING SIMULATIONS (N = 188)

<table>
<thead>
<tr>
<th>Years</th>
<th>No.</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Six or more</td>
<td>61</td>
<td>33</td>
</tr>
<tr>
<td>2. Four</td>
<td>40</td>
<td>22</td>
</tr>
<tr>
<td>3. Three</td>
<td>32</td>
<td>17</td>
</tr>
<tr>
<td>4. Five</td>
<td>30</td>
<td>16</td>
</tr>
<tr>
<td>5. One</td>
<td>12</td>
<td>6</td>
</tr>
<tr>
<td>6. Two</td>
<td>10</td>
<td>5</td>
</tr>
<tr>
<td>No Response</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>188</td>
<td>100</td>
</tr>
</tbody>
</table>

As can be seen from Table 22, the largest percentage of teachers regularly using simulations have been using them for six or more years. It is difficult to ascertain the nature of simulation usage among those teachers who checked the "Six or more" response since many of them did not specify the exact number of years in the blank next to the response as they were instructed to do. Of those teachers checking the "Six or more" response and filling in the appropriate blank, the longest any teacher had been using simulations was for sixteen years.

Teachers were also asked if they had ever developed their own simulation. Table 23 summarizes the data obtained from this question.
TABLE 23: DISTRIBUTION OF FREQUENCIES AND PERCENTAGES FOR TEACHERS' DEVELOPMENT OF THEIR OWN SIMULATIONS (N = 188)

<table>
<thead>
<tr>
<th>Yes or No</th>
<th>No.</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>129</td>
<td>69</td>
</tr>
<tr>
<td>No</td>
<td>59</td>
<td>31</td>
</tr>
<tr>
<td>Total</td>
<td>188</td>
<td>100</td>
</tr>
</tbody>
</table>

From Table 23 it can be seen that a majority of teachers (69 percent) who were regular users of simulations, had developed simulations, while there were 31 percent of the teachers who had not developed them.

Teachers were then asked the following question: TO WHAT EXTENT MIGHT YOU BE USING SIMULATIONS IN THE FUTURE? Teachers had five responses to choose from, and their responses are shown in Table 24.

TABLE 24: DISTRIBUTION OF FREQUENCIES AND PERCENTAGES FOR TEACHERS' FUTURE USE OF SIMULATIONS (N = 188)

<table>
<thead>
<tr>
<th>Response</th>
<th>No.</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. I will probably use at about the same rate</td>
<td>133</td>
<td>71</td>
</tr>
<tr>
<td>2. I will probably increase their use</td>
<td>31</td>
<td>17</td>
</tr>
<tr>
<td>3. I don't know</td>
<td>14</td>
<td>7</td>
</tr>
<tr>
<td>4. I will probably decrease their use</td>
<td>6</td>
<td>3</td>
</tr>
<tr>
<td>5. I will probably discontinue their use</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td>Total</td>
<td>188</td>
<td>100</td>
</tr>
</tbody>
</table>
The table above indicates that the majority of teachers (133, 71 percent) will use simulations at about the same rate. Only fourteen teachers (7 percent) did not know about their future use of simulations.

To find out how long teachers usually spend on one simulation, the following question was asked: WHAT IS THE TOTAL NUMBER OF CLASS PERIODS IT USUALLY TAKES TO CONDUCT ONE SIMULATION? Teachers had the option of choosing from one to five or more periods, and Table 25 shows the data regarding this question.

**Table 25: DISTRIBUTION OF FREQUENCIES AND PERCENTAGES FOR THE NUMBER OF PERIODS NEEDED TO CONDUCT ONE SIMULATION (N = 188)**

<table>
<thead>
<tr>
<th>Number of Periods</th>
<th>No.</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Two</td>
<td>55</td>
<td>29</td>
</tr>
<tr>
<td>2. Three</td>
<td>41</td>
<td>22</td>
</tr>
<tr>
<td>3. Five or more</td>
<td>35</td>
<td>19</td>
</tr>
<tr>
<td>4. One</td>
<td>25</td>
<td>13</td>
</tr>
<tr>
<td>5. Four</td>
<td>24</td>
<td>13</td>
</tr>
<tr>
<td>6. No Response</td>
<td>8</td>
<td>4</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>188</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

Table 25 indicates that the time needed to conduct one simulation varies a great deal among teachers. Eight teachers did not respond to this question because they could not decide on one response. All eight teachers wrote comments in the margin next to this question that their use of simulations varies according to the simulation used. The most extreme responses came from two individuals who checked the "Five
or more" response and wrote that they have used simulations to teach entire units to their students.

The final question asked of the regular users of simulations regarding their use of simulations dealt with the specific simulations they have used. Teachers were given a list of fifty-seven commercially produced simulations from which to choose. If a simulation they had used was not listed, teachers were instructed to write in the names of those simulations in the provided spaces. Table 26 indicates the eighteen most frequently used simulations by this group of teachers.
TABLE 26: DISTRIBUTION OF FREQUENCIES FOR THE EIGHTEEN MOST FREQUENTLY USED SIMULATIONS (N = 188)

<table>
<thead>
<tr>
<th>Simulation</th>
<th>No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Starpower</td>
<td>33</td>
</tr>
<tr>
<td>2. Ghetto</td>
<td>24</td>
</tr>
<tr>
<td>3. Dangerous Parallel</td>
<td>20</td>
</tr>
<tr>
<td>4. Consumer</td>
<td>16</td>
</tr>
<tr>
<td>5. Democracy</td>
<td>16</td>
</tr>
<tr>
<td>6. Jury Game</td>
<td>15</td>
</tr>
<tr>
<td>7. Generation Gap</td>
<td>14</td>
</tr>
<tr>
<td>8. Conflict</td>
<td>13</td>
</tr>
<tr>
<td>9. War and Peace</td>
<td>12</td>
</tr>
<tr>
<td>10. Ecology</td>
<td>10</td>
</tr>
<tr>
<td>11. Economic System</td>
<td>10</td>
</tr>
<tr>
<td>12. Life Career</td>
<td>10</td>
</tr>
<tr>
<td>13. Radicals vs. Tories</td>
<td>10</td>
</tr>
<tr>
<td>14. Crises</td>
<td>9</td>
</tr>
<tr>
<td>15. Shipwreck</td>
<td>9</td>
</tr>
<tr>
<td>16. Market Game</td>
<td>9</td>
</tr>
<tr>
<td>17. Inner City Planning</td>
<td>9</td>
</tr>
<tr>
<td>18. Stock Market</td>
<td>9</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>248</strong></td>
</tr>
</tbody>
</table>
The eighteen simulations that are listed in Table 26 vary enormously in the subject area with which they deal, and the grade levels for which they were designed. Only one simulation, "Stock Market," finished in the top eighteen and was not on the original list of the fifty-seven simulations. Teachers wrote in numerous simulations they had previously used, and all but three of the simulations on the original list had been used by at least one teacher. One teacher wrote in the name of a simulation that she had designed and then had published by a simulation company.

Conclusion

Chapter IV has analyzed the data obtained from the 327 social studies teachers. Chapter V presents the summary of the study, interpretation of the findings, and implications for further research.
Chapter V

SUMMARY, INTERPRETATION, AND IMPLICATIONS

FOR FURTHER RESEARCH

Summary

This study was intended to be an initial attempt to examine some perceptions about the nature and extent of the utilization of simulations among a selected group of social studies teachers. Specifically, the problem of this study was to: (1) examine perceptions held by selected Ohio public secondary social studies classroom teachers concerning simulations, and (2) assess the nature and extent of simulation usage among selected public secondary social studies classroom teachers in Ohio. Accordingly, a survey consisting of twenty-seven questions was designed to examine teachers' perceptions and utilization of simulations, and was administered through the mail to a randomly selected group of public secondary principals. These principals were requested to distribute the surveys randomly to members of their social studies faculties. The data from the completed surveys were placed on coding sheets and analyzed by computer.

Based on an estimated response rate of 43.5 percent, the data showed that 120 teachers (37 percent) had never used a simulation; 19
teachers (5 percent) used simulations at one time, but chose to discontinue their use; and 188 teachers (58 percent) had been regularly using simulations. The 188 regular users of simulations were classified further according to their rate of use of simulations, with light use constituting the use of at least one or two different simulations a year; occasional use being the use of from three to five different simulations a year; and heavy use being the use of six or more different simulations a year. Using this classification, it was found that 107 teachers (33 percent) had been using simulations on a light basis; 65 teachers (20 percent) on an occasional basis; and 16 teachers (5 percent) had been using simulations on a heavy basis.

Both users and non-users of simulations were asked specific questions regarding their perceptions of simulations. A sizeable number of non-users had decided not to use simulations because they questioned their educational benefit. Only eight of the teachers (less than 1 percent) who were non-users of simulations indicated they had never heard of simulations. For those nineteen teachers who discontinued the use of simulations, the most frequently chosen response to explain their non-use was that simulations "required too much preparation and work to properly execute." Over half of the regular users of simulations (128, 69 percent) had developed their own simulations, and the most frequently chosen source of information regarding simulations was a "professional social studies publication, such as a book or a journal." Teachers were also asked to choose among lists of advantages and disadvantages of using simulations. "Provides variety (change of pace) for students" was the advantage receiving the highest priority
from the regular users of simulations, while "requires a great deal of preparation and work to properly execute" was the disadvantage receiving the highest priority. When teachers were asked about what they felt was needed work in the area of simulation, over half of the responses dealt with three needs: (1) "publishing simulations in specific subject areas" (2) "sponsoring of more workshops and institutes" and (3) "reducing the costs of simulations."

The 188 regular users were asked specific questions relating to their utilization of simulations. In regard to teachers' utilization in the future, the data showed that 133 teachers (71 percent) might be using simulations at the same rate in the future, and 31 teachers (16 percent) felt they might increase their use of simulations. The remaining fourteen teachers (12 percent) either did not know about their future use of simulations, felt they might decrease simulation usage, or indicated they might discontinue the use of simulations.

The data also showed that nearly a third of the teachers (61, 33 percent) had been using simulations for six or more years. The number of periods it takes to conduct one simulation varies among teachers and the simulations used, with fifty-five teachers (29 percent, the largest category of responses) indicating they usually spend two periods to conduct one simulation. Finally, teachers were asked which commercially produced simulations they have used. The most frequently chosen simulation was "Starpower," which was used by thirty-three teachers (17 percent).
Interpretation

As with any educational innovation, making teachers aware can be a major task. Awareness of simulations does not seem to be a major factor inhibiting simulation usage, since only 8 of the 327 teachers indicated they had never heard of simulations. The study also found that nearly 60 percent of the teachers surveyed were using simulations regularly, suggesting that these teachers have found simulations to be of enough interest and promise to warrant their regular use. Many teachers were interested enough to develop their own simulations, with 69 percent of the regular users indicating that they had developed them. It also appears that simulations have been fairly well accepted by the administration and department leaders in the schools surveyed. The two responses, "administration frowns on their use," and "department chairperson/coordinator frowns on their use," consistently finished low on the list of reasons for not using simulations and on the list of disadvantages of using simulations.

As mentioned previously, awareness of simulations does not seem to be a major factor blocking teachers' use of them. Rather, the non-use of simulations appears to be linked to teachers' skepticism about their educational benefit, concern over their costs, and unwillingness to spend the extra time needed to prepare and execute them. This study did not uncover the origins of teachers' skepticism surrounding the educational benefit of simulations. One might speculate, however, that the non-users may see simulations merely as games that have little educational value. Six non-users did make
negative comments on the last page and in the margins of the survey expressing their concern over the place of simulation in the classroom. One teacher remarked, "My general reaction to 'simulation' as a means of learning is that it is just another game we play in teaching with the result of NO REAL LEARNING." The stigma that simulations are just games offering more fun than learning can also pervade students' views. It should be noted that "students associate simulations with free time" was the disadvantage receiving the second highest priority from teachers in this study. Students can associate simulations with free time for various reasons, especially if they are used improperly by teachers. For example, teachers who use simulations after a quiz on Friday or on the last two days of a semester may be fostering this stigma. Obviously, even if simulations are used properly, it is no guarantee that student learning will take place. It is curious to note that of the nineteen teachers who chose to stop using simulations, only three discontinued their use because they questioned their educational benefit.

As mentioned in Chapter II, simulation research tends to support the positive relation between student affective growth and the use of simulations. This, however, is not one of the major reasons why the regular simulation users in this study have been doing so. The two responses, "can develop or alter certain attitudes or values," and "students can develop empathy for people in roles they play," consistently received low priority as advantages of using simulation. It appears from the data that a sizeable number of teachers used simulations because they give their students a change of pace, in
addition to providing students with other practical and motivational benefits.

As mentioned earlier, Chapman and Cousins conducted a study to examine teachers' perceptions and utilization of simulations. They asked teachers about their various sources of information on simulations. Chapman and Cousins found: "... teachers obtained information on simulation/games from several sources, mainly 'literature,' 'workshops and teacher institutes,' and 'colleagues.'" (1974, p. 8) This finding closely parallels the one made in this study. Teachers indicated that they learned about simulations from a variety of sources, including: (1) "professional social studies publication, such as a book or a journal"; (2) "colleagues"; (3) "workshops and institutes"; (4) "advertisement from a publisher"; and (5) "college or university graduate course." These two findings highlight the importance of the professional literature in disseminating information about simulations to teachers. Interestingly, both studies did find a number of teachers who created their own simulations without the aid of outside informational sources.

When the regular users of simulations were asked about what they felt were needed improvements in the simulation field, the majority of responses dealt with these three needs: (1) "publishing simulations in specific subject areas"; (2) "sponsoring more workshops and institutes"; and (3) "reducing the costs of simulations." Based on this data, it would appear that a worthwhile focus for inservice programs would be to help teachers design and develop their own simulations in areas lacking commercially produced simulations. This,
undoubtedly, would reduce the amount of money teachers spend on commercial simulations.

A possible bias inherent in a study such as this, that only those teachers familiar with simulations would take the time to fill out the surveys, is nearly impossible to measure. This is due to two factors: (1) the total number of surveys to actually reach social studies teachers is unknown, and (2) the total number of social studies teachers who did receive surveys but for various reasons were uninterested in completing them is also unknown. However, an encouraging point associated with this is that 37 percent of the respondents had never used simulations but did take the time to answer the surveys.

The data showed "can only use simulations with certain groups of students" was the disadvantage receiving the second highest priority from teachers. This study was not able to explore teachers' perceptions beyond this point, which leaves a number of fundamental questions unanswered, including the following: What kinds of students work (or do not work) well with simulations? How can teachers diagnose groups of students who will probably not benefit from participation in a simulation? What kinds of preparatory activities should teachers conduct to help insure that a simulation will work well with their students?

A number of regular users of simulations felt that methods which would disseminate information about simulations needed to be developed. This need is bound to become more acute as the number of simulations produced commercially rises. Hopefully, teachers are familiar or will become familiar with *The Guide to Simulation/Games for Education and*
Training by Zuckerman and Horn, and the Handbook of Simulation and Gaming in Social Education by Stadsklev. These two reference books, in addition to numerous simulation journals, contain an abundance of information about simulations.

In his discussion of teachers' utilization of simulations, Heyman expressed the following belief:

Teachers experienced with simulations have used them for as much as one-quarter to one-half of the total class time, but most teachers use simulations less frequently, perhaps two or three times a term. (1975, p. 15)

The data from this study showed that a majority of the regular users of simulations (57 percent) were using them at a rate of one or two different simulations a year, somewhat less frequently than Heyman had thought. These data suggest that simulations actually assume only a minor part in the total instructional programs being provided by many of these teachers.

It appears as if the simulation field is healthy, judging from the 188 regular users of simulations, the 133 regular users who indicated they might use simulations at the same rate in the future, and the 31 regular users of simulations who felt they might increase their use of simulations. Although the initial flurry of interest surrounding the appearance of simulation in the classroom is subsiding, it does appear from the analysis of the 327 surveys that for many teachers simulations have had an impact. It also appears that the issue regarding the educational worth of simulations may be debated by educators ad infinitum.
Implications for Further Research

Since few systematic studies have been conducted to investigate teachers' perceptions and utilization of simulations, the following two recommendations for further research seem warranted.

1. A more rigorous study needs to be conducted to investigate teachers' perceptions and utilization of simulations on a smaller scale, perhaps among teachers in a particular school system. A study of this kind would allow a more in-depth probe of the current practices and attitudes regarding simulations, and would also allow the researcher to identify and study additional variables that may be related to teachers' use of simulations. One unanswered question in this study, dealing with why some teachers question the educational benefit of simulations, could be easily pursued in a study such as the one suggested above.

2. A study needs to be conducted using a similar survey, void of some of the errors made in this study. More specifically, the following suggestions are made which would enable the researcher to conduct a similar study under more optimal conditions:
   a. If possible, lists should be used containing the names and addresses of the social studies teachers to be sampled. This allows for direct contact with participating teachers, establishment of a finite N, a greater possibility of obtaining a representative sample, and would provide the opportunity to conduct
a more thorough and efficient follow-up.

b. Prior permission should be secured from all schools and/or school systems to be used in the study. This would allow for greater ease in the distribution and completion of the surveys.

c. Finally, some of the questions appearing on the survey should be modified or deleted. Also, a number of responses should be added to certain questions.

Hopefully, this study has generated ideas that may be used in future research to assist educators in better understanding an instructional tool such as simulation.
APPENDIX A

WAIVER OF INFORMED CONSENT
January 31, 1978

Memo to: Chairperson of the Human Subject Review Committee, OSU Research Foundation, Room 205

From: Jeffrey J. Blaga, Graduate Teaching Associate, The Ohio State University

Re: Request for waiver of informed consent

I am attaching the necessary materials for clearance of my doctoral study with your office.

I would like to request that the form concerning informed consent be waived for this study. I have made every effort to inform the subjects of the purpose of this study, and that answering the survey is completely voluntary. In addition, I have provided information to the subjects regarding the confidentiality of their responses.

I feel that requiring an informed consent form would add an unnecessary sinister air to my study, which might ultimately reduce my response rate. Also, there are absolutely no risks to subjects participating in this study.

My proposal was accepted earlier this month by my reading committee. Thank you for your time and consideration of this request.

Sincerely,
APPENDIX B

SIMULATION SURVEY AND LETTERS TO PRINCIPALS AND TEACHERS
SIMULATION SURVEY

There is much confusion about what exactly constitutes a simulation. Many terms, such as simulation game, role playing, social simulation, and educational game, are usually associated with simulations. For this study, the term simulation will be used in a broad sense, representing social simulations and simulation games. Specifically, a simulation will be defined as: a teaching strategy where an operating model of a social process has been created to be played out by students to provide them with life-like problem-solving experiences. By approximating life-like conditions in the classroom, simulations provide opportunities for students to engage in many practical and realistic activities including: bargaining, manipulation of resources, decision-making, and compromising.

The purpose of this survey is to measure the nature and extent of simulation usage in secondary (grades seven through twelve) social studies classrooms in Ohio. The survey has five parts. Please read the directions to each part carefully. Parts A through D deal with specific questions about your use of simulations, and Part E deals with general information about you. If you have never used a simulation, please complete Parts A and E only.

This is not a test; there are no right or wrong answers. All information is given voluntarily. Numbers appearing to the left of each question are for computer analysis.

General Directions: Please answer the following questions by placing an X in front of the appropriate response. Some questions ask for specific answers to be placed to the right of the appropriate response. Also, some questions ask for more than one response.

Part A

Part A deals with whether or not you have used a simulation. Please follow the directions after answering question #1.

2/1:5  1. Have you ever used a simulation in any of your classes?
       _____ 1. Yes
       _____ 2. No

IF YES, GO ON TO PART B. IF NO, RESPOND TO QUESTION #2, THEN GO ON TO PART E.

3/1:6  2. What is (are) the major reason(s) for not using simulations?

       (Check no more than three.)
       1. Never heard of them before
       2. The teachers who use them have noisy classes
       3. My students are not receptive to this type of strategy
       4. The subject matter I deal with is not conducive to this type of strategy
       5. They are too expensive
       6. The school administration frowns on their use
       7. The department chairperson/Coordinator frowns on their use
       8. I question their educational benefit
       9. Others (Please specify)
Part B

Only if you have used a simulation, should you go on to question #3. Please follow the directions after answering question #3.

6/1:9 3. In one year, how many different simulations do you generally use? 
(Please specify the exact number of different simulations you use to the right of the appropriate response)
- 1. I have used one or two simulations, but do not intend on using them in the future ______
- 2. Light use-have used or will use at least one or two simulations a year ______
- 3. Occasional use-have used or will use at least three to five simulations a year ______
- 4. Heavy use-have used or will use at least six or more simulations a year ______

IF YOU ANSWERED QUESTION #3 WITH RESPONSE 2, 3, OR 4, GO ON TO PART C. IF YOU ANSWERED QUESTION #3 WITH RESPONSE 1, ANSWER QUESTION #4, THEN GO ON TO PART E.

7/1:10-11 4. What is (are) the major reason(s) for choosing not to use a simulation again? (Check no more than three)
01. My classes became too noisy
02. My students were not receptive to this type of strategy
03. Students associated simulations with free time
04. Required too much preparation and work to properly execute
05. It was too difficult to find a simulation for some subject areas
06. The school administration frowns on their use
07. The department chairperson/coordinator frowns on their use
08. I question their educational benefit
09. Was too difficult to integrate into the total curriculum
10. They involved students in highly competitive situations
11. Others (Please specify) _________________________________________________________________

Part C

Only if you use simulations on a regular basis (at least once or twice a year), should you go on to Parts C and D. Some of the following questions have directions to read before answering them. Please read all directions carefully. Thank you.

10/1:16 5. For how many years have you been using simulations?
- 1. One
- 2. Two
- 3. Three
- 4. Four
- 5. Five
- 6. Six or more (Please specify) _____
6. Have you ever developed your own simulation?
   1. Yes
   2. No

7. How did you find out about simulations? (Check no more than three)
   1. District resource consultant
   2. District resource center
   3. Librarian
   4. Professional social studies publication, such as a book or a journal
   5. Department chairperson/coordinator
   6. Representative of a simulation publisher
   7. Advertisement from a publisher
   8. Colleague
   9. Workshop or institute
   10. Professional meeting
   11. Book(s) on simulations
   12. Simulation journal
   13. College or university undergraduate course
   14. College or university graduate course
   15. Others (Please specify)

8. What is the total number of class periods it usually takes to conduct one simulation?
   1. One
   2. Two
   3. Three
   4. Four
   5. Five or more (Please specify)

9. To what extent might you be using simulations in the future?
   1. I will probably discontinue their use
   2. I will probably increase their use
   3. I will probably decrease their use
   4. I will probably use at about the same rate
   5. I don't know

10. In what area(s) of the simulation field does work need to be done? (Check no more than three)
   1. Sponsoring more workshops and institutes
   2. Publishing more simulation journals
   3. Publishing simulations in specific subject areas
   4. Informing administrators of the potential educational worth of simulations
   5. Informing department chairpersons/coordinators of the potential educational worth of simulations
   6. Reducing the costs of simulations
   7. Developing methods to disseminate information about simulations
   8. Others (Please specify)
11. With what grade level of students do you most frequently use simulations? (Check only one)
   1. Seventh
   2. Eighth
   3. Ninth
   4. Tenth
   5. Eleventh
   6. Twelfth

Directions for questions #12: Listed below are possible courses you are currently teaching. Place an X in front of the course in which you most frequently use simulations.

12. Course in which you most frequently use simulations:
   01. American History
   02. World History
   03. Ohio History
   04. Geography
   05. Economics
   06. Anthropology
   07. Sociology
   08. Psychology
   09. Government (Political Science, Civics, Problems of Democracy, etc.)
   10. Social Studies
   11. Black Studies
   12. Other (Please specify)

Directions for questions #13 and #14: Question #13 is a list of possible advantages of using simulations. First, read the entire list. Then rank order what you consider to be the most important advantages. Do not rank order more than FOUR advantages. (Write a "1" in front of the most important advantage, "2" in front of the second most important advantage, and so on.) Question #14 is a list of possible disadvantages of using simulations. First, read the entire list, then follow the ranking procedure for the most important disadvantages (if any), ranking no more than FOUR.

13. Possible advantages (rank no more than four)

14. Possible disadvantages (rank no more than four)
14. Possible disadvantages (rank no more than four):

   1. Can involve students in highly competitive situations
   2. Requires a great deal of preparation and work to properly execute
   3. Classes become too noisy
   4. Students associate simulations with free time
   5. Administration frowns on their use
   6. Department chairperson/coordinator frowns on their use
   7. Can only use simulations with certain groups of students
   8. Difficult to integrate into the total curriculum
   9. Difficult to find a simulation for some subject areas
   10. Others (Please specify) ________________________________

Directions for question #15: Question #15 is a list of commercially produced simulations. Put an X by each simulation you have used.

30/1:48-49 15. List of simulations:

   __ 01 Abolition
   __ 02 Baldicer
   __ 03 Bafa-Bafa
   __ 04 Campaign
   __ 05 Caribou Hunting
   __ 06 C.L.U.G.
   __ 07 Conflict
   __ 08 Consumer
   __ 09 Crazy Horse
   __ 10 Crimes
   __ 11 Culture Contact
   __ 12 Dangerous Parallel
   __ 13 Democracy
   __ 14 Destiny
   __ 15 Dig
   __ 16 Dirty Water
   __ 17 Disunion
   __ 18 Division
   __ 19 Ecology
   __ 20 Economic System
   __ 21 Empire Game
   __ 22 F.L.I.P.
   __ 23 Generation Gap
   __ 24 Ghetto
   __ 25 Grand Strategy
   __ 26 Herstory
   __ 27 Humanus
   __ 28 Impact
   __ 29 Inner City Planning
   __ 30 Inter-Nation Kit
   __ 31 Jury Game
   __ 32 Life Career
   __ 33 Life Skills
   __ 34 Mahops
   __ 35 Market Game
   __ 36 Metfab
   __ 37 Napoli
   __ 38 Panic
   __ 39 Party Central
   __ 40 Point Roberts
   __ 41 Police Patrol
   __ 42 Pollution: Negotiating...
   __ 43 Porteville
   __ 44 Power
   __ 45 Radicals vs. Tories
   __ 46 Railroad Game
   __ 47 Road Game
   __ 48 Seal Hunt
   __ 49 Shipwreck (Search)
   __ 50 Simpolis
   __ 51 Simsoc
   __ 52 Starpower
   __ 53 System I
   __ 54 They Shoot Marbles...
   __ 55 Tracts
   __ 56 Triangle Trade
   __ 57 War and Peace

Below list the names of all other commercial simulations you have used in the classroom.

   a. ________________________________
   b. ________________________________
   c. ________________________________
   d. ________________________________
   e. ________________________________
   f. ________________________________
Part D

In answering the preceding questions you have given a great amount of information about the nature and extent of your use of simulations. However, much of this information is rather cut and dried. In an attempt to capture some of the flavor of your impressions of simulations—be it boring, mundane, explosively creative, or whatever—please, in your own words describe the last class session in which you used a simulation. Include the name of the simulation, the title of the course, the grade level of students, and your general impressions. Thank you.

Name of simulation:

Course Title:

Grade level of students:

Your general impressions:

Part E

This is the last part of the survey!!!!!!

30/1:50  16. At the conclusion of this academic year, how many years of teaching experience will you have had? (Please specify the exact number of years to the right of the appropriate response)

   1. 1-5
   2. 6-10
   3. 11-15
   4. 16-20
   5. 21 or more

31/1:51  17. Do you have a permanent contract?

   1. Yes
   2. No

32/1:52  18. What is your sex?

   1. Female
   2. Male

33/1:53  19. What is your age?

   1. 20-25
   2. 26-30
   3. 31-35
   4. 36-40
   5. 41-45
   6. 46-50
   7. 51-55
   8. 56-60
   9. 61-65
20. Which of the following best characterizes the location of your school?
   1. Urban-inner city
   2. Urban-outer city
   3. Suburban
   4. Small town
   5. Rural

21. What is the size of your school?
   1. Under 600 students
   2. 600-1000 students
   3. Over 1000 students

22. What course(s) do you teach?
   1. American History
   2. World History
   3. Ohio History
   4. Geography
   5. Economics
   6. Anthropology
   7. Psychology
   8. Government (Political Science, Civics, Problems of Democracy, etc.)
   9. Social Studies
   10. Sociology
   11. Others (Please specify)__________________________________________

23. What grade level(s) do you teach?
   1. Seventh
   2. Eighth
   3. Ninth
   4. Tenth
   5. Eleventh
   6. Twelfth

24. How far is your school located from a teacher training institution such as a college or university?
   1. 00-10 miles
   2. 11-50 miles
   3. Over 50 miles

25. What is your current position?
   1. Social studies teacher
   2. Department chairperson/coordinator
   3. Other (Please specify)______________________________________________

26. What is the highest degree you have earned?
   1. None
   2. Bachelors
   3. Masters
   4. Doctorate
   5. Other (Please specify)______________________________________________
27. To how many professional organizations do you belong, such as OEA, NEA, AFT, UCSS, NCSS, etc.? (Please specify the name of each organization to the right of the appropriate response):

1. None
2. One
3. Two
4. Three
5. Four or more

Your Name ____________________________ School ____________________________

School Address ____________________________ Phone (___) - ___

Home Address ____________________________ Phone (___) - ___

Thank you for completing this survey. Results will be mailed upon request. Please return the survey in the provided stamped, self-addressed envelope.

Jeffrey Blaga
950 Quay Avenue, Apt. A
Columbus, Ohio
43212
Dear Principal,

Your school has been selected by a random sampling procedure to participate in a study examining the nature and extent of simulation usage by Ohio secondary social studies teachers. I would like to request your cooperation in making sure that members of your social studies faculty (grades seven through twelve) including the department chairperson/coordinator if applicable, receives a survey. The survey data will provide the base for my doctoral dissertation which I am completing in the College of Education at The Ohio State University.

Enclosed is a packet of these surveys. Please distribute the surveys randomly to those social studies faculty members who would be willing to complete it. In pilot studies, I have found that most persons require only ten-to-twelve minutes to complete the survey.

You may be assured that the information supplied by your teachers will be held in the strictest confidence. Names of teachers and the name of your school will not be mentioned; and no attempt at evaluation is implied or intended. Stamped, self-addressed envelopes have been provided for the return of the surveys.

Results of the survey will be mailed upon request. Thank you for your time in making this study a success.

Sincerely yours,

Jeffrey J. Blaga
Graduate Teaching Associate
614-422-1078
614-488-6703 (Home)
Dear Member of the Social Studies Faculty:

This letter is a request for your assistance in completing a survey measuring the nature and extent of simulation usage by secondary social studies teachers in Ohio. The survey data will provide the base for my doctoral dissertation which I am completing in the College of Education at The Ohio State University.

Perhaps you have used STARPOWER, DIG, Ghetto, Dangerous Parallel, or some other simulation in your classroom. If so, I would like to ask you some questions about your use and impressions of simulations. Even if you have never used a simulation (which for this study has been defined as: a teaching strategy where an operating model of a social process has been created to be played out by students to provide them with life-like problem-solving experiences), your professional responses to certain questions are still needed.

The survey is designed to take only a few minutes of your time, and a stamped, self-addressed envelope has been provided for the return of the survey. Information is given on a voluntary basis, and you may be assured that information you provide will be held in the strictest confidence. No mention will be made of you or your school, and no attempt at evaluation is implied or intended.

Your cooperation and assistance in returning the survey at your earliest convenience will be greatly appreciated.

Sincerely yours,

Jeffrey J. Blaga
Graduate Teaching Associate
The Ohio State University
APPENDIX C

FOLLOW-UP LETTERS TO PRINCIPALS
Dear

Approximately six weeks ago I sent a survey concerning simulation usage by social studies teachers to your school. The data is being collected in conjunction with my doctoral dissertation. I received _____ surveys from your school as of this date. Could you please make sure that members of your social studies faculty randomly received and completed the surveys? If you are in need of more surveys feel free to call me collect at 614-488-6703.

I realize this is a busy time for you and for your teachers and that makes me sincerely appreciate your efforts. I would not impose upon you if this were not such an important project for me. I thank you again for your time and cooperation.

Cordially,

Jeffrey J. Blaga
950 Quay Avenue, Apt. A
Columbus, Ohio
43212
614-488-6703
Dear

Approximately six weeks ago I sent a survey concerning simulation usage by social studies teachers to your school. The data is being collected in conjunction with my doctoral dissertation. I received ______ surveys from your school as of this date. Could you please make sure that members of your social studies faculty randomly received and completed the surveys? If you are in need of more surveys feel free to call me collect at 614-488-6703.

I realize this is a busy time for you and for your teachers and that makes me sincerely appreciate your efforts. I would not impose upon you if this were not such an important project for me. I thank you again for your time and cooperation.

Cordially,

Jeffrey J. Blaga
950 Quay Avenue, Apt. A
Columbus, Ohio
43212
614-488-6703
BIBLIOGRAPHY


"An Inventory of Hunches About Simulations As Educational Tools" (Paper printed by Western Behavioral Sciences Institute, La Jolla, California, 1966).


Sprague, Hall T. "Using Simulations to Teach International Relations" (Paper presented by the Western Behavioral Sciences Institute, La Jolla, California, 1969).


