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The development and formative evaluation of an interactive, multimedia, multimethod, simulation on teacher evaluation

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THE DEVELOPMENT AND FORMATIVE EVALUATION OF AN INTERACTIVE, MULTIMEDIA, MULTIMETHOD, SIMULATION ON TEACHER EVALUATION

by

Corean Robinson Mayorga

A dissertation submitted in partial fulfillment of the requirements for the degree of

Doctor of Education

in

Educational Administration and Higher Education

Department of Educational Administration and Higher Education
University of Nevada, Las Vegas
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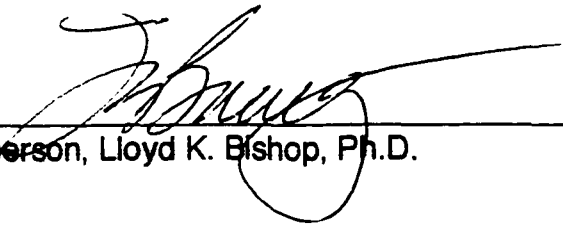

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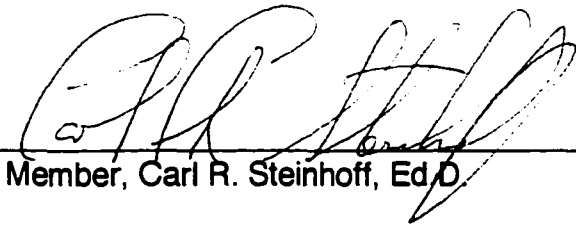

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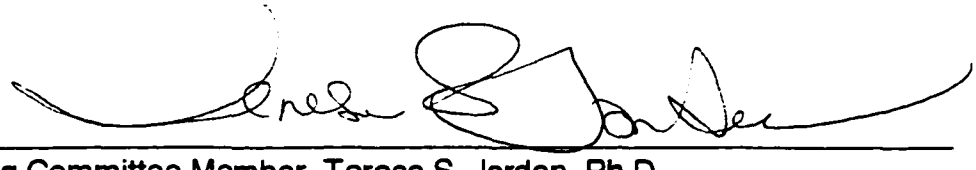

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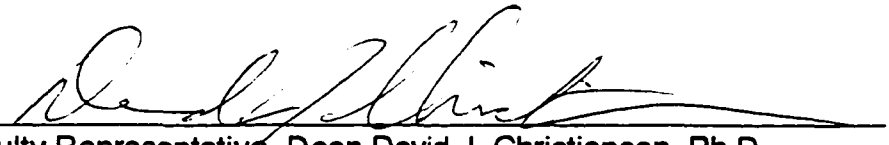

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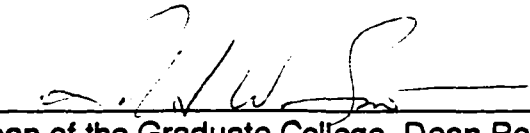

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ABSTRACT

The goal of this dissertation was to produce a prototype interactive, multimedia simulation that could be used by an instructor as an experience medium in bridging theory of teacher evaluation with practice. Nine administrative skills found to be frequently a part of the school administrators day by the NASSP were used as guidelines in designing the environment for the realism of the simulation.

The simulation consists of three main segments in a video format that closely follow the Clinical Supervision Model of Teacher Evaluation. Options and variations for the simulation include teacher selection, several realistic administrative decision- making problems, teacher rating, and length of the simulation. On-screen graphics, written assignments, simulated inter-office communications, video segments, group interaction, and realistic consequences are utilized in the simulation and vary from simulation to simulation according to the responses of the participant. All of the included devices are controlled by the information input into the computer by an instructor or operator according to the responses of the participant and the chronological stage of the simulation.

Students participate in the simulation in simulated administrative teams. The use of teams facilitates engagement of a reflective practice that would provide appropriate simulation analysis. Aspects of reflective practice are also reinforced in simulation written assignments. Actual simulation time is estimated to be 45 to 50 minutes for completion, which does not include preparatory assignments and group discussions.

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The placement of a single name as the creator and author of the research simulation and dissertation is exceedingly inaccurate. The final production of this research was truly a family effort. We are a family of teachers and innovators and each member contributed their efforts throughout the course of the dissertation. Susan Brand, my aunt, contributed her vast knowledge of administration and her belief in living to your potential. Len Robinson, my uncle, also contributed his vast knowledge of administration and his strong support. Loyal Robinson, my father, and Ruth Robinson, my mother, both experienced teachers, gave contributions to this simulation that few others would have withstood. Sierra, Alexander, and

Jordan Mayorga, my children, gave me silence, at times, and purpose in completing this dissertation. Finally, Lenny Mayorga, my husband and teammate, gave an unconditional support throughout the research that can not be described. This dissertation is as much his as it is the researchers.

CHAPTER 1

INTRODUCTION

Simulations have long been used in educational administration to help in the transition from theories taught in the classroom to actual practice in the administrative world. However, past simulations have often been an extension of the classroom environment rather than a reflection of what is actually required as an administrator. These simulations have relied upon a single mode of communication, usually a written form, with the necessary elements for administrative decision making clearly stated rather than embedded as often happens in reality. The reality of educational administrative decision making is that it is often a processing of disorganized information presented through several channels of communication with limited information in conflicting situations. Historically, simulations, while having value, simply have not had the capability to present material in a way that effectively engages the participants in realistic administrative decision making. The capabilities necessary are present in the potential of interactive, multimedia simulation designs.

Simulations created using multimedia and interactive technology have the potential to more accurately represent the work place environment. They have the ability to relay information through visual, auditory, and written communication avenues in a manner similar to communication channels that are actually practiced in reality. Interactivity through computer assisted manipulation of consequences and choices of presented materials provides

information with realistic impartiality, response time, and convenience. The benefits realized in utilizing this type of simulation in training education administrators are numerous.

Statement of the Problem

The goal of this study was to produce a prototype interactive, multimedia simulation to be used by an instructor as an experiential medium for application of theory and analysis of administrative behavior. This study consisted of the development of the simulation design, the creation of the actual simulation, and formative evaluations. The formative evaluations occurred throughout the development and creation stages with a final assessment that used an evaluation instrument.

The format of the simulation consisted of three main segments. These segments were developed following a sequence similar to the Clinical Supervision Model of Teacher Evaluation. This included a pre-observation conference, observations of instruction, and a post observation conference.

The simulation incorporated several methods of information presentation. All of the main segments were given in a video format. Intercom messages, on-screen graphics, printed materials, and other devices were utilized to give the participant necessary information.

All of the included devices are controlled by a computer. Information is entered into the computer according to the responses of the participant and the chronological stage of the simulation. Video segments, messages displayed, memos printed, and phone calls vary from simulation to simulation according to this input.

Participants in the simulation were provided necessary background

information in a packet of simulation materials. The introductory simulation materials included teacher information, group assignments, rules of the simulation, and a preparatory assignment. Teacher evaluation instruments were provided by the instructor or by the participating students. Other simulation materials were dispersed throughout the simulation as needed.

The formative evaluation of the simulation was continual and then final. Continual evaluation was solicited from practicing administrators and university professors in educational administration. These professionals gave their opinions on various aspects of the design, filming, and content of the simulation prior to its actual assembly. The final formative evaluation was conducted on the simulation in its completion. The clarity, realism, and benefit of the simulation was assessed. The results from this evaluation were utilized in further development of the simulation.

Delimitations

It was not the intent of this simulation to completely portray the environment of the administrative world. A set of nine targeted administrative skills were chosen to define the environment of the simulation. The nine administrative skills are derived from research by the National Association of Secondary School Principals and include decisiveness, problem analysis, stress tolerance, judgment, organizational ability, leadership, sensitivity, oral communication, and written communication. The scope of the simulation was limited to portraying the environment necessary to develop the targeted skills through the application of a specified theoretical field.

Limitations were also set on the interactivity of the simulation. The interactivity of a computer is limitless, however the myriad of reactions and

responses of the participant necessitated some channeling of responses. A set number of options were developed to give decision choices to the participant.

Definitions

Interactive multimedia system design: The design of this simulation incorporates all necessary information into the computer, through various input mechanisms and procedures, and then utilizes the branching capabilities of the computer to control all those segments.

Branching: An action by which the user triggers a range of responses depending on previous actions (Montgomery and Sayre, 1989).

Learner Control: Allows the learner to have some control over the pacing, sequence, or content of an individualized lesson (Milheim, 1989).

Multimedia: Refers to systems combining information presentation from several quite different media (Ferraro, 1989).

NASSP Assessment Center: A center designed to assess the abilities of administrators. This assessment center is sponsored by the National Association of Secondary School Principals. The following nine skills are incorporated in the evaluation criteria:

Problem Analysis: The ability to seek out relevant data and analyze complex information to determine the important elements of a problem situation.

Judgment: The ability to reach logical conclusions and make high quality decisions based on available information.

Organizational ability: The ability to plan, schedule, and control the work of others and self.

Decisiveness: The ability to recognize when a decision is required and to act quickly.

Leadership: The ability to recognize when a group requires direction, to interact with a group effectively and to guide them to the accomplishment of a task.

Sensitivity: The ability to perceive the needs, concerns and personal problems of others; skills in resolving conflicts, tact in dealing with people from different backgrounds.

Stress Tolerance: The ability to perform under pressure and during opposition.

Oral Communication: The ability to make clear oral presentation of facts or ideas.

Written Communication: The ability to make clear written presentation of facts or ideas.

Perception: The assessment of information for potential value for purposes of attention and effor (Doerner, 1983, as in Tennyson, 1989).

Principles of Contiguity: How close in time two events must be for a bond to be formed (Grippen and Peters, 1984, as in Merriam and Caffarella, 1989).

Psychological Fidelity: Effectiveness of device for training. Adherence to the learning process (Hays and Singer, 1989).

Reflective Practice: The action itself is reflected upon by the actor and brings up different courses of action (Sergiovanni, 1989).

Simulations: The presentation of an experience in an artificial environment in order to build skills used in the actual environment. The simulations designed

in this study will relate experiences encountered in the field by the educational administrator.

Case Study: Carefully recorded account or narrative of something that actually happened (Bolton, 1971).

In-basket: Letters, papers, memoranda and other notes and messages which an administrator might find in his incoming mail or in-basket. Decision-making exercise (Bolton, 1971).

Background

Interactive video, in its various forms, has been used for simulations for the last 20 to 30 years. In the past, most interactive video systems have been developed at what is termed Level I or Level II interactivity. Level I or II interactivity has been limited to start and stop, pause, freeze frame, etc. with perhaps some preprogrammed starts and stops. As an example, a student would view a videotape of some type of situation and at some point in the video the instructor would stop the tape and ask the student what action they would take or what was the correct answer. The tape would then be restarted to give further information to the student. The use of this type of interactive video was very limited in that it had very little individualization and did not react to the responses of the user. However, technology has propelled this technical innovation to a point that allows the developer to create more realistic simulations.

New developments in computer, computer programs, and visual equipment, such as video cassette recorders, laser disc, etc., have allowed interactivity to reach new levels termed Level III and Level IV. Level III allows the integration of an external computer with a variety of devices, such as video

cassette recorders, printers, and telephones. This makes possible the combining of several avenues of information with computer graphics and audio, all controlled through the programming of the computer. Level IV interactivity denotes a more advanced system that allows branching, or the choice of different pathways through the responses of the user. This gives to the developer the potential to create an interactive program that responds to the user according to the responses of the user. Therefore, the student is required to participate actively in the learning situation even becoming vicariously involved. The research simulation was developed at least at Level IV interactivity.

Many industries have recognized the potential of the new developments of interactive programs. The Department of Defense of the United States has been one of the forerunners in this field. They use interactive video to train personnel in all three branches of the service. Dexter J. Fletcher states,

> Interactive videodisc instruction requires students to participate actively in the training environment, it provides access to high quality simulation of devices that could not otherwise be made available to them...As a consequence, interactive videodisc instruction has become prominent among the new approaches pursued by the Department of Defense (Fletcher, 1989).

Many private enterprises have also begun to use interactive video to train their employees. Ford Motor Company of Europe uses an interactive video in an award winning program to train both management and shop floor personnel. They have recognized the educational and production benefits this technology offers. Education has also begun to recognize the potential impact of interactive video. Hueneme School District (California) organized the development of the "Smart Classroom" which offers a variety of computer and interactive video instruction methods. This program has been very successful,

raising the enthusiasm level of the students as well as raising GPA's and test achievement scores. Many universities, such as California State University at Fullerton and the University of Southern California, have delved into this new technology with excellent results and enthusiasm.

Conceptual Foundation

The use of simulations in educational administration began in the 1950's with such notable proponents as Daniel Griffiths, Richard Wynn, Don Davies, and Harold McNally. Initial simulation efforts resulted in the creation of many different approaches such as case studies, in-basket simulations, and management "games". Whitman Elementary School in Washington County in the State of Lafayette became one of the best known elementary schools around the nation in the 1960's. This school was the created site for simulations in educational administration developed through efforts at the Development of Centers for Success in School Administration (DCS) and the Educational Testing Service. Results from these initial simulation attempts did give favorable results. Richard Wynn is cited in The Use of Simulation in Educational Administration (Wynn as in Bolton, 1971) as outlining the following positive points of simulation:

1. The evident face validity of the simulation stimulates interest and motivation in learning and encourages the subject to behave as he might in reality.

2. Simulation permits the learner to profit from mistakes that might be disastrous on the job.

3. The instructor in a simulated situation can provide the subject with concepts, research evidence, models, or other information which he can't always send in during the actual game.

4. Permits a degree of introspection rarely provided on the real job.

5. Provides varied opportunities.

The use of simulations in the classroom gives the learner an opportunity to immediately, or quickly, apply the presented knowledge. Behavioral theorists emphasize this critical time period between two events (in this case knowledge and practice) that must be limited in order for a bond to be created linking the two phenomenon in the mind of the learner. This is the principle of contiguity (Merriam and Caffarella in Galbraith, 1990). Behaviorists also emphasize the need for reinforcement in the learning process (Grippin and Peters, 1984 as in Merriam and Caffarella, 1989). The learner must be given more than one exposure to a theory or ideas, and preferably this exposure should be varied in its delivery.

Simulations give the learner a concrete base to use as a foundation for the application of theory or knowledge. Bloom (1956) states that "generalization isolated from the phenomena it covers is very hard to learn." The experiences presented in concrete terms by the simulation to the participant gives a learning technique that is advocated by adult learning theorists. Knowles (1984) emphasizes the use of experience analysis as one of the richest sources for an adult's learning.

Simulations create an immediate need for the learner to obtain knowledge. Abraham Maslow (1968) presents the notion that people will engage in actions that will satisfy their "prepotent needs" at any given time. The assessing of information for potential value for purposes of attention and effort is also a basic component of cognitive theory (Doerner, 1983, as in Tennyson, 1989).

Simulations center on the presentation, apparent or embedded, or a problem that requires action. Andragogical theory emphasizes the problem centered orientation of adults to learning. The adult learner will be most motivated when a problem is present, or presented, that needs to be solved.

"Interactive video (simulations) can be a true learning device as it is not something that is done to the learner, but rather is an activity the learner does himself or herself" (Grabowski, 1989). Research has shown that the ability of an individual to adapt and shape the environment and to give insightful combinations of information has the most to do with success on the job (Sergiovanni, 1989). The self-involvement of the learner, as in interactive simulations, is thought by cognitive and adult learning theorists to increase knowledge retention. Clark Bouton and Russell Garth in Learning as Construction emphasize the importance of the learner in making new knowledge personally meaningful (Bouton and Garth, 1989).

Interactive video simulations have the capability to give a learning experience that is visual, auditory, emotional, and self-involved. This experience would facilitate learning through the senses as well as through intellect. Carl Rogers, in Freedom to Learn for the 80's (1983) states that significant learning that leads to personal growth and development must involve both the affective and cognitive aspects of a person. This is representative of the humanistic view of learning that emphasizes a welding of cognitive and affective learning.

Interactive video, by definition, provides immediate feedback to the participant. "Cognitive psychologists have discovered the importance of feedback in the learning process: as people receive feedback information

about the results of their actions, they are able to correct themselves progressively until they achieve the intended results" (Silver in Murphy and Hallinger, 1987). If the interactive video simulation is properly designed, this will also encourage the use of "reflective" practice by the participant, both in the simulation and in the field.

The main value of interactive simulations that utilize a visual, auditory, multimedia format is its closeness to the reality of the administrative world. An important point in learning is the recognition of patterns. The model of skill acquisition theorizes that learning occurs in stages (Hansen, 1989). These stages build upon each other through the exposure to practical experiences. The first stage includes the learning of relevant facts and features. The learner then progresses through each stage by learning to recognize patterns and situations. If the interactive simulation can accurately portray the patterns that the participant must learn to recognize, then the participant should be able to function at a more effective level, more quickly than those not exposed to this type of simulation.

Interactive, multimedia simulations can provide the basis for use in implementing the elements of reflective practice. Reflective practice is described as a means by which a professional can develop a greater self awareness of their work performance and is a major component in the cyclical process of learning espoused in experiential learning theory. The four stages of the experiential cycle include: experience, observation and reflection, abstract reconceptualization, and experimentation (Kolb, 1984 as in Osterman and Kottkamp, 1993). It is a process that is most effective as a collaborative effort (Osterman and Kottkamp, 1993). Reflective practice attempts to increase the effectiveness of personal theories-in-use, the theories that are actually

used, rather than espoused theories, those that are simply articulated. While participating in an interactive simulation, the student is required to react, at times immediately, to a variety of problems and situations. The interactive simulation should evoke a response resulting from the personal beliefs a person acts upon rather than simply articulates, as may happen in role playing or a written response to a case study. The participants actions would then be analyzed according to a collaborative reflective process utilizing a simulation team.

These arguments build the foundation for the prediction that interactive simulations will have a positive effect on the learning of educational administration students, through increased motivation, participation, and self involvement of the learner. If the exposure is a realistic portrayal of the work situation, then the participant will be able to recognize similar patterns and events and will be able to perform more effectively in the area(s) of content of the simulation(s) when in actual practice. Inherent to this prediction is the increased probability that the knowledge learned through interactive simulations will lead to a more immediately successful administrator, in the area(s) of the simulation(s), with a higher level of confidence in the use of theories.

Need and Significance of the Study

Research has shown that a large proportion of an administrators time is spent in verbal contacts and most of this time is spent in one-to-one contacts (Gally, 1986). Another detailed study of a school principal found that 76% of an average day was spent in interactive situations (Kell and Louis, 1980). Administrators also receive communications in several different formats; written,

visual and auditory. Bridges (1977) has observed, "within the school context a premium is placed on verbal skills, the ability to make quick decision and activeness,.." (Bridges as in Murphy and Hallinger, 1987). Interactive, multimedia simulations have better potential to portray these critical aspects of administration than any single simulation medium.

Multimedia simulations combine the positive aspects of in-basket simulations through written communications, case studies by portraying a situation as actually found or similar to one found, film by giving visual and auditory communications through video, and even role playing by requiring the participant to establish a relationship with the characters in the simulation. Interactive, multimedia simulations additionally require the participant to make decisions, sometimes immediately, that affect the outcome of the situation. The potential for a realistically designed simulation environment through a multimedia, interactive format gave necessary elements of administration while providing an opportunity to apply theories.

Theory is taught to educational administration students to improve upon or continue aspects of practice. Theory can give the principal an underlying base on which to effectively interlock the hundreds of decisions, interactions, and details that are encountered daily in the work setting. However, "theory has often remained untranslated and has provided little guidance to administrators in the day-to-day operations of schools" (Murphy and Hallinger, 1987). The use of interactive, multimedia simulations that accurately reflect the day-to-day operations of schools seem to accomplish the translation and application necessary.

Field experience courses have been one means provided for application of theories and knowledge learned by the educational administration student in

the classroom. A common practice is to assign the student to a principal and for the principal to oversee the students' training for a semester. This practice can provide an enriching learning experience under optimal conditions, however optimal conditions are not always possible. Students may not be exposed to vital administrative tasks, such as utilizing confidential information in teacher evaluation, due to legal constraints or a lack of opportunity. in addition, the student administrator usually does not have true decision making power, such as actually giving a teacher an evaluation, and does not have accountability for the consequences of those decisions. interactive, multimedia simulations give the trainee experience in several situations, with the direct consequences of decisions and actions made, and with realistic factors affecting administrators, such as letters from parents and emergency interruptions.

The time span between classroom learning and the opportunity for each individual to apply learning on the job can range from a few days to a few years. Application of theory is essential in forming a more complex understanding. Many proponents for reform in educational administration training recognize the necessity for application and call for a greater reliance on the process of educational administration and an emphasis on the actual practice (Murphy and Hallinger, 1987; Blumberg, 1984). The research designed interactive simulation gives the potential for student application of new knowledge presented as a self-directed process similar to that utilized in actual practice.

Integrating new knowledge with the processes already in place on the job can result in mistakes with severe consequences. Improper application resulting from an unfamiliarity with the actual implementation of the theory can have a negative effect on the future use of that theory, on the climate of the school, and on the regard of that administrator. Interactive, multimedia

simulations offer a relatively safe environment for the testing of new knowledge with realistic consequences.

The use of an interactive, multimedia format for creating this simulation provided the potential to give an immediate application of specified theoretical teachings in a realistically designed environment. This format also gave the possibility of consequences as they are actually encountered and communicated in practice for participant decisions. The essential power of the use of an interactive, multimedia simulation was its capacity for incorporating all the positive aspects of previously developed simulation models and adding a dimension of actual decision-making thorough branching, with an unequaled ease of use. These aspects should lead to a greater utilization of simulation in classroom instruction and more effective teaching and learning.

The simulation developed in this study should serve as a prototype for the design of further simulations in educational administration and other fields.

CHAPTER 2

REVIEW OF THE LITERATURE

Use of Simulations in Educational Administration

Early development, refinement, and use of simulations in educational administration is largely attributed to Daniel Griffiths, Richard Wynn, Dan Davies, and Harold McNally (Bolton, 1971). One of the first comprehensively developed simulations was the created site of Whitman Elementary School, in 1959 at Columbia Teachers College. In 1964, the Department of Elementary School Principals devoted whole day sessions of its national meetings to discussion and analysis of simulated problems. In 1965 the practice at the University of Chicago of training school personnel in a wide variety of simulations was initiated. These first simulations were usually centered on in-basket exercises or case studies (Bolton, 1971). Another well-known simulation exercise is the Monroe City simulations developed by the University Council for Education Administration (UCEA). These simulations were incorporated into the National Association of Secondary School Principal's Assessment Center. This simulation program utilized group activities, in-basket, fact-finding, and stress exercises. More recently, the University of Utah has developed the Simulating Alternative Futures in Education (SAFE) computer simulations (Beckman, et al., 1985).

Benefits of Simulations

Research on the incorporation of simulations into the instructional design have found many benefits. In a simulation presented to training administrators on the budget of a small college, researchers found that participants increased their ability to identify organizational variables and relate them to decision-making. The simulation also increased abilities to discern relationships among variables while making adjustments in decision-making paths (Poppenhagen and McArdle, 1982). The reality based orientation of simulated problems and positions to provide opportunities for students and professors to test concepts against the facts of administrative life has been found to be a central value (Bolton, 1971). Waddel (1982) notes the advantage of simulations is the application of new learning to different situations (Galbraith, 1990). Greenlaw, Herron, and Fawdon (Bolton, 1971) state the following benefits of simulation:

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

2. Effect: Intense involvement of participants.

3. Intensity: Simulation provides an illusion of reality which results in a full range of human perceptions.

4. Organization: The learning experience is relevant for the participants since it is realistic.

5. Exercise: Gives the opportunity to practice some skills/knowledge both newly learned and previously acquired.

Richard Wynn (Bolton, 1971) cites the following advantages of simulation:

1. The evident face validity of the simulation stimulates interest and motivation in learning and encourages the subject to behave as he might in reality.

2. Simulation permits the learner to profit from mistakes that might be disastrous on the job.

3. The instructor in a simulated situation can provide the subject with concepts, research evidence, models, or other information which he can't always send in during the actual game.

4. Permits a degree of introspection rarely provided on the real job.

5. Simulation provides an opportunity to see the whole picture, to view each problem in broad context.

Schmuck states that, "organizational simulations and exercises provide rich opportunities to practice, get feedback, reflect, and practice again" (Schmuck, 1988). Gilley also cites immediate feedback as one of the advantages of simulation (Galbraith, 1990).

Benefits of Interactive Video Simulations

Iuppa states that "interactive video can be a true learning device since it is not something that is done to the learner but, rather, is an activity the learner does himself or herself" (Iuppa, 1989). Interactive video technology is beneficial to the learning environment in that it combines the searching and branching capabilities of the computer and the visual learning support of video. Initial research on the effectiveness of interactive videodisc has identified three significant findings: 1) reduced learning time, 2) increased learning retention, and 3) reduced training costs (Sayre, 1989). The ability to present moving pictures and to access random frames very quickly are the major training advantages of videodisks (Hays and Singer, 1989). Dexter reported to the Congress that interactive videodisk instruction requires students to participate actively in the training environment. It provides students access to high quality simulation of devices that could not otherwise be made available them, and it distributes both the content and interactions of high quality training to widely

dispersed sites. As a consequence, interactive videodisc instruction has been prominent among the new approaches pursued by the Department of Defense." The Department of the Defense found in their use of interactive video that time on task with interactive video increased 45%, trainees gave a superior performance, and interactive video was the preferred cost-effective alternative in several specific applications (Fletcher, 1989).

Interactive video has the capacity to increase learning through a blending of cognition and the senses (Resigno, 1988). In Port Hueneme, California, interactive video was used in the classroom in a project named the Smart Classroom. Students in this program increased their standardized test scores, decreased necessary learning time, increased their grade point averages, and decreased absenteeism and referrals. Benefits in training adult learners have been noted in industrial training. "These benefits, at a minimum, include reduced training time and improved learning levels. In addition, the value of these benefits is amplified when factors of cost avoidance are used to weigh off the costs of technology" (Gardner as in Fletcher, 1989). Interactive video practice has been found to be important for the learning of declarative knowledge and problem solving skills (Hannafin and Colamaio, 1986 in Slee, 1989). "Interactive video can combine the powerful instructional logic of programmed instruction with the drama of real-life situations to create consequence remediation in which you can see the results of your decisions, for good or for ill" (Iuppa and Anderson, 1988).

Other advantages of interactive video simulations include (Hansen, 1989):

1. It creates a single environment for reading, writing, sound recordings, still and motion images.

2. It helps to conceptually integrate mediums and present them as different modes of dealing with the same subject matter.

3. Interactive video is an ideal medium for learning from other people's learning.

4. The interactive video system has the ability to break up the linear succession events.

Criticisms of Simulations/Interactive Video

Many of the critiques on the use of simulations and interactive video technology center on the design of the research. Critics have cited that media researchers tend to operate within a vacuum. They rarely acknowledge research in parallel interests in other fields" (Clark, 1983). As an example, a media researcher may find that interactive video simulations actively involve the learner, thereby increasing learning acquired, but stating that this is the only method of involving the learner is a fallacy. The media researcher needs to acknowledge other methods such as role play, using the student as instructor, etc. The design of media research has been faulted for a small sample size, that the content of the videos studied may teach to the test, and are biased because many times the producer is doing the evaluation. In addition, while most studies report that interactive video is superior over other comparisons, rarely is the instructional method or content difference controlled for in the study (Slee, 1989).

Hannafin and Colamaio (1986) state that interactive video practice has little effect on procedural knowledge. Wynn also questions the transferability of learning from the simulated situation to others (Bolton, 1971). The National Association of Secondary School Principals criticize computer simulations as

not approximating real life to the degree possible with performance simulations (Beckman, Erlandson, Heller, Kelley, McCleary, and Keefe, 1985).

Clark states that "the medium that delivers instruction will have no more of an impact on student achievement than the truck that delivers food will have on the nutritional value of that food. Media are "mere vehicles" for the deliverance of instruction" (Yacci, 1988). Wynn supports this thought by emphasizing that competence of the instructor in the use of simulation has an impact on what is learned (Bolton, 1971).

Specific criticisms have been directed toward the limitations of each of several types of simulations. Computer simulations are faulted for shortcomings in that "they do not approximate real life to the degree possible with performance simulations. A strength is that they are usually self-instructional." (Beckman, et al., 1985) Case studies are also criticized for leaving the bridging of the theory to reality to the reader (Beckman, et al., 1985).

Design

Most of the problems cited with interactive video and simulation design can be addressed through an appropriate design. Interactive video simulation can be designed around seven criteria: 1) how to use the program, 2) information about the program, 3) content of the program, 4) control and support of the program, 5) presentation, 6) production and design, and 7) programming. (Copeland, 1988) The potential of the program to deliver effective instruction depends on: 1) the appropriateness of the instructional and motivational strategies, 2) if individual differences are accounted, 3) appropriateness of method design, 4) the appropriate match of the capabilities of the format with the simulation (Grabowski, 1989). Capabilities of the format and the computer

are limited. Types of question presentation include (Iuppa and Anderson, 1988):

1. Interruptive
    a. answer and compare
    b. guided discovery (repeat if needed)

2. Identification
    a. stop when you see
    b. identify the area
    c. matching

3. Sequencing
    a. put in order

4. Multiple Choice
    a. remedial loops
    b. consequence remediation

5. Database Usage
    a. check your files
    b. market research (given data necessary to make a decision)

6. Pathfinding
    a. parallel scenarios (student given decision-making points)

Other suggestions for design include: 1) identifying learning objectives before beginning the design, 2) using a team of insiders of information and a reality check (embedding experts), 3) adding "gotchas" in the simulations-paperwork, administrative trivia, etc., 4) develop an hour-by-hour taxonomy of the subject to be simulated, 5) utilize breaks efficiently, and 6) select evaluation criteria before designing (Hendrickson, 1990). Nine recommended principles for designing interactive video simulation include (Hansen, 1989):

1. The video part of the program should provide an authentic look at the skill in its situational context. Should show significant patterns.

2. The design should provide multiple approaches for analyzing the interaction.

3. The program design should be open. Allow later revisions.

4. The interactive video program should be integrated into other existing instruction.

5. The interactive video program should serve as a model for the self-assessment of the students own performance.

6. A student-centered approach should be utilized, do not direct.

7. The emphasis should be on feedback that coaches the student to consider alternatives.

Simulations should also be designed according to psychological fidelity, the effectiveness of the device for training. Psychological fidelity can be accomplished through adherence to learning processes (Hays and Singer, 1989). Simulations that employ higher-order thinking strategies will give (Tennyson, 1989):

1. situations that themselves have a meaningful context;

2. exposure to students to alternative solutions to improve their integration process;

3. situations that use reflective evaluation rather than right or wrong answers;

4. situations that allow students to see consequences of their solutions and decisions.

Many researchers also advocate the use of group instruction in interactive design (Lookatch, 1989).

Learning Theory

The behaviorist orientation of learning theory was founded by John B.

Watson. The underlying assumptions of this learning theory are (Merriam and Caffarella, 1989):

1. Observable behavior rather than internal thought processes is the focus.

2. The environment shapes one's behavior.

3. The principles of contiguity (how close in time two events must be for a bond to be formed) and reinforcement are central to explaining the learning process (Grippen and Peters, 1984, as in Merriam and Caffarella, 1989).

Cognitive psychology focuses on the internal mechanisms that trigger learning. This branch of learning theory offers the how and the why of the occurrence of learning. Cognitivists theorize that learning comes from both external and internal knowledge. One basic component of the cognitive systems model is perception. Information is assessed for potential value for purposes of attention and effort (Doerner, 1983, as in Tennyson, 1989). Important to the storage and retrieval of information is the understanding and awareness of the information, knowing how to employ concepts, rules, and principals in a given situation, and an understanding of when and why to select (Tennyson, 1989). This leads to the model of skill acquisition proposed by Stuart and Herbert Dreyfuss (Hansen, 1989). The model of skill acquisition theorizes that learning occurs in five stages:

1. Learning of relevant facts and features, as well as rules for acting upon them.

2. Gaining of practical experience in concrete situations. This enables the learner to identify features and react appropriately.

3. The ability to choose a plan that organizes a situation before entering the situation. This allows the individual to focus only on important factors to reach a predetermined goal.

4. Through an abundance of experience, the individual recognizes similar situations and appropriate courses of action.

5. The individual reaches the point where they know what to do without making a conscious decision.

The triarchic theory of intelligence (Robert J. Sternberg) submits that intelligence has three dimensions: 1) componential: traditional academic intelligence, 2) experiential: creative thinking, insightful combining of information, and 3) contextual: ability to adapt to the environment and to shape the environment. It is further theorized that contextual and experiential have the most to do with success on the job (Sergiovanni, 1989).

Bloom (1956) classified learning into three domains. Cognitive knowledge consists of knowledge, comprehension, application, analysis, synthesis, and evaluation. Affective learning centers on changes in interest, attitudes, and values. Psychomotor training is the development of manipulative skills.

A recently discovered lack in the field of psychology has been the omission of theory for adult learning. Malcolm Knowles, considered to be the founder of the adult theory model, outlines four factors in adult learning, or andragogy. Andragogical theory rests on four assumptions (Pitner, 1987):

1. Adults are self-directed.

2. Adults have a reservoir of experiences to draw upon.

3. Adults learn what is necessary to perform their evolving social roles.

4. Adults are problem centered in their orientation to learning.

Involving the learner is an important instructional element supported through learning theory, particularly adult learning theory. Dansereau, et al.

(1975), note that many students tend to receive information passively and, consequently, do not actively integrate this information into their existing cognitive structures (O'Neil, 1978). Burton (1958) also emphasizes the active participation of the learner being preferable to the kind of "passive reception involved in listening to a lecture or watching a motion picture" (Saunders, Phillips, and Johnson, 1966).

Involving the learner through many senses and areas has been linked to an increase in learning. Kelley and Rasey (1952) found that the individual learns best when the total organism is involved (Saunders, Phillips, and Johnson, 1966). Carl Rogers emphasizes the relationship of involving both the affective and cognitive aspects of a person with significant learning that leads to personal growth and development (Rogers, 1983).

Learning theorists also emphasize the importance of "discovery" learning. Carl Rogers (1953) states, "I have come to feel that the only learning which significantly influences behavior is self-discovered, self-appropriated learning" (Saunders, Phillips, and Johnson, 1966). S.B. Newman (1957) conducted a study on 2 groups of students in an Air Force academy. Those students allowed to learn a list of facts with their own methods did far better on the post test than students for whom study techniques were prescribed (Newman, 1957). It has also been found that an individual learns best when he or she is able to create responses to the material and organize the information in a way that is individually meaningful (Hopkins, 1941). Clark Bouton and Russell Garth, in Learning as Construction, postulate that in order to understand what is said, the learner must make sense of it and compare it in a way that is personally meaningful (Bouton and Garth, 1989). Knowles (1984) emphasizes the need adults have to be self-directing (Knowles, 1984). Simply stated,

adults learn best when they are actively involved in the learning experience (Bouton and Garth, 1989).

Experience is the richest resource for adult learning; therefore, the core methodology of adult education should be the analysis of experience (Knowles, 1984). Joyce and Showers recommend practice in a simulated setting as a major component essential for maximum training (Murphy and Hallinger, 1987). Realistic practice allows the adult learner to analyze theory as it is practiced in reality.

A major component of learning is feedback. Learning is enhanced by feedback (Long, 1983). Cognitive psychologists also stress the importance of feedback in the learning process; as people receive feedback information about the results of their actions, they are able to correct themselves progressively until they achieve the intended results (Murphy and Hallinger, 1987). Related to this component is the concept of the reflective learner. Hansen advocates reflection-in-action, which is a provision for the learner to explore various situations and experiment with different approaches until satisfied. This allows the participant to add to knowledge already possessed and to unlearn knowledge that has become a hindrance (Hansen, 1989). Pitner (1987) also recommends including opportunities for administrators to reflect upon their actions (Murphy and Hallinger, 1987). Ausubel (1967) suggests that learning is meaningful only when it can be related to concepts which already exist in a person's cognitive structure (Merriam and Caffarella, 1989).

Higher-order thinking involves cognitive processes directly associated with the employment of knowledge in the service of problem solving (Gagne, 1985 as in Tennyson, 1989). Basically, these processes enable the individual to "restructure" their knowledge by a) analyzing a given situation, b) working out

a conceptualization of the situation, c) defining specific goals for coping with the situation, and d) establishing a possible solution (Breuer and Hajovy, 1987 as in Tennyson, 1989).

Adults most effectively motivated to learn material which satisfies a need in their life. Abraham Maslow proposed the notion that people will engage in actions that will satisfy their "prepotent needs" at any given time (Maslow, 1968). Hull proposed that a response depends on such factors as habit, drive, and motivation (Merriam and Caffarella, 1989).

Administration Preparation

Preparation programs of educational leaders have recently focused their efforts on the need to include a more practice based curriculum. Through self assessment and the recommendations of other analysts many administration training programs realize that a reliance on scientifically based theory to fully prepare administrators for a practice that is largely uncontrollable and greatly influenced by the actions and reactions of others is unrealistic. Murphy and Hallinger state, "The absence of instructional leadership can be attributed to the multiple demands and time pressures on an administrator as well as the fact that training programmes don't train in these areas so administrators are unprepared" (Murphy and Hallinger, 1989). In an analysis of preparation programs for school administrators, the National Commission on Excellence in Educational Administration concluded that a majority of programs in the United States teach courses without an understanding of, or connection to, the everyday life in schools (Danforth Report, 1989). Many preparation programs are attempting to include elements reflecting the situations and decision points typically encountered by practicing administrators.

In an international study on the practice of educational administrators, administrative time and activities were analyzed for frequency. It was found that a very large proportion of an administrator's time is spent in verbal contacts (82%), whether by direct means (65%) or by telephone calls (17%). it was found that 10.8% of a principals time was spent utilizing written skills. This study also found that administrators usually relate to people on a one-to-one basis, or in "dyads" (75% of contacts). The administrator is also largely self-directed, with 48% of activities being initiated by the administrator himself or herself. It was also found that administrative activities are characterized by brevity, fragmentation, and variety. The average time to a single activity was 10.25 minutes, with 50% of activities lasting 5 minutes or less (Gally, 1986). A 1980 study stated, "Managerial studies have also shown that leaders in all settings prefer spoken as opposed to written communications." These same authors stated that, "One detailed study of an elementary school principal found that he spent 76% of an average day in interactive situations" (Kell and Seashore, 1980). Sergiovanni (1989) states, "Patterns of school practice... are characterized by uncertainty, instability, complexity and variety." The National Association of Secondary School Principals (1985) inferred the following generic skills from an extensive job study on administration as being critical factors in job performance:

1. Problem analysis: The ability to seek out relevant data and analyze complex information to determine the important elements of a problem situation.

2. Judgment: The ability to reach logical conclusions and make high quality decisions based on available information.

3. Organizational ability: The ability to plan, schedule, and control the work of others and self.

4. Decisiveness: The ability to recognize when a decision is required (disregarding the quality of a decision) and to act quickly.

5. Leadership: The ability to recognize when a group requires direction, to interact with a group effectively, and to guide them to the accomplishment of a task.

6. Sensitivity: The ability to perceive the needs, concerns, and personal problems of others; skills in resolving conflicts, tact in dealing with people from different backgrounds.

7. Stress tolerance: The ability to perform under pressure and during opposition.

8. Oral communication: The ability to make clear oral presentation of facts or ideas.

9. Written communication: The ability to express ideas clearly in writing; to write appropriately for different audiences (students, teachers, parents, et al.)

10. Educational values: The possession of a well-reasoned educational philosophy.

A recurring finding in studies analyzing educational administration practice was the importance of supervision and personnel management. In 1977 the National Association of Secondary School Principals rated school law, curriculum and program development, management, supervision of instruction, and human relations all essential (in order given) by 70% of surveyed principals (Beckman, et al., 1985). This same study also had 63.9% of the administrative respondents citing school personnel management graduate courses as being most crucial to their present job. In two studies commissioned by the NASSP, on the allocation of time for a typical work week for both middle school and senior high school principals, personnel was ranked as being the second most time consuming (Keefe, et al., 1983). In an analysis

of research commissioned by the American Association of School Administrators, one of seven critical competencies for an administrator is designing staff development and evaluation systems to enhance effectiveness of educational personnel (AASA, 1984). Campbell (1981) has noted, "The sub-areas of curriculum and instruction have particular significance for educational administration since administration is, after all, designed to enhance teaching and learning" (Murphy and Hallinger, 1988). Several professional organizations and researchers have utilized findings on the skills and knowledge needed for administrative practice and analysis of preparation programs to derive recommendations for improvement.

Throughout the literature on the need for basic changes in educational administration preparation program and courses, there is a recurrent theme on the need to continue the teaching of theoretical constructs however with the opportunity to apply those constructs in a realistic setting or the embedding of those constructs in the relating of practical experiences. The inclusion of craft knowledge, the inductive understanding derived from the experience of practitioners, in administration preparatory programs is recommended by many researchers (Hallinger and Wimpelberg, 1989). The National Association of Secondary School Principals found in both 1965 and 1977-79 studies that principals considered courses directly related to their jobs as educational administrators more essential than those that treat education more broadly (Beckman, et al., 1985). Sergiovanni (1989) lists theoretical knowledge, craft knowledge, self-knowledge, values and intelligence as being preceding causes of administrative action. The National Task Force on Excellence in Educational Administration and the National Policy Board for Educational Administration recommends, among five criteria, to include the study of "the technical core of

educational administration and the acquisition of vital administrative skills and the application of research findings and methods to problems" (Crampton and Westbrook, 1989). Crowson and McPherson articulate this thought in stating "much of the legacy of the theory movement should be retained. We see the need to develop better training models from the best of both worlds" (Murphy and Hallinger, 1988).

Reflective Practice

A reflective practice is "viewed as a means by which a practitioner can develop a greater level of self-awareness about the nature and impact of their performance, an awareness that creates opportunities for professional growth and development (Osterman and Kottkamp, 1993). Sergiovanni (1989) recommends that administrators learn to practice reflectively. Sergiovanni is supported by considerable evidence (Donaldson and Quaglia, 1989). Reflection has been proposed as a means for changing administrative behavior through analysis of theories-in-use. Reflection on theories-in-use (a person's beliefs, position, and culture) may add to an individual's understanding and knowledge base about how and why one does what one does in action (Short and Rinehart, 1993).

Reflective practice is often best facilitated in a small group setting. The individual analysis of actions is often difficult as many theories-in-use, those beliefs that dictate actions, are many times subliminal and deeply ingrained. "Analysis occurring in a collaborative and cooperative environment is likely to lead to greater learning (Osterman and Kottkamp, 1993).

Teacher Evaluation and Assessment

Development of the dissertation simulation necessitates a basic knowledge of elements necessary for the application of evaluation theory. Review of the literature on the teacher evaluation process shows that a viable evaluation process should include the basic steps for identifying and describing the criterion measures, analyzing necessary component parts, collecting data relevant to the criteria, applying the criteria to the organized data, and making judgments with recommendations (Eye, Netzer, Krey, 1971). The Clinical Supervision Cycle includes the essential elements of establishing a relationship with the teacher, communicating goals and objectives through pre-data collection conferences, the actual observations, analysis and planning the post conference, conducting the post conference and establishing new planning and goals. Harold McNally (Hoyle, et al., 1985) stipulated eleven characteristics that should be part of any teacher evaluation system, four of which are the following:

1. The purposes must be clearly stated in writing and will known to the evaluators and those who are to be evaluated.

2. The policy and procedures must reflect knowledge of extensive research related to teacher evaluation.

3. Teacher should know and understand the criteria by which they are to be evaluated.

4. The program should make ample provision for clear, personalized, and constructive feedback.

A large variety of instruments are available for evaluating teaching performance. It has already been established that this dissertation is not meant for the purpose of providing or recommending evaluation instruments or theory, however the basic elements for using a variety of instruments need to be

included in the simulation materials. Evaluation instrumentation utilizes several sources for data gathering. Sources can include: teacher self-reports, student reports, peer reports, and observations (Steel and Stone, 1973). Time-on-task through student observation and analysis of the room arrangement for complementing learning, i.e. bulletin boards, seating arrangements, etc. have also been recommended as evaluation means (Manning, 1988). Classroom management is frequently mentioned in evaluation methods. Observations based on classroom management focus on the documentation of transition activities, high expectations, established routines, accessibility of the teacher, motivation techniques, and percentage of direct instructional time (Manning, 1988). Many evaluation instruments commonly focus on identifying excellent and marginal teaching through rating classroom management (including handling discipline problems), presentation of subject matter, instructional monitoring, good interpersonal relationships with the students and colleagues, and professional growth and responsibilities (Millman and Darling-Hammond, 1990). The Clark County School District utilizes three main areas in its Walk Through Teacher Observation checklist. These areas are the lesson actually being taught, student behavior, and classroom environment. The lesson being taught, according to this checklist, should include an introductory presentation, a clearly stated objective, a clear and organized presentation of new materials with elements combining several ways to learn, guided practice, independent practice, and application of the skills. Student behavior is rated according to time on task, appropriate discussion and movement, and positive student attitude. The classroom environment is assessed for the display of student work, educational bulletin boards, and the arrangement of the room to facilitate the lesson. Lesson plans, varied teaching techniques and grouping, and the

use of various materials such as visual aides and hands-on activities are also mentioned as recommended teacher evaluation criterion.

CHAPTER 3

DESIGNING THE SIMULATION

The goal of this dissertation was to create a simulation innovative to educational administration and more accurately reflective of administrative practice than has been available in previously developed models. A secondary goal was to create a prototype simulation that would update easily and would be portable. These goals were accomplished through the use of advanced technological equipment while adhering to relevant psychological guidelines and theoretical and practical administrative models. Accomplishing the goals of this study entailed three basic stages: designing, developing, and formatively evaluating the simulation.

Elements of the Simulation Design

The simulation was designed using a multimedia, interactive format. One major element of the design was to accommodate and intensify the accuracy of a technological representation of educational administration practice. A secondary problem to the accommodation of technological capacity was the determination of which available means of communication were most appropriate and accurate. Elements of role-play, in-basket, and case-study simulation formats were integrated into the computerized interactive format. The simulation design followed recommended principles for developing quality interactive video simulations.

Copeland (1988) detailed seven criteria for designing the format of the interactive video simulation. Copeland recommended planning the following elements into the design:

1. how to use the simulation
2. information about the simulation
3. content of the simulation
4. control and support of the simulation
5. presentation of the simulation
6. production and design of the simulation
7. programming

Hendrickson (1990) emphasized utilizing the following elements in the content of the simulation:

1. Identify the learning objectives before beginning the design.
2. Use a team of insiders for a reality check (embedding experts).
3. Add "gothchas".
4. Utilize breaks in the simulation efficiently.
5. Select the evaluation criteria before designing.

Hansen (1989) set forth nine principles for designing interactive video simulations.

1. The video segments should be authentic and show significant patterns.

2. The design should provide multiple approaches for analyzing the interaction.

3. The program design should be open and allow for later revisions.

4. The interactive video program should be integrated into other existing instruction.

5. The interactive video program should serve as a model for the self-assessment of the students own performance.

6. A student-centered approach should be utilized, do not direct.

Tennyson (1989) advocated incorporating elements in the simulation that

increase higher-order thinking strategies. These include:

1. The situations have a meaningful context.
2. The student is exposed to alternative solutions to improve their integration processes.
3. Situations should be presented that use reflective evaluation rather than right or wrong answers.
4. Situations should be presented that allow students to see the consequences of their solutions and decisions.

These criteria from Tennyson, Copeland, Hendrickson, and Hansen were selected as a basis for the simulation design.

Procedure Used to Design the Simulation

Identification of Simulation Goals and Objectives

The main purpose of the simulation was to accurately portray educational administration in a situation requiring responses and interaction from the participant in a manner that facilitates the use and development of administrative skills in the instructional setting. This purpose of the simulation led to the main goal of creating a realistic situation that would address targeted administrative skills. The administrative skills targeted were derived from those recommended by the National Association of Secondary School Principals. These skills included problem analysis, judgment, organizational ability, decisiveness, leadership, sensitivity, stress tolerance, oral communication, and written communication. Secondary simulation objectives were to provide a means of motivating the student to learn theories taught in the classroom in a manner that facilitated instruction already in place. Satisfying simulation

objectives necessitated the creation of a simulation innovative to educational administration instruction.

A five-point Likert-scale evaluation instrument was developed prior to the designing of the simulation according to the goals, objectives, and skills targeted for the simulation (refer to Appendix B). The evaluation instrument was used as an accountability device in designing and developing the simulation. A panel of experts, consisting of university professors, practicing administrators and managers, and practicing teachers, was also formed for accountability purposes. The selected experts were consulted at significant points in the simulation creation.

Simulation Topic Selection

The topic of the simulation was chosen according to the following guidelines:

1. Utilizes visual communication that can be videotaped.
2. Logical predictability as to outcome.
3. Frequently used in administration.
4. Requires decision making by the administrator.
5. Requires the administrator to communicate in several different formats (written, oral, etc.)
6. Requires the administrator to gather information through several different formats.

Teacher observation and evaluation using a clinical supervisory approach, with a pre-observation conference, three observations, and an evaluation conference was chosen as the topic by following the above guidelines.

Topic Research: Theory and Practice

Developing the elements to place into the basic simulation design began with a review of, through literature, expert advice, observation, and participation, the process of teacher evaluation. Experts included university professors, principals, vice principals, deans, and teachers. The goals of this review were 1) to gather information on a realistic sequence of teacher evaluation, 2) to find common requirements that will need to be included for completion of teacher evaluation instruments, and 3) to find common criteria that are thought to exemplify effective teaching and marginal teaching. Throughout the simulation development expert advice and the information gathered through literature were consulted and utilized to make necessary adjustments.

Technological Research

This step of the process in developing the simulation permeates throughout. Technology, particularly with digitized and computerized video, is changing constantly. Research was done to determine the most current technology available that would be the most effective for this type of simulation. Current journals were reviewed and sources in the field, such as Apple Computer representatives and representatives from many different software and hardware companies were consulted. Conferences such as Comdex and the Consumer Electronics Show and other independent product demonstrations were attended. The decision was made to utilize a Macintosh 8500 computer with a 9 gigabytes external hardrive. A Sony Hi 8 camcorder was chosen to video the teaching and conference segments. The authoring

software chosen was Action! by Micromedia. Avid Video Shop 3.0 was used to digitize the video onto Apple Quick Time utilities.

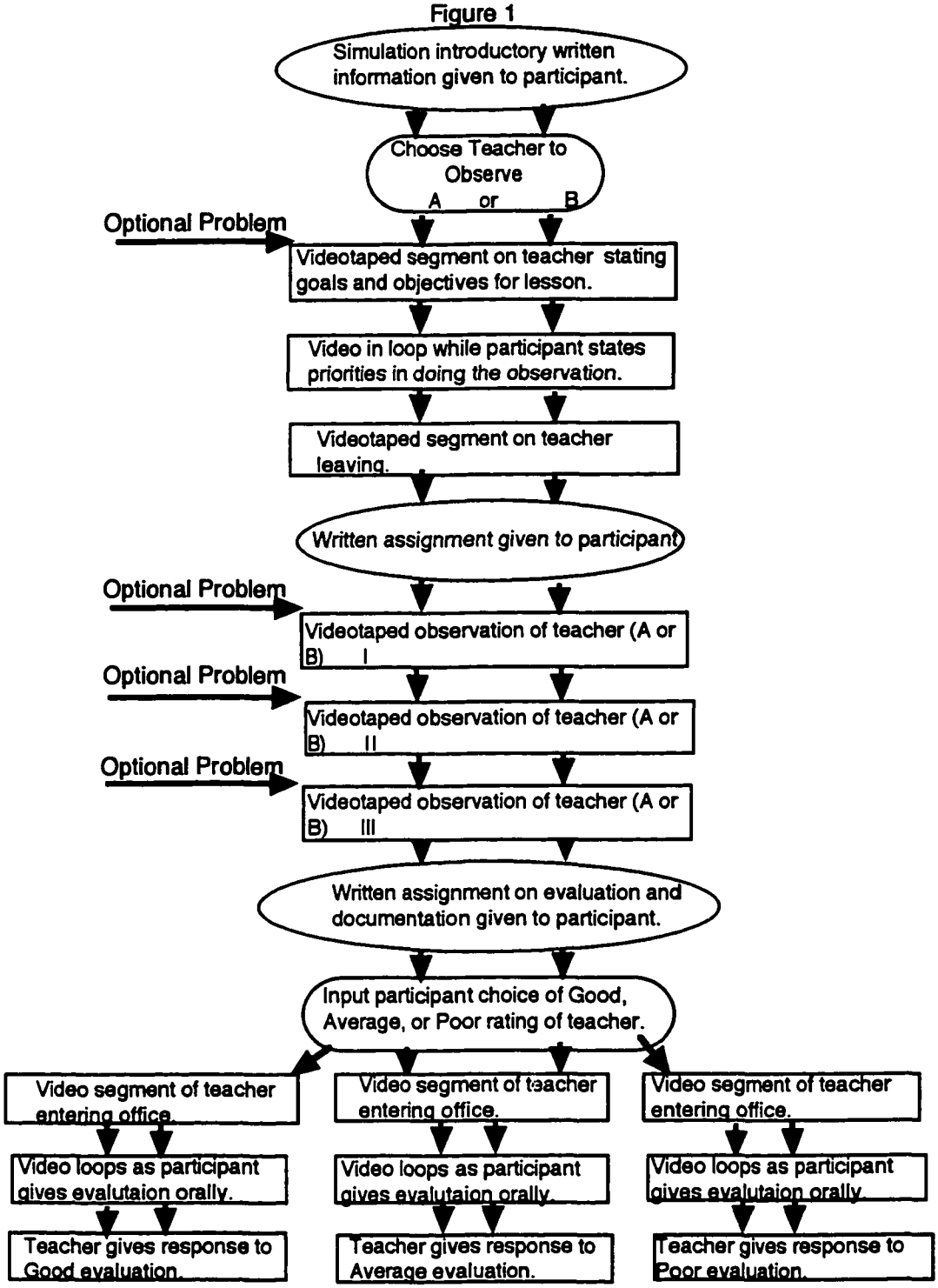
Simulation Design and Flowchart

The simulation was designed using a multimedia format controlled by a computer program. The main method of communication of the administrative situation was planned as video. Other methods of communication would include audio, graphic, and written assignments. The design allows for user input and decision making that would affect the next series of presented information. The flowchart outline in Figure 1 (see page 42) was created to give a visual presentation of the simulation format prior to its actual creation. A visualization was necessary for computer authoring and communications with other involved parties. The flowchart depicts the incorporation of the basic steps of Clinical Supervision with the strategic use of video segments and written assignments with optional audio inter-office communications. The outline is based on predictable requirements and responses of the simulation participant as recommended by a panel of experts and theoretical literature. The inter-office communications are representative of those problems typically encountered by administrators and were designed to be optional at the discretion of the operator/instructor. All of the segments of the flowchart are designed for computer operator control in the actual simulation.

Targeted Teaching Performances

To present a variety of administrative evaluation decisions, it was determined to include two types of teaching performances (marginal and excellent), at different grade levels (elementary and junior high), with different

Simulation Flowchart
Figure 1



class groupings (multiple grade levels and single grade level classrooms), and different communities (rural and urban).

Teacher A performance was targeted as a more incompetent teacher. Factors such as lack of classroom control, little student participation and monitoring, no variety in instructional groupings, and limited variety of materials, resources, and teaching strategies were emphasized. Incorporated into the designed performance of Teacher A were positive qualities to realistically counterbalance the negative qualities and increase the difficulty of the evaluation. Teacher A was designed to possess superior knowledge in a highly demanded field; technology, computers, and video, and to have organized lesson plans, and to be very eager to learn. Teacher A was designed as the first year teacher.

Teacher B was targeted as the veteran, more competent teacher. Specific teaching attributes that were targeted included excellent classroom management, the use of varied student groupings, such as individualized instruction, whole group instruction, and small group instruction, the use of a variety of materials, resources, and teaching strategies, the amount of student time on task, the organization of a learning environment, and the organization of the lesson.

Creation of Administrative Problems

Included in the simulation content were three situations and/or problems that are representative of those encountered by a practicing administrator. These problem solving situations were intended to add realism to the simulation and increase the development of administrative skills and a reflective practice. The administrative problems require the participant to make

choices about conflicting professional obligations and duties with limited time. The three problems are similar to situations described by practicing administrators.

The three problems were designed to have matters of different urgency. The first problem centers on a visit from a police officer. The basic concept was to convey to the participant a situation in which a police officer is waiting in the office and needs to see the principal regarding an incident with concerning students of the school. This matter has the most urgency and the participant is expected to address this situation immediately. The second problem centers on a phone call from the supervisor of the participant/administrator regarding budget considerations at an upcoming meeting. This problem was designed with less urgency than the first, however the first year principal may sense more urgency in that a supervisor is calling. The third problem is a request from a teacher to conference with the principal about a fund raising idea. This problem was designed with the least urgency and it is expected that the participant will choose not to address this problem immediately and to continue with teacher observations.

All problems were designed to be conveyed to the participant through an inter-communication message from a simulated secretary. The design of the simulation also requires the participant to choose between addressing the problem immediately and forfeiting one of the segments of teacher observations or addressing the problem at a later time and continuing with the observations. If the problem is addressed at a later time, written assignments were planned to be created to communicate the consequences.

Use of Written Information

The pre-production skeleton of the simulation planned for the incorporation of written materials as one of the targeted administrative skills. The written materials were designed for use in giving introductory information, to give preparatory assignments prior to major simulation segments, to give consequences for participant decisions, and to facilitate consultation and reflection within the student groups.

Design for the Presentation of the Simulation

The simulation was designed for integration with classroom instruction. The simulation and classroom integration could be realized during actual classroom time, as an extension activity, or in a computerized simulation lab. The design of the simulation does not address the teaching of theory to the student, but rather assumes the student participating in the simulation will have a basic knowledge of the theories necessary.

The control of the simulation input of courses of action and participant responses is given to a designated computer operator. The designated operator would be the instructor or a trained third party who inputs the responses of the participant and makes specified determinations about materials to be presented during each particular simulation. The use of a designated operator alleviates the potential for decreased learning resulting from a lack of computer or simulation knowledge and allows for knowledgeable adjustment of input.

The simulation design relies on the use of a team of students for implementation in the classroom. The proposed student group organization for the simulation utilizes three to four students with one student appointed as the

principal. The principal designee would be accountable for the final decisions and would be the actual participant in the simulation. The remaining group members would act as consultants in planning for future segments and as analysts in determining the effectiveness of past decisions.

The use of student teams facilitates several of the objectives of the simulation. Student interaction in the team will increase the development of administrative skills in working with groups. The use of student teams also decreases the time needed for simulation completion in the classroom setting as groups of students will participate in the simulation rather than each one individually. Finally, the student team serves as one of the planned feedback mechanisms on the impact of responses and decisions made.

Assessment of Participant Performance

One element of educational administration, and administration in general, is the lack of a clear right or wrong method of resolving many problems or making conclusions. The design for the study simulation did not include a presumed correct pathway of decisions. Feedback was designed to be given to the participant through a reflective practice in the student teams or by the participant, through instructor comments, or through logical consequences to participant actions, such as the reactions of the teacher, etc.

Final Comment on Design

Following the completion of the simulation flowchart and the basic outline for teacher performance and administrative problems, the segments of the simulation were ready for production and development. However, throughout all phases of the simulation creation there is much overlapping and

interweaving. The design of the simulation was adjusted as necessary throughout both the development and the formative evaluation segments.

CHAPTER 4

PRODUCTION AND DEVELOPMENT OF THE SIMULATION

The production and development stage of the simulation included videotaping of teacher performances, computer programming, recording of audio messages, and assembling the parts into the prototype of the simulation. Throughout the developmental stage, formative evaluations were conducted through consultation with the selected panel of experts.

Videotaping of Teaching Segments

As determined and described in the design of the simulation, two teachers were filmed for the video segments while teaching at different grade levels (elementary and junior high), with different class groupings (multiple grade levels and single grade level), and different communities (rural and urban).

The chosen profiles place the teachers at different phases in their careers (veteran and first year teacher) and give different ethnic backgrounds. Each teacher was instructed to emulate different teaching qualities, one with negative teaching qualities and one with more positive teaching qualities.

Teacher A strove to portray a more incompetent teacher. Factors such as lack of classroom control, little student participation and monitoring, no varied instructional groupings, and limited variety of materials, resources, and teaching strategies were emphasized. It was recommended by the panel of experts not to make the evaluation decision too simple and to realistically

counterbalance the negative qualities with some positive qualities. Teacher A was portrayed as possessing a superior knowledge in a highly demanded field, technology, computers, and video, and as having organized lesson plans, and being very eager to learn. Videotaping was done at an actual school location. Attending students with parental permission slips participated. Realistic interruptions and students behaviors were included.

Teacher B was videotaped while doing actual instruction, with both superintendent permission and parental permission. Teacher B was not given detailed instruction on what type of teacher to portray as this teacher was chosen to be filmed based on extremely high evaluation reports from three different administrators. Teacher B portrayed a highly competent teacher.

Two other teachers were filmed in a teaching setting, however for different reasons these videos were not utilized.

Videotaping Pre-observation and Post Observation Conferences

To be able to videotape the conferences, both pre-observation and evaluation, a scene had to be set and specific directions had to be given to the two teachers. An office setting was arranged that would be typical with books, a chair for the teacher, and other items. Specific instructions had to be given for each segment.

The teachers were informed that the first segment to be filmed would be the pre-observation conference. A set script was not given so as to get natural responses. Directions were given to the teacher to have a five minute dialogue on their goals and objectives in teaching their specific subjects and in their careers. The teachers were given time to compose their dialogue and then

were filmed. Refilming was done if mistakes were made or if the time limit was not followed.

Following the pre-observation conference filming, the teachers were filmed for sixty seconds in a sitting position with no talking. This filming was necessary for the fifteen second time loop that would allow the participant in the simulation to give their goals and objectives in the observations while the teacher appeared to be listening. The participant is allotted up to five minutes for their dialogue. The computer operator can press a skip button at the time when each individual participant is finished and within fifteen seconds the scene changes to the final pre-observation scene.

In the final pre-observation scene the teachers state, "Oh, there is my bell, I had better go." This final phrase permits the computer operator to cut off the participants speech if it is exceeding the five minute time limit and still have a natural reaction.

The evaluation conference had to be filmed three times for each teacher. The teachers were instructed to give a short reaction and response to a situation in which they were given a good evaluation, an average evaluation, and a poor evaluation. The same office scene was used as was set up for the pre-observation conference, with only a shirt change by the teachers being filmed. Each time the filming was done the teacher being filmed held papers that were meant to signify a written evaluation given to them.

The filming began with the teacher being filmed holding the evaluation papers and stating, "Oh, I see that you have my evaluation completed, well lets get started." This was a cue-in for the participant to begin their dialogue on their evaluation of this teacher. The teacher was then filmed again for sixty seconds

holding still to allow for a fifteen second time loop to be played during the participants dialogue. Each of the three reactions were then filmed.

Creation of Written Assignments

Written assignments were created to give necessary preparatory information to the participants and to encourage a reflective practice with themselves or with their assigned group of student administrators. The simulation itself does not give a value judgment on decisions made or the accuracy of the final evaluation. The written assignments were necessary to require the participant to look back on their decisions and actions and analyze possible negative and positive consequences and other actions that may have been better. This reflective process in enhanced with the participation of assigned team members and the instructor.

The first written assignment includes an introduction to the simulation, giving the purpose of the simulation and what can be expected. Also included in the first assignment is the participants assignment to a team and a position in that team, as principal or team member. The principal is the main participant. "Assignment I" also requires the composition of a five minute dialogue that will be delivered by the principal during the simulation. This dialogue communicates the goals and objectives of the principal in the observation and evaluation of the teacher. The principal is required to consult with their team on this assignment.

A written assignment was also created for the participant following each of the three main segments; pre-observation, observations, and evaluation conference. These assignments require the participant to clarify what was

accomplished or observed, to gather input from other team members, and to introduce and give information necessary for the next segment.

Written assignments were also given if the participant was given an optional administrative problem and if they acted to address that problem. These assignments required the participant to reflect on their decision and to gather input from other team members.

A final written assignment was given to assess the simulation. This assessment was a 5-point Likert scale questionnaire to gather data for analyzing the effectiveness of the simulation.

Computer Authoring and Graphics Creation

A program designed specifically for the simulation had to be created to control the presentation of information based on user input. The program was developed using the Action! computer authoring software. The authoring software utilizes a timeline on which the computer programmer placed designated controls and media segments. Segments on the simulation timeline were designated for the various simulation components, such as video segments and audio communications. Branching for decision making was accomplished through looping and pause features. The various computer screens were created within the authoring software and were placed at specific points on the simulation timeline. The authoring program was developed in conjunction with a computer programmer.

Initially, the programmer was given the flowchart shown previously in Figure 1. Detailed discussion followed on the specifics of the time length of the video segments, the requirements for the simulated inter-office communications, and the necessary branching. Other stipulations given for the

authoring was that the program should be user friendly, have the capacity for ease in changing video segments for future updates, and that the computer operator would have access to any segment of the simulation at any time (to accommodate breaks by the participant in the simulation). A stipulation was given that each active simulation would be able to be saved in order to automatically return to the ending point after a break by the participants, however the authoring software did not have this capacity and this stipulation was not satisfied.

The authoring process was one of constant review and troubleshooting. As stated before, this was a collaborative effort with the computer programmer. Once the program satisfied the requirements and the skeleton of the simulation was in place, the video and audio segments had to be included.

Editing of the Video and Refilming

A brief review of the videos was done immediately after the filming to ensure quality. The video was also shown to experts to test for realism and accuracy of teaching competency portrayed. However, the majority of the editing was done following the creation of the basic lay out of the computer program. This was done to allow for specific tailoring to the program requirements, such as time length.

Editing the videos began with logging by writing down counter numbers and the specific action of the teacher associated with those counter numbers. Once the specific sections of the teaching were chosen, the selections were timed for necessary length adjustments. The time length for each observation segment was set at eight minutes. It was determined through expert recommendation that the necessary elements for teacher evaluation could be

evident in this length of time. The time length for the pre-observation teacher dialogue was set at five minutes. The time length for the post observation evaluation conference teacher dialogue was set at three to five minutes. Some refilming was necessary at this time and then those refilmed sections were also logged and timed. The videos were now ready for digitizing.

Digitizing the Video

The video segments were digitized by connecting the camcorder to the Macintosh 8500 with the audio/video input jacks and then digitizing using Avid Video Shop 3.0 onto Apple Quick Time utilities folder. Digitizing the video through the Macintosh gave acceptable video quality, however not exceptional quality. Minimum requirements of a 320x240 screen resolution and clear audio were established. The audio was enhanced through software settings.

Each digitized segment, i.e. pre-evaluation conference, each observation, and the final conference, were saved into separate files onto an external 9 gb hardrive. Each digitized segment was saved onto separate files to allow for placement into separate sections designated for the video on the computer program. This also allows for these files to be removed and then replaced by an updated video segment.

The digitized video for each total simulation took approximately 3 gb of hardrive space. To obtain acceptable quality, the video was not digitized to full screen. If digitizing was done to full screen, an upgrading of the digitizing software would be necessary and each simulation would require approximately 4 gb of hardrive space. These intensive memory requirements precluded the original intention of using three video teachers to only two video teachers as a result of the access to only one 9 gb hardrive.

Placing Video Segments into the Computer Timeline

Each video file was then placed into the designated segment in the computer program. As each video file was put in place, the program was played in sequence. Troubleshooting and adjustments to the program were necessary at this point, particularly with the limited use of 16 mb of RAM.

Auditory Inter-office Communications Recording and Placement

Three administrative problems were created utilizing auditory inter-office communications to add an element of realism to the simulation. These problems consisted of a visit from a police officer, a phone call from the principal's supervisor, and a request from a teacher for a conference. Scripts were created for the messages and then recorded through the audio input on the computer with an external microphone. The researcher simulated the secretary's voice. Each message was saved into a separate sound file. Each sound file was then placed into the designated segment on the computer program. Each message is approximately 25 seconds in length.

Troubleshooting and Refinement

With the completion of the placement of the main segments and administrative problems into the programmed timeline, troubleshooting for programming errors and refinement of details in the presentation of the simulation were necessary. Several problems occurred when the simulation was played as a whole and minor adjustments were needed.

A major problem was encountered with the audio towards the end of the simulation. The pre-conference audio and all the observation audio was audible, however the audio in the evaluation conference was not. The problem

was thought to derive from an inadequate amount of RAM. The computer was originally equipped with 16 mb of RAM. To attempt to address this problem 16 mb were additionally added. This did not resolve the problem. The problem was finally resolved by saving the evaluation conference as a separate program. The programmer and researcher concurred, from process of elimination, that the cause of the difficulty was software shortcomings.

Minor difficulties were encountered with the visual esthetics of the looping video segment in the evaluation conference. At the time of filming and editing, the difference in the lighting when filming separate segments was not noted. This created a problem when the looping segment was placed as a bridge between two other video segments. The goal was to make it appear as if the teacher were now listening, however the lighting made it apparent that there was a change in video segments. This problem was resolved by eradicating the original looping segment and inserting a video clip with similar lighting.

Several other bugs occurred within the programming and with the integration of all segments of the simulation. These problems were addressed through minor programming adjustments or redirection. Refer to Appendix B for a printout of the completed simulation computer programming.

Actual simulation time (for all three segments) is 45 to 50 minutes. Teams or participants are required to complete assignments between segments that fosters a reflective practice and that allows for the preparation of the next simulation segment. In the classroom setting, this gives an opportunity to run groups intermittently. Some segments (i.e. the observations) may be run at the same time for two participants/teams. Simulations may also be run simultaneously with additional equipment.

Final Comments on Production and Development

At the completion of the production and development stage the simulation was in a form similar to the rough draft of a written document. The simulation was in a multimedia, interactive form utilizing audio, video, graphic, and written information. At this point the simulation needed to be formatively evaluated for the clarity of presentation of materials and communication and the presence of the initially targeted skills, objectives, and goals. Adjustments and editing would be conducted through the analysis of the results of this formative evaluation.

CHAPTER 5

FORMATIVE EVALUATION OF THE SIMULATION

Formative evaluations were conducted at critical points of the designing and creation of the simulation. These initial evaluations consisted of consultations with administration experts and experts in relevant fields. Proposed videotaping, the raw video footage, and then the final, edited video segments were all analyzed by different members of the selected panel of experts for realism, clarity, and relevance. The content of administrative problems for audio inter-office communications was developed through input from the panel of experts. Clarity and organization of materials, relevance of information, and the simulation format in its entirety all were examined at different points by different members of the panel of experts. The consultation with these administrative experts was conducted throughout the design, production, and development stages. Once these stages were completed, a final formative evaluation was conducted on a pilot group of participants.

Final Formative Simulation Assessment

The completed simulation was now ready for the formative testing on a pilot group of individuals. Three separate presentations were given. Two of the presentations were given to individual experts that had over ten years experience as practicing administrators. Both experts had been administrators at both the secondary and elementary levels. The third presentation was given

to two teachers who acted as an administrative team, consulting each other for a final single decision. At the end of each of the three presentations the simulation assessment instrument was completed by the participants. Responses and results from these evaluations, as well as feedback given throughout the presentation by the participants, were used to refine the simulation and to make judgments on the degree to which the goals and objectives targeted for the creation of the simulation were accomplished.

Results of the Final Formative Assessment

The formative evaluation was conducted using a Likert-scale instrument with nineteen questions. The instrument had a 5 point scale with the following values for the points:

5=Strongly Agree
4=Agree
3=Somewhat Agree
2=Somewhat Disagree
1=Strongly Disagree
UD=Unable to determine

Ten of the nineteen questions on the formative evaluation instrument were rated as "Strongly Agree" by all members of the pilot testing group (n=6) as being addressed in the simulation. The administrative skill areas embedded in six of these questions included problem analysis, stress tolerance, oral communication, and written communication. Other simulation objectives tested in these questions were the realistic portrayal of an educational administration situation, being a valuable tool in training educational administrators, providing a means to apply theory to practice, and that the simulation was a device that had not been available before in training administrators. The two students who actually participated in the simulation as a group also rated as "Strongly Agree"

that the simulation motivated the students to learn. The other participants in the pilot test did not rate this question.

None of the questions on the instrument were rated lower than "Somewhat Agree". Two areas received a "Somewhat Agree" from two respondents. These two areas received the lowest ratings from the pilot group as a whole. The two administrators both rated the ability of the simulation to have the participant make decisions with limited information, Judgment, as "Somewhat Agree". One of the students and one of the administrators rated the capability of the simulation to require the participant to have tact in dealing with people from different backgrounds, Sensitivity, as "Somewhat Agree". The question centered on the simulation requiring the participant to reach logical conclusions based on available information, Judgment, received all "Strongly Agree" with the exception of one of the administrators.

Two questions, both in the area of Leadership, received an "Agree" rating from several of the participants. Four of the pilot testing group rated the capability of the simulation requiring the participant to resolve conflicts with others, Leadership, as "Agree". Two respondents in the pilot group rated requiring the participant to discern the professional needs of others as "Agree". All other ratings for these two questions were "Strongly Agree".

Three members of the testing group rated having to take action under opposition, Decisiveness, as "Agree". The members that rated these areas at the highest level, "Strongly Agree", based their decision on the participant having to resolve the differences of opinion within the administrative student team. During the presentation of the simulation to the student team, a conflict did arise in the decision of whether to meet immediately with the police officer in the administrative problem or to continue with the evaluation observation. This

conflict led these students to realize that opposition and conflict would occur within the groups that would lead to the exercise of decisiveness from the primary participant. The area of "Organizational Ability" was determined to be strongly required by the majority of the respondents in questions 4 and 5. One of the administrators was undecided on the two questions on "Organizational Ability". The programmer rated the capacity of the simulation to require the participant to organize the work of others as "Agree".

Comments were given by the pilot test participants on the strengths and weaknesses of the simulation. One of the practicing administrators wrote that "the simulation is very realistic in terms of what you encounter in an actual observation. Teacher responses are very typical of what you expect when doing an evaluation." The graduate participants state that "strengths include learning through all the senses, the capability of the simulation to be repeated several times, and the options on different teachers." The graduate student participants also commented that weaknesses included the sound, at times, and that it may need to be more user friendly for persons not familiar with technology.

Adjustments Made to the Simulation

The necessary adjustments to the simulation following the formative evaluation were surprisingly few. One area of needed improvement was the volume level of the audio. Adjustments were made in the audio settings and when this was unsuccessful the computer authoring was minimally reconfigured and the audio volume level was made higher.

CHAPTER 6

SUMMARY AND CONCLUSIONS

Overview of the Study

The goal of this dissertation was to produce a prototype interactive, multimedia simulation that could be used by an instructor as an experience medium in bridging theory of teacher evaluation with practice. Nine administrative skills found to be frequently a part of the school administrators day by the NASSP were used as guidelines in designing the environment for the realism of the simulation. Teacher evaluation, a basic function of school administrators, was then selected as the topic for theory application. Using advanced technological means for embedding the necessary elements for the application of evaluation theory into the planned design of the environment of the simulation then defined the research course.

The format of the simulation consists of three main segments. These segments closely follow the Clinical Supervision Model of Teacher Evaluation and include a pre-observation conference, observations of instruction, and a post observation conference. Options and variations for the simulation include teacher selection and several realistic administrative problems typical of those encountered daily by administrators. These options and variations effect the quantity of segments shown to the participant and the potential quality of the teacher assessment.

The simulation incorporates several methods of information presentation. All of the main segments are in a video format. On-screen graphics and communication devices are utilized to give the participant necessary information and to more realistically involve the participant in administrative decision-making.

All of the included devices are controlled by computer. Information is entered into the computer by an instructor or operator according to the responses of the participant and the chronological stage of the simulation. Video segments, messages displayed, written assignments, the teacher to be evaluated, and administration problems vary from simulation to simulation according to the decisions of the participant and the computer operator.

Participants in the simulation are initially provided with necessary background information. This includes a brief history of the teacher being observed, group roles and assignments, rules of the simulation, and a preparatory assignment for the simulation. Background theory instruction and teacher evaluation instruments are to be researched by the participant through a source outside the simulation materials.

Students are given necessary information and assigned in teams of three. This includes a student designee for the position of principal. The assigned principal is the primary participant and is presented all actual simulation materials. The remaining team members act as consultants on the effectiveness of decisions made or to be made. Participation as a team should facilitate engagement of a reflective practice that would provide appropriate analysis of the actions of the participant and the decisions of the team. Aspects

of reflective practice are also reinforced in simulation assignments. Actual simulation time is estimated to be 45 to 50 minutes for completion.

Formative testing of the teacher evaluation simulation was conducted throughout development with expert guidance. The team of experts used for guidance included practicing administrators and teachers and university professors. A final formative evaluation on the completed simulation was conducted with two graduate level students, with teaching experience, in a group and then individually to two practicing administrators, each with over 10 years of experience. The researcher and programmer also completed the formative instrument. The goal of the final formative evaluation was to obtain recommendations on content and presentation of information and to test the accomplishment of predetermined goals and objectives of the simulation.

The simulation was formatively assessed according to the following goals and objectives used for its creation:

1. The simulation should add the following to the classroom learning environment:
    a. An application of administrative theory in administrative situations.
    b. An additional element of motivation to the student to learn the materials presented in class for use on the simulation.
    c. An increase in the confidence level of the administrator in training for their ability to become an administrator.
2. The simulation should improve and introduce the following administrative skills:
    a. Problem Analysis

b.Judgment

c. Organizational ability

d. Decisiveness

e. Leadership

f. Sensitivity

g. Stress Tolerance

h. Oral Communication

i. Written Communication

3. The simulation should be determined to be realistic.

The information gathered from the simulation assessment was utilized for alterations to the simulation.

Conclusions

The creation of this simulation required a balance between the initial ideas and projections and the realities of technological capabilities and budget. Much of the initial mental blueprint was viable, however several points needed adjustment or elimination for completion. Three main forces, the design criteria, the environment of the simulation, and the capability of the technology for fidelity and realism, shape the final analysis of the accomplishments and failures of the simulation model.

Extent of the Realization of the Design Criteria

In the initial planning for the simulation design, several criterion were selected for use as guidelines in developing and designing the simulation. Elements for quality simulation design were selected based on a review of prior assessments of simulations and interactive simulations and the findings of

those assessments for producing quality simulations. The goal in using the design criteria was to produce a comprehensively planned simulation that was practical to use, realistic, and meaningful.

Seven principals for design set forth by Copeland (1988) were included in the planning of the simulation. The simulation was primarily designed for use in a classroom situation or a computer laboratory to satisfy Copelands suggestion to plan for the use of the simulation. Copeland recommended determining the presentation of the simulation, the research simulation is developed to be most effective in a small group. Information about the simulation is given in the introductory simulation materials, to accomplish Copelands' criteria for designing introductory materials. The content of the simulation is centered on the elements necessary for teacher evaluation and the simulation environment was created using nine administrative skills recommended by the National Association of Secondary School Principals. Instructor or operator simulation control is recommended, however the participant controls the decision making. The support of the simulation would be given through materials presented by the instructor. In conclusion, all selected elements for simulation design set forth by Copeland were successfully planned into the simulation.

Hendrickson (1990) set forth five elements that were selected for use in designing the simulation. Hendrickson advocated identifying the learning objectives before beginning the design. Administrative skills from the NASSP, motivating students, and having a realistic portrayal of the teacher evaluation process were selected as objectives. Hendrickson recommended using a team of insiders for a reality check and this was accomplished through consultations with university professors, veteran administrators, veteran teachers, and

experienced programmers. "Gotchas", another recommended item, were added to the design of the simulation through the inclusion of daily administrative problems and the reactions of the teachers to poor evaluations (one refuses to sign). Hendrickson stated that quality simulations utilized breaks efficiently, an idea included in the research simulation through utilizing assignments in the small groups between simulation segments that require planning for the next segments of the simulation and a reflection on past actions taken. Finally, Hendrickson recommends selecting the evaluation criteria before designing the simulation. The evaluation instrument was designed prior to beginning the actual creation of the simulation using the goals and objectives predetermined. In summary, criteria selected from Hendrickson's recommendations were satisfied in the simulation design.

Hansen (1989) found that quality interactive video simulations contained authentic video segments that portrayed significant patterns. The authenticity of the video segments were assured through the use of an actual classroom setting and through consultation with experts. The use of an actual classroom setting was a change in the original conception of the simulation. Initially actors and a "staged" classroom were to be used, however the realism of interruptions, student reactions, and other subtle elements that show significant patterns were difficult to duplicate. The actual classroom setting provided a much more realistic simulation video.

The simulation design also satisfied several of Hansen's criterion for student involvement. Hansen recommended using a student-centered approach restricting the directing of the instructor. The student is required to make the decisions in the research simulation and to interact with their small group for consultation and reflection. However, the instructor may become

"over" involved at times or may direct the students. Control of the instructor is beyond the scope of the simulation. Hansen also advises using a self-assessment by the student. This element is satisfied through the use of a small-group and reflection. The simulation gives no judgment as to "right" or "wrong" decisions, rather consequences are given, such as the reaction of the teacher to the evaluation. Finally Hansen advocates providing multiple approaches for analyzing the interaction. This is accomplished in the research simulation through group and individual analysis as well as the videotaped reaction of the teacher and the potential for analysis by the instructor. Another idea that was not incorporated into the formal simulation design is to video the participation in the simulation for later review and for each group to present their evaluations of the same teacher to different groups.

Simulations that were open and allowed for later revisions were found by Hansen to be most effective. The research simulation allows for the replacement of the video segments without affecting the rest of the program. Replacing the videos makes updates for contemporary material possible and allows for the addition of several different teachers into the simulation format to create a library of evaluation experiences. The computer program can also be changed through the use of a programmer.

Finally, Hansen advocates designing the interactive simulation for integration into existing instruction. The research simulation is designed for application purposes only, the teaching of theory or feedback is not provided. Designing the simulation for application only will facilitate integration with many different philosophies, procedures, and instructional settings.

Tennyson (1989) gives several conclusions for simulation elements that employ higher-order thinking strategies. Tennyson concludes that simulations

should have a meaningful context for the participant. The research simulation is based on teaching performance evaluation, which is a major component of educational administration. The situations in the research are directly taken from the practical world and experts have validated the realism. Tennyson also advocates exposing the student to alternative solutions for improved integration processes. The research simulation design encourages group feedback which gives the possibility for the presentation of possible alternatives. Tennyson supports using reflective practice such as that used in the research simulation.

Environmental Elements Present in the Simulation

The environment of the simulation was created utilizing nine of the administrative skills of the assessment center of the NASSP. The simulation environment incorporated the application of these skills through the presentation of and guidelines for decision points, assignments, simulation format and simulation content. An evaluation instrument was created using the NASSP skills as a basis for questions. The evaluation instrument was utilized in a formative evaluation of the final simulation. The results of the evaluation indicate the simulation successfully provides an experiential medium for several of the targeted administrative skills.

Four administrative skills that appear to be strongly represented in the simulation are problem analysis, stress tolerance, oral communication, and written communication. Other skills that are judged by the assessment participants to be present in the simulation, but not as strongly as the previous four, are leadership, organizational ability, and decisiveness. In conclusion, seven of the targeted nine administrative skills have been judged to be prominently present in the simulation. In addition, graduate student participants

found the simulation to be motivating for learning.

Two administrative skills that received lower ratings, in comparison to the stronger ratings of the other skills, by the simulation evaluators were in the areas of sensitivity and judgment. The lowest ratings for these areas were "Somewhat Agree", the median rating on the rating scale. The sensitivity issue was subtly addressed in the simulation through the ethnicity of the teachers, the populations of the schools, the expertise and experience of the teachers, and the reactions of the teacher to the evaluations. This issue would be more prominently evident as more videotaped teachers were included in the simulation library. The question, on judgment, which was rated lower than other questions, asked if the participant was required to make decisions with limited information. One of the administrators, who rated this question "Somewhat Agree", stated that the simulation evaluation process was much more thorough than the process actually practiced in reality. This administrator stated that principals need to determine at the onset which teachers need a comprehensive evaluation, i.e. the marginal teachers, and which teachers need a much more brief evaluation, i.e. the exceptional teachers. This determination may be the realities of practical administration, however the simulation needed to balance the realities of practice with the needs of a student of administration. It was decided that the student needed to follow the path of a comprehensive evaluation to fully apply and understand theoretical knowledge.

In conclusion, the simulation strongly accomplished the inclusion of the majority of the targeted administrative skills. This accomplishment is evidenced in the results of the formative evaluation. However, the formative evaluation was, and should be, only used as an indicator. It was not a comprehensive or

valid assessment. A more rigorous assessment needs to be conducted for any statements to be conclusive.

Technological Capability for Fidelity and Realism

The final area of analysis for concluding simulation assessment is the technological capability of the devices used for the simulation to realistically portray a practical area of administration for meaningful learning. Technological capability was the essential research question and led to the inclusion, modification, or elimination of several original elements in the simulation design.

Changes in simulation design began almost as soon as filming was initiated. Originally, the research plan was to use staged teaching performances. However, when the needed elements for filming were analyzed for actual filming, it was decided that using actual teaching performance would be more effective. Administrators and teachers encounter unplanned interruptions and surprises every day, if not every second, and to attempt to script these occurrences proved to be artificial. It was thought to be necessary to obtain the most realistic teaching performance, and natural student reactions, in order to lead to administrative student identification of essential patterns, i.e. the identifying clues encountered in the working world that mark teaching effectiveness. Therefore, filming was done in an actual setting.

Once filming was completed the next major alteration in the simulation design occurred with the choice of computer hardware and software. Initially, the plan was to utilize a Commodore Amiga computer with compatible software and a laser disk. During the course of the research process, the Commodore company became defunct and it became illogical to continue to design a

simulation with this system. The Macintosh 8500 was then chosen as a replacement.

The Macintosh computer was chosen based largely on its wide acceptance in education. Educational institutions are the targeted users of the simulation designed for this dissertation and it was determined that using a computer with the necessary capabilities that was also widely used was important. The 8500 computer also came standard with digitizing capabilities.

When the decision was made to change computers it was also decided to use digitized video. As stated above, the 8500 computer came standard with digitizing capabilities. Using this capability in the simulation would allow the creation of like or similar simulations using the multimedia, interactive format designed in this dissertation without expensive and complicated specialized equipment and expertise. Changes in the simulation could also be made utilizing the 8500 without having to contract outside agencies. However, using digitized video had both benefits and disadvantages.

Digitizing the video allowed the realization of a simulation that has total editing capabilities within its own system. This was a major goal of the creation process, to develop a prototype simulation that would easily be recreated and extended. Using standard digitizing capabilities, however, results in a lower quality video, though the problem was largely eliminated through manipulating the settings and colors. The result is video presentation that, while somewhat distracting, is effective.

Digitizing video is very memory intensive. The researchers originally estimated that each 10 minutes of video would take 1 gb of memory to digitize. Using the digitizing capabilities in the standard system reduced the amount of memory used, however the number of teacher simulations had to be reduced

as a result of limited access to external memory. The original simulation design planned to use three different teaching performances. One teacher performance was eliminated, the performance determined to be "average". Two teacher performances were kept.

The goal of having five major video segments that roughly followed the Clinical Supervisor Model was realized. Each simulation has a pre-conference, three observations, and a post conference. An effect of the teacher listening whiie the participant gives their goals and objectives for the observation is accomplished through a 15-second looping of the teacher listening. At the point that the participant is through with their discourse, a button is pressed on the computer and the next video segment appears. This allows for another element of interactivity.

The programming also allows for decision points by the participant as planned in the original design. These decision points are as follows: choice of teacher (AorB), decision to address interruption of evaluation process (administrative problems such as phone calls, unexpected visits, etc.), and finally, the rating of the teacher (excellent, satisfactory, unsatisfactory). All portions of the programming have editing capabilities through reprogramming, however, reprogramming will effect the remaining portions of the program and trouble shooting may be necessary.

The design of the simulation also proved technologically capable of providing a multimedia communication of information. As stated previously in this dissertation, administrators receive and gather information through several different communication modes. Effective training of student administrators should include opportunities for gathering and receiving information through different sources. The research simulation has the capability of providing

information through written, auditory, and visual communication. In addition. the simulation adds an element of time that gives the impression of urgency within which many administrators must operate and gather information.

Final Analysis

The end product of this dissertation was the creation of a multimedia, interactive simulation that provides a platform for application of teacher evaluation theory in a practical setting. Information is realistically presented through written, auditory, and visual avenues. The participants are required to make oral and written communications. The participants are also required to make decisions in a group and reflective practice is encouraged.

The complete end product utilizes not only multimedia and interactive technology, but also incorporates effective practices from previous simulations, such as role play, case studies, and in-basket problems. The simulation also gives logical and realistic feedback to participant decisions based on presented material and past participant actions. It can be predicted that the use of this simulation will lead to an engagement in the learning process by the participant in a manner that will develop effective administrative decision making and the increase of the use in the workplace of theories taught in the classroom.

Recommendations

1. Implementation of the simulation in an actual classroom setting.
2. An intensive assessment of the effectiveness of the simulation in the implemented setting and the long range effects on actual administrative performance.

3. The inclusion of more teachers to create a full teaching "library" that will allow participants to view and evaluate several different teaching styles.

4. The inclusion of more decision points in the programming as a frequency of questions and responses is seen in the reactions of the participant.

5. The use of the following simulation system (according to current available technology:

a. Macintosh 8500 with an additional 8-16 mb of RAM
b. An external 4-9 gb of hardrive/storage system, removable preferred, with a high data transfer rate
c. The use of the "Director" or comparable authoring software
d. The use of a digital camcorder
e. Remote microphone for better audio

Final Comment

The introduction to this dissertation provided discourse on the major advancements in the field of computer and video technology. The new potential for simulations given by these advancements in representing a variety of educational administrative situations was envisioned. Was this vision realized through the development of this simulation? As with many innovations, the vision was both unattainable and surpassed. Technological problems resulting from memory requirements and budgetary restrictions limited the number of videotaped teachers and the length of video segments. Interactivity points needed to be restricted and controlled to those with a predictable response. Finally, some technological idiosyncrasies are distracting to a learning process dependent upon gathering information through all the senses.

However, it was decidedly shown that the creation of an interactive, multi-media simulation is possible in realistically simulating administrative decision making. The use of this type of simulation as an experiential medium,

while not completely portraying the continuum of human interactions, requires the participant to make decisions that can be used for analysis and discussion on theories-in-use and, therefore, should enhance the integration of new knowledge into existing ideas. This may well be the strongest contribution of the research simulation format. Another strong point of the simulation is the capacity for ease in changing the programming and videotaped segments for improvements and updates. Further assessment and the creation of different types of simulations need to be conducted and developed for conclusive statements on the impact of multimedia, interactive simulations to be made. One of the main drawbacks of technological simulations, however, is that at the point that final conclusions are drawn, the simulation may well be obsolete.

APPENDIX I
INTRODUCTORY MATERIALS AND ASSIGNMENTS

INTRODUCTORY MATERIAL
EVALUATION SIMULATION

The simulation in which you are about to participate is an interactive, multimedia simulation on teacher evaluation. You will be given information with which to judge teacher performance through videotape, written letters and memos, computer graphics, and recorded inter-office communications. Your responses to presented information will affect the next series of information given to you.

You may be assigned to a "team" of administrators. One person will be chosen by your group to act as the principal. This person will be the primary participant, however, all decisions will have to be discussed with the team as a part of a reflective process. In this simulation there really is no right or wrong answers, just decisions and consequences. You and your team will discuss if the decisions made could have been better. The team will also discuss which actions should be taken next.

This simulation is centered on the observation and evaluation of teaching. The three phases of clinical supervision will be followed, which includes pre-observation conference, observation, and post observation conference. More specifically, the simulation will begin with a pre-conference with a video taped teacher, then, after a break and conference with your team, you will observe three ten-minute videotaped lessons, and finally, after a break and conference with your team, you will have a post-observation with a videotaped teacher response. You may choose any observation instrument to collect information during the observation. However, you will have to use this instrument to support your decisions. Also included in the simulation will be random events that are part of a typical administrators day, such as parent phone calls, letters of complaints, students altercations, etc. Your decisions on these events will have to be instantaneous in some cases and can only be discussed with your group after the decision has been made.

If you feel additional information or data is needed to give an accurate evaluation of the teacher, you will have to ask for that information. Some additional information is available, if you ask for it specifically during the break times of the simulation.

There will be a total of 8 assignments in this simulation. These assignments will be discussed and completed as a team if you are assigned to a team. Each assignment must be given to the instructor with all team members names included.

Assignment I:

___ The teacher that has been chosen for you to observe is teacher _____. Information on the school you manage and on this teacher is included in your packet. Please review this (if you are assigned to a team, review it as a team) You will be required to have chosen an observation instrument before the pre-observation conference. Please use your group as a resource.

Information on Teacher A
School Assigned: Parker Elementary

Parker Elementary is a rural school with multi-level classrooms. The children come from a lower socioeconomic area and must ride buses to school. The class you are to observe has students ranging in grades from third to fifth grade.

Teacher A is Mr. Miller. Mr. Miller taught for 20 years in another school district , but is a first year teacher in this school. Mr. Miller was hired by you on the basis of an outstanding file with good recommendations and many extra-curricular advisory assignments. However, Mr. Miller taught in an inner-city middle school and is new to this age level.

Your contact with Mr. Miller has been limited as you are housed at a location some distance from Parker Elementary.

Information on Teacher B
School Assigned: Parker High School

Parker High School is located in a lower-socioeconomic, urban area. About 60% of the students walk from the neighborhood to school and another 40% ride the bus to school or drive. The class you are to observe has students ranging from ninth to tenth grade. The class is a video technology class.

Teacher B is Mr. Vasquez. Mr. Vasquez is a first year teacher to the district. Mr. Vasquez recently received his degree from a well-known university and has worked in the video business prior to completing his degree. Mr. Vasquez was hired by your vice principal on the basis of his extensive knowledge in a specialty field and excellent recommendations from recent employers. Mr. Vasquez also coaches the volleyball team for Parker High School and is beginning a video production club.

Your contact with Mr. Vasquez has been limited as he was hired by your vice principal and Parker High School has a large student and teacher population. However, Mr. Vasquez has been noted to work well with other staff and spend many hours at school after school has ended.

Assignment II

You are to prepare, with the help of your team, a five minute speech to be used in the pre-observation conference. In the pre-observation conference (as a result of the limitations of video) the teacher will have a five minute speech prepared and will enter the room and give this speech. Following the teachers speech, you will have five minutes to give your speech to the teacher. The time limit will be enforced by the simulation.

Assignment III
Team Evaluation of Pre-observation Conference

Team Members :_____

_____

_____

_____

1. Which of your or your team's goals of the pre-observation conference were met? How were they met?

2. Were any of your or your team's goals of the pre-observation conference not met? If not, how could they have been realized?

3. What did you perceive the goals of the teacher to be?

4. Did you specify the date, time, and place of the observations?_____ If so, when are the observations supposed to take place? If not, would you remedy this situation? Explain.

Assignment IV

You are assigned, as a principal, to observe three 10-minute segments from three different teaching lessons by your assigned teacher. You will have to have some type of documentation for your observations. An observation instrument is recommended. A few types of observation instruments were included in your packet, however you may use any observation instrument of your choice. Your team members can observe the teaching lessons with you, however you can not discuss the observation until the videotape is finished. All decisions made during the active simulation will have to be made by you, you can not discuss a course of action with your team until the active simulation is finished.

Assignment V

Team Members Names:

_____

_____

_____

_____

Type or name of observation instrument(s) used:

After having completed the video taped teacher lessons, you are now required to provide evaluation documentation of your observations. Complete the following questions using the data gathered for the simulation, then include copies of the completed observation instruments with this questionnaire. You must choose an overall rating of the teacher as Excellent, Good, or Poor. You must document your decision so that it is legally defendable. Restraints of the simulation will not allow further observations of the teacher. The documentation and rating must be submitted to the instructor before continuing with the simulation. You may consult with your team for this assignment.

The teacher is given the following overall recommendation (circle one):
1. Teacher is given an excellent recommendation.
2. Teacher is given a good recommendation.
3. Teacher is given a poor recommendation.

1. What are the teacher's areas of strengths. Please document all areas with specifics and data.

2. What are the teacher's areas of weakness? Please document all areas with specifics and data.

3. Which of the goals and objectives specified in the pre-observation conference by the administrator did the teacher satisfy?

4. Which of the goals and objectives specified by the teacher in the pre-observation conference were satisfied?

5. What will be your subsequent recommendations to the teacher?

Assignment VI

Team Members: _____

_____

_____

_____

You are now ready for the final video section of the simulation. You must compose a 5 to 10 minute speech to present to the teacher for the post-observation conference. This speech should include your analysis of the teacher's performance and future recommendations. Due to the limitations of the simulation, the teacher will only give a reaction to your evaluation and then will leave the office. There will be no direct response to the recommendation you give, however, indirect follow-up responses may occur. The proceedings of the post-observation conference will be as follows: the teacher enters your office and greetings are exchanged, you will give your analysis and recommendations, the teacher will give their response and leave the office. A maximum time limit of 10 minutes for your speech will be enforced by the simulation.

Assignment VII

Team Members Names: _____

_____

_____

_____

1. Which of your or your team's goals of the post observation conference were met? How were they met?

2. Were any of your goals of the post-conference not met? If not, how could they have been realized?

3. What administrative actions would you take as a follow-up to this conference?

Assignment VIII

Team Members Names: _____

_____

_____

_____

Dates of Simulation:

What changes would you make in your decisions or approaches to the simulation if you were to do the simulation again?

What changes in the team's decisions or approaches would the team make if the team were to do the simulation again?

What do you and your team think could be different in a real-life teacher evaluation from this simulation?

Police Officer Affirmative Assignment

Your decision to meet with the police officer has been programmed into your simulation. You will forfeit the next part of the simulation. The matter with the police officer concerned a group of girls who had been chased by a van after-school yesterday. The girls had reported it to the police. One girl had been seriously injured as a result of falling down a hill while running away. You and the police officer spent the day meeting with the involved students and gathering information.

I. Initially, why did you make the decision to meet with the police officer?

II. What will be some of the negative consequences for your decision? Would there be any legal consequences to you for missing this part of the simulation in the "real" world?

III. After knowing the result of your decision, do you feel you made the right decision?

IV. Does your team support you in this decision? Do any of them have suggestions for alternative methods of handling this situation?

V. You can not reschedule the missed part of the simulation with the teacher as your time as an administrator is limited, however, what are some other possible follow-up actions you could take with this teacher?

VI. How will this affect the quality of your evaluation of this teacher?

Meeting with Police Officer Declined

An alternative time to meet with the police officer was set up for later that same afternoon. However, several parents called as they were upset that there children were not protected on the way home from school. You had to put off these parents until you obtained met with the police officer. One of the parents that called was upset about your lack of knowledge and, as he felt, lack of concern and called the School Board office. Your supervisor then called and asked you to put in writing what exactly had happened and why you had taken the actions you had. Please write this letter to your supervisor, Mrs. White, explaining the situation with the information you have and justifying your decision. Please include this letter with the next assignment you have to hand in to your instructor.

Variable Assignment-Supervisor Phone Call

Congratulations, your financial consideration was placed on the agenda and was approved. You now have funding for 3 additional computers. However, you have missed an important part of your teacher evaluation process. This will have consequences for you throughout the video. This assignment is an alternate or additional assignment for you for having made this decision.

I. Initially, why did you make the decision to take the phone call?

II. What will be some of the negative consequences for your decision? Would there be any legal consequences for you for missing this part of the simulation in the "real" world?

III. After knowing the result of your decision, do you feel you made the right decision?

IV. Does your team support you in this decision? Do any of them have suggestions for alternative methods of handling this situation?

V. You can not reschedule the missed part of the simulation with the teacher as your time as an administrator is limited, however, what are some other possible follow-up actions you could take with this teacher?

VI. How will this affect the quality of your evaluation of this teacher?

Variable Assignment
Phone Call Declined

As a result of your declining the telephone call from your supervisor, your request to have a financial consideration for your school was not placed on the agenda. Therefore, your school will not get the funding for three additional computers that are needed. You can still get the item on the agenda for the meeting next month. However, you must write a memo to the computer instructor explaining the delay in having an answer for his request for additional computers. Please write this memo with your team and submit it with your other assignments to your instructor.

Teacher Meet Affirmative
Assignment

During your meeting, the teacher discussed an idea she has on raising money. The teacher had a student initiated idea to make a "Love House" for Valentines Day. This "Love House" would be open before and after school on Valentines Day and would feature Valentine themed games and a picture booth. Please reflect on your decision with your team and answer the following questions.

I. Initially, why did you make the decision to meet with the teacher?

II. What will be some of the negative consequences for your decision? Would there be any legal consequences to you for missing this part of the simulation in the "real" world?

III. After knowing the result of your decision, do you feel you made the right decision?

IV. Does your team support you in this decision? Do any of them have suggestions for alternative methods of handling this situation?

V. You can not reschedule the missed part of the simulation with the teacher as your time as an administrator is limited, however, what are some other possible follow-up actions you could take with the teacher you are evaluating?

VI. How will this affect the quality of your evaluation of the teacher you are evaluating?

APPENDIX II
FORMATIVE EVALUATION INSTRUMENT

FORMATIVE EVALUATION INSTRUMENT

Name_____

Position_____

Years of Experience as an Educational Administrator_____

Number of Observations of the Simulations to this point_____

DIRECTIONS: *Rate the simulation in each of the following areas by circling the appropriate number. Numbers are coded as follows:*

5=Strongly agree
4=Agree
3=Somewhat agree
2=Disagree
1=Strongly disagree
U=Unable to Determine

1. The simulation requires the participant to seek out relevant data in a problem situation.	1 2 3 4 5 U
2. The simulation requires the participant to determine the important elements of a problem situation.	1 2 3 4 5 U
3. The simulation requires the participant to reach logical conclusions based on available information.	1 2 3 4 5 U
4. The simulation requires the participant to organize and plan their own work.	1 2 3 4 5 U
5. The simulation requires the participant to organize and plan the work of others.	1 2 3 4 5 U
6. The simulation requires the participant to determine when a decision is required.	1 2 3 4 5 U
7. The simulation requires the participant to make decisions with limited information.	1 2 3 4 5 U

8. The simulation requires the participant to discern the professional needs of others. 1 2 3 4 5 U

9. The simulation requires the participant to resolve conflicts with involved others. 1 2 3 4 5 U

10. The simulation requires the participant to have tact in dealing with people from different backgrounds. 1 2 3 4 5 U

11. The simulation requires the participant to take action under pressure. 1 2 3 4 5 U

12. The simulation requires the participant to take action under opposition. 1 2 3 4 5 U

13. The simulation requires the participant to make clear oral presentation of facts or ideas. 1 2 3 4 5 U

14. The simulation requires the participant to make clear and organized written materials. 1 2 3 4 5 U

15. The simulation realistically portrays an educational administration situation. 1 2 3 4 5 U

16. The simulation motivates students to learn administrative theories. 1 2 3 4 5 U

17. This simulation is a valuable tool in preparing educational administrators. 1 2 3 4 5 U

18. This simulation provides an opportunity for participants to apply theory to practice. 1 2 3 4 5 U

19. This simulation offers a device to the training of educational administrators that has not been available before. 1 2 3 4 5 U

Strengths of the simulations (if any):_____

_____

_____

_____

Weaknesses of the simulation (if any):_____

_____

_____

_____

_____

Comments:_____

_____

_____

_____

APPENDIX III
COMPUTER PROGRAMMING AND GRAPHIC SCREENS

COMPUTER PROGRAM

- Start of Sim
  - Object 1
  - A Interactive Simulations in Educational Administration
  - A Welcome to
  - A I S E A
  - SKIP
- Options
  - Red box
  - Yellow box
  - Red box back
  - A Interactive Simulations in Educational Administration
  - A Interactive Simulations in Educational Administration
  - Yellow box line
  - Teacher A
  - Blue box
  - Blue box back
  - A Please select the Teacher that you wish to Observe and Evaluate
  - A Please select the Teacher that you wish to Observe and Evaluate
  - Teacher B
  - Teacher C
- Teach A Main Menu
  - TitleBox
  - A Teacher 'A' Main Menu
  - A Teacher 'A' Conference
  - TextBox
  - A By Addressing Problem you have forfeited the Pre-Observation Conference with Teacher A, Please select your next option
  - A Teacher 'A' Pre-Observation Conference

COMPUTER PROGRAM

Select one of the following
A Select Teacher 'A' Option
A Select one of the following
options for Teacher 'A'
A Immediately prior to Teacher A entering your office, you recieve the following intercom message.
H NProb1
Preobsevation Conference
A Problem 1
Object #16
Address Problem
Goto Observation 1
Start Conference
Observation 1
A An intercom message from your secretary
Do Pre-Observation
Goto Observation 2
Problem Prior to Conference
Problem Prior to Observation 1
Goto Observation 3
Repeat Problem
A Press the space bar to began message.
ReStart Teacher A
ReStart Teacher A
Goto Evaluation
ReStart Teacher A
Skip
T EXIT
Teach A PreOb
T TitleBox
A Observation 1, Teacher 'A'
A Pre-Observation Conference
T TextBox
A By Addressing Problem you have forfeited Observation 1 with Teacher 'A',
Please select your next option
A End of Pre-Observation
Teacher 'A'
Select one of the following

COMPUTER PROGRAM

A Select one of the following
options for Teacher 'A'

A Immediately prior to observing Teacher 'A' , you receive the
following intercom message.

A Press
SPACE BAR
to begin
Observation 1

A Problem 3

☐ Box to cover video

Click To Continue

Address Problem

Observation 2

Do Observation 3

A An intercom message from your secretary

Problem Prior to Observation 2

Do Observation 2

Problem Prior to Observation 3

Repeat Observation 1

Repeat Problem

A Press the space bar to began message.

ReStart Teacher A

ReStart Teacher A

ReStart Teacher A

Skip

T EXIT

Observation 2-A

☐ T TitleBox

A Observation 3, Teacher 'A'

A Observation 2, Teacher 'A'

☐ T TextBox

☐ BlackBox

A End of Observation 2
Teacher 'A'
Select one of the following

H TA-SOB2

A Select one of the following
options for Teacher 'A'

A By Addressing Problem you have forfeited Observation 3 with
Teacher 'A',

COMPUTER PROGRAM

A Immediately prior to observing Teacher 'A' , you receive the following intercom message.

A Press
SPACE BAR
to begin
Observation 2

A Problem 4

Box to cover video

Click To Continue

Address Problem

Observation 3

A An intercom message from your secretary

Problem Prior to Observation 3

Do Observation 3

Do Evaluation Conference

Repeat Observation 2

Repeat Problem

A Press the space bar to began message.

ReStart Teacher A

ReStart Teacher A

ReStart Teacher A

Skip

T EXIT

▽ Observation 3-A

T TitleBox

A Observation 3, Teacher 'A'

T TextBox

BlackBox

A End of Observation 3
Teacher A
Select one of the following

H TA-S0B3

A Press
SPACE BAR
to begin
Observation 3

Click To Continue

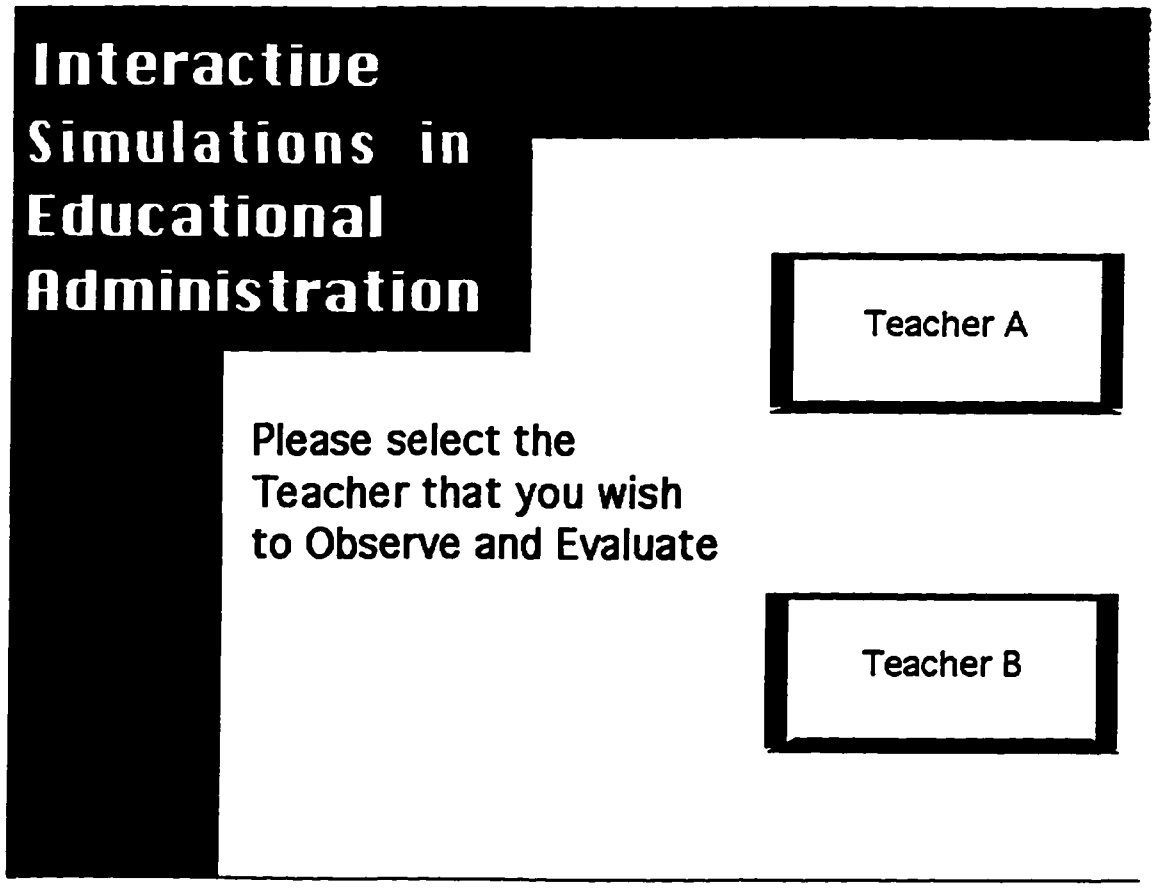
Evaluation Conference

Repeat Observation 3

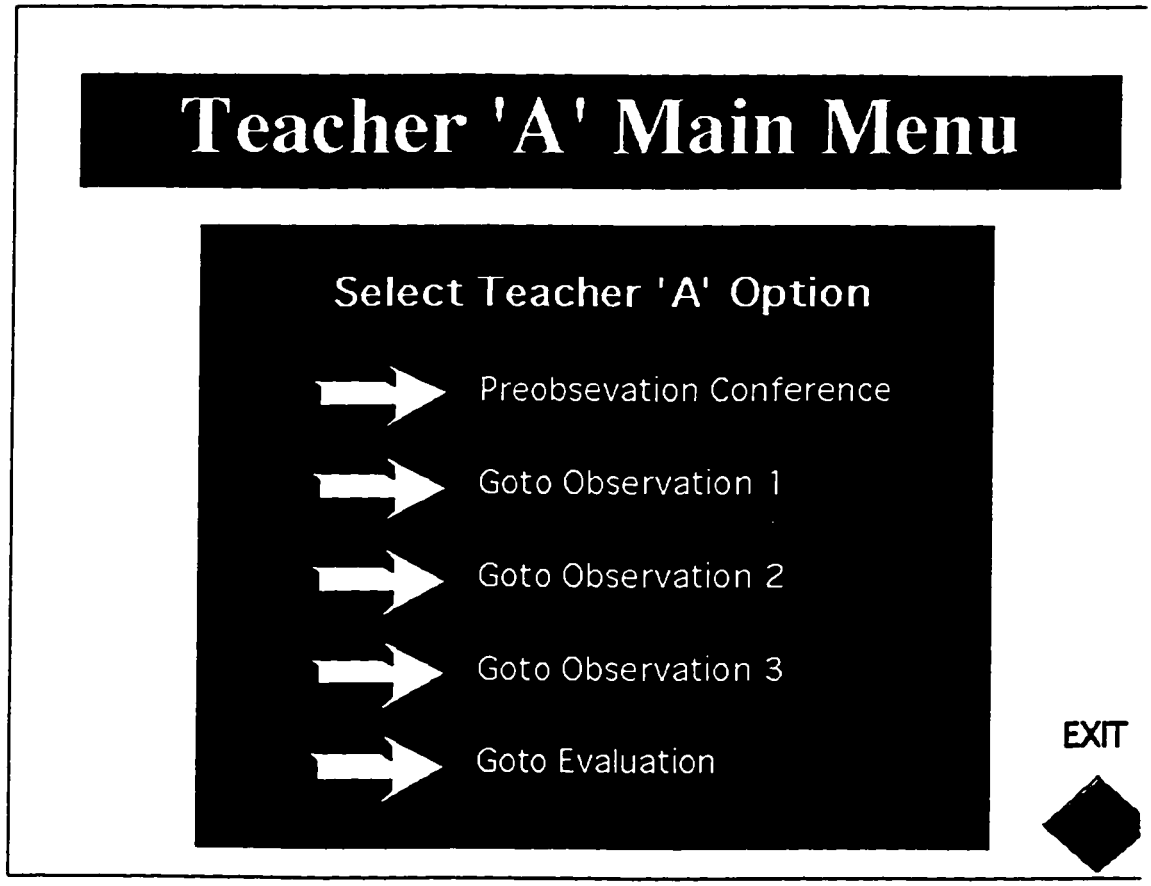
COMPUTER PROGRAM

- Skip
- EXIT
- Eval T-A
  - TitleBox
  - Evaluation Conference
  - TextBox
  - TA-SPause
  - TA-SGood
  - TA-SAvg
  - TA-SBad
  - End of Conference With Teacher 'A'
    Select one of the following
  - End of Conference With Teacher 'A'
    Select one of the following
  - End of Conference With Teacher 'A'
    Select one of the following
  - Good
  - Press
    SPACE BAR
    to begin
  - Average
  - Redo Evaluation
  - Redo Evaluation
  - Redo Evaluation
  - Poor
  - Goto Main Menu
  - Goto Main Menu
  - Goto Main Menu
  - Skip
  - Skip
  - Skip
  - EXIT

TEACHER SELECTION GRAPHIC SCREEN

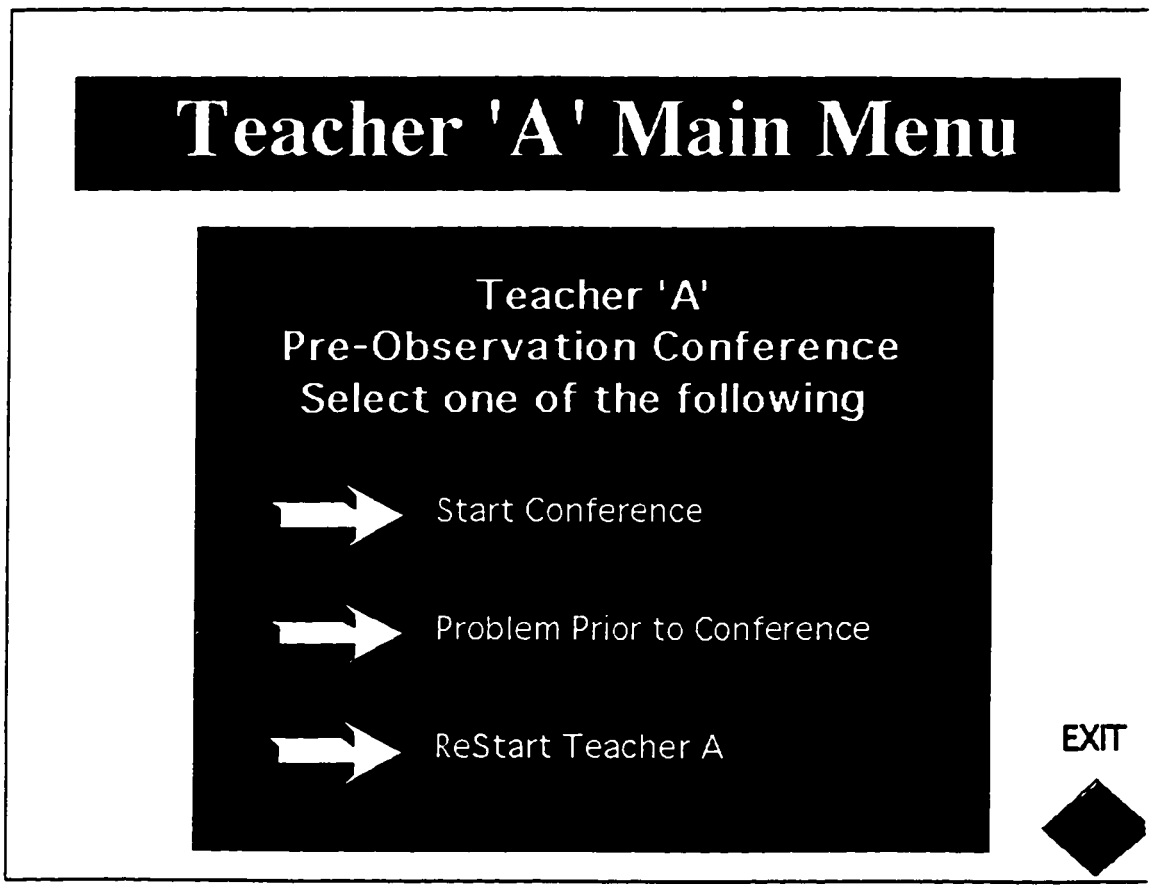


EXAMPLE OF INITIAL OPTION SCREEN

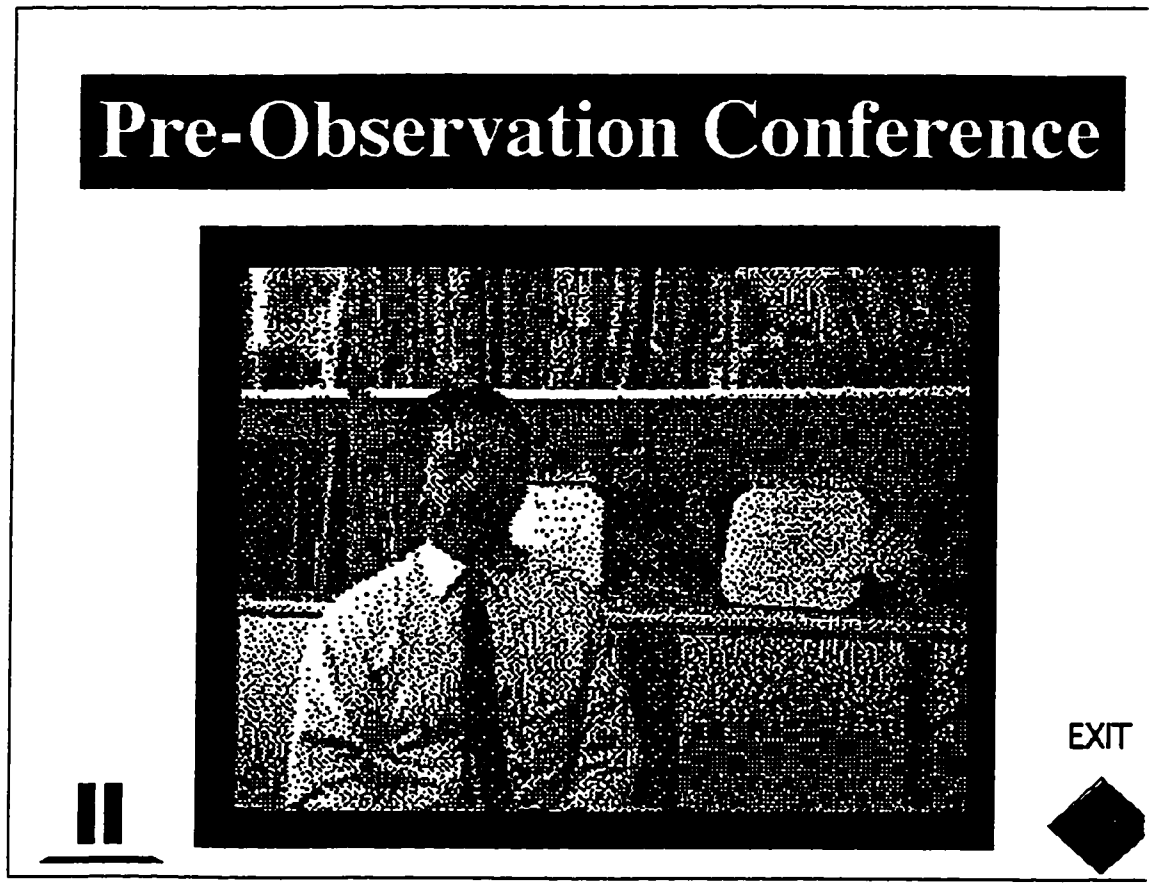


EXAMPLE OF GRAPHIC SCREEN

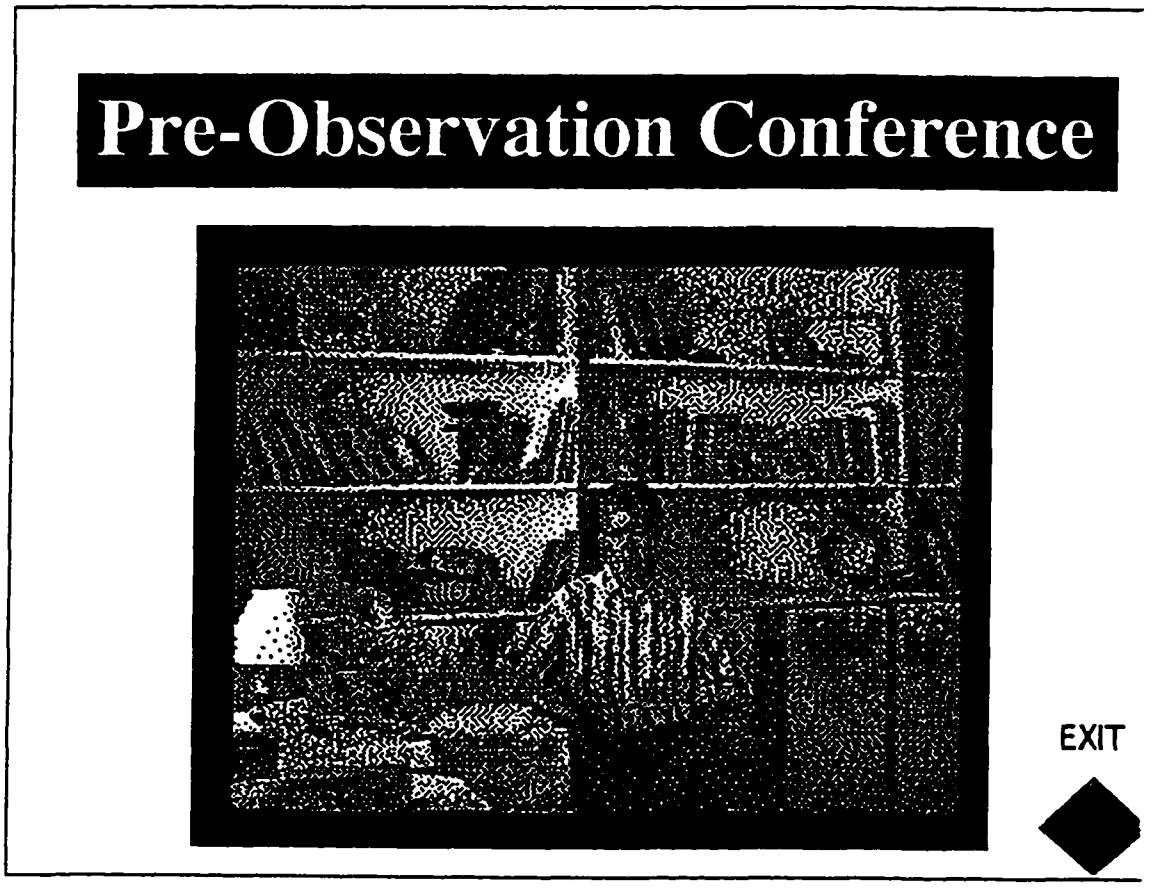
IMMEDIATELY PRIOR TO PREOBSERVATION VIDEO



DIGITIZED STILL OF TEACHER "A" PREOBSERVATION VIDEO

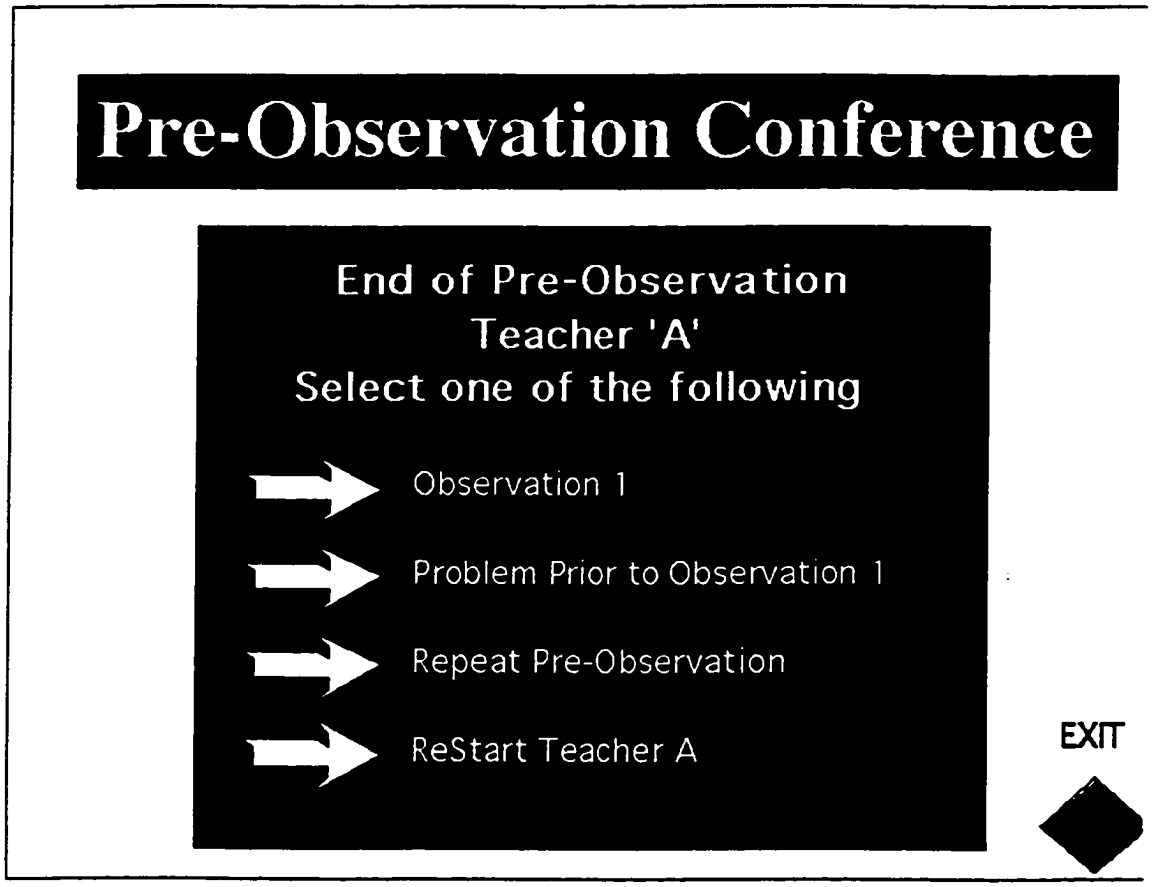


DIGITIZED STILL OF TEACHER "B" PRE-OBSERVATION VIDEO



EXAMPLE OF GRAPHIC SCREEN

IMMEDIATELY FOLLOWING PRE-OBSERVATION



DIGITIZED STILL TEACHER "A" OBSERVATION "1" VIDEO

Observation 1, Teacher 'A'

EXIT

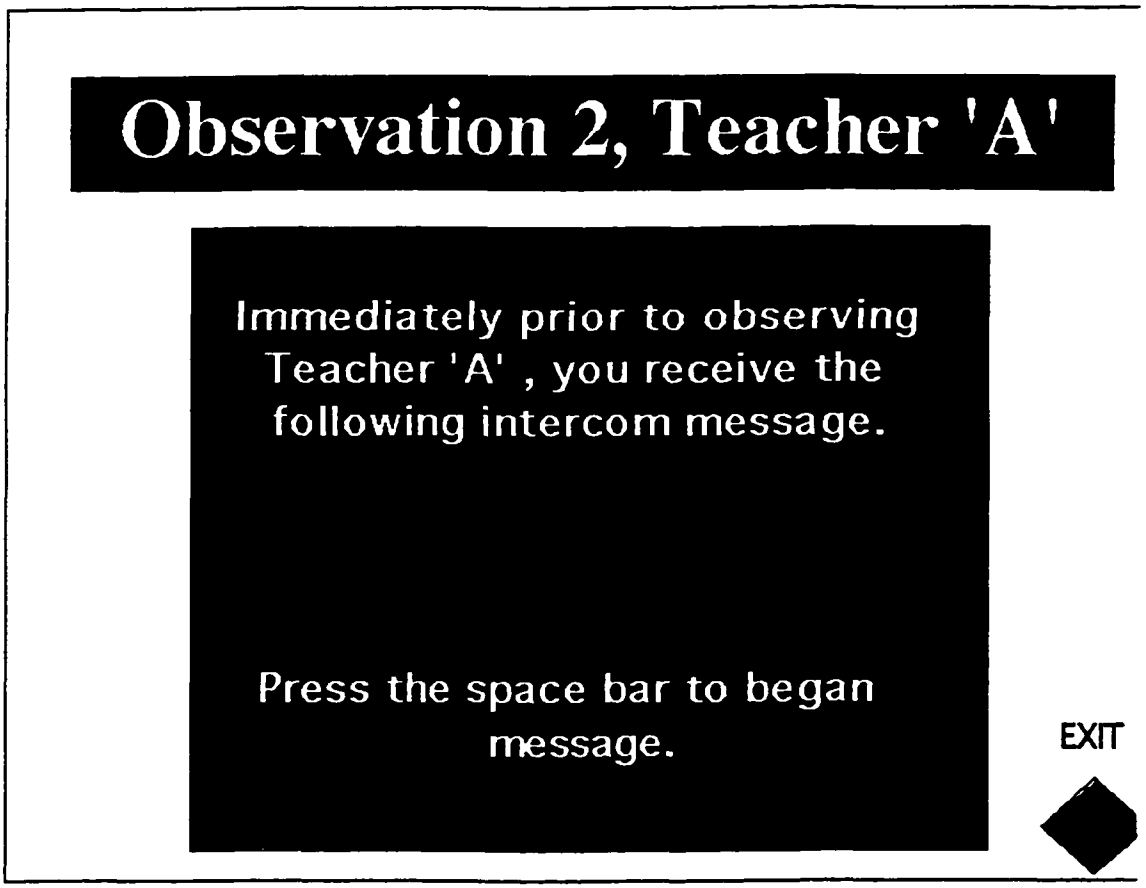
DIGITIZED STILL TEACHER"B" OBSERVATION "1" VIDEO

Observation 1, Teacher 'B'

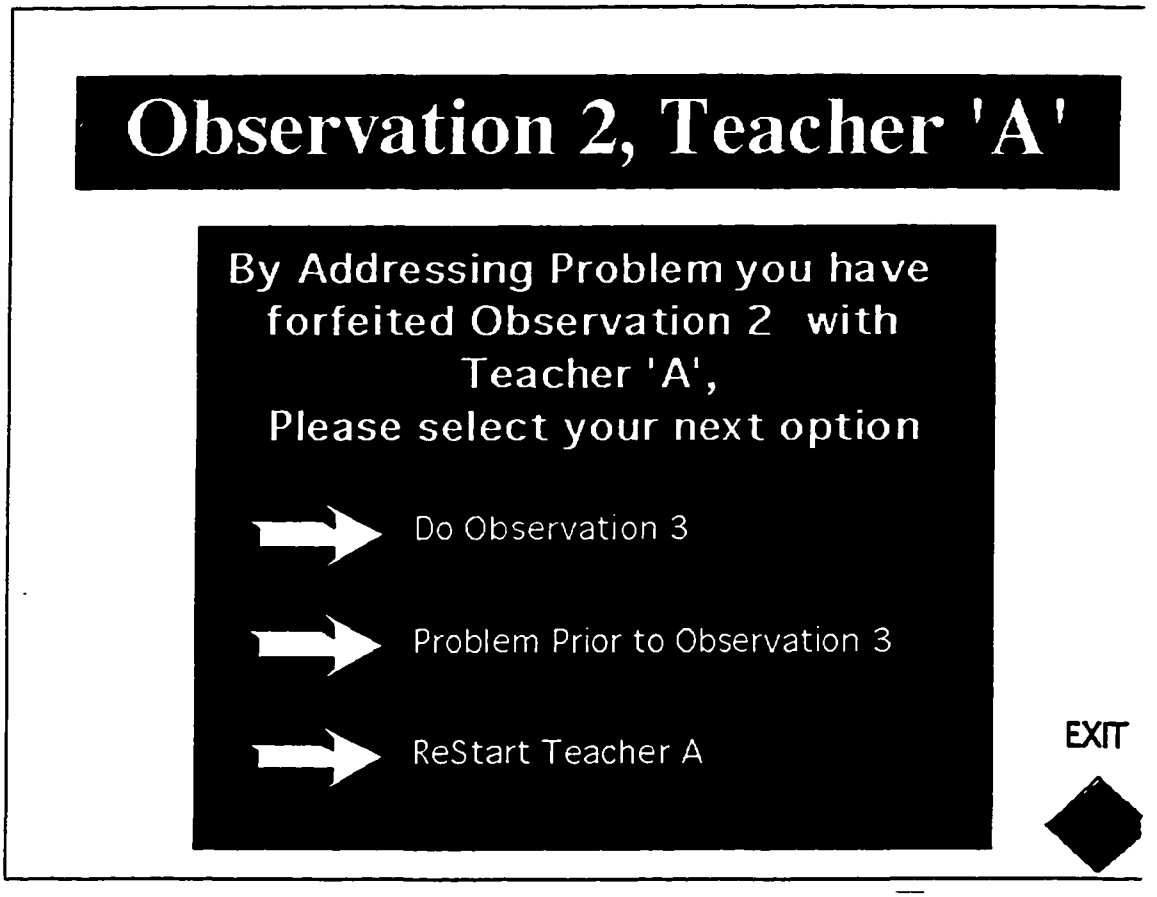
EXIT

EXAMPLE OF GRAPHIC SCREEN

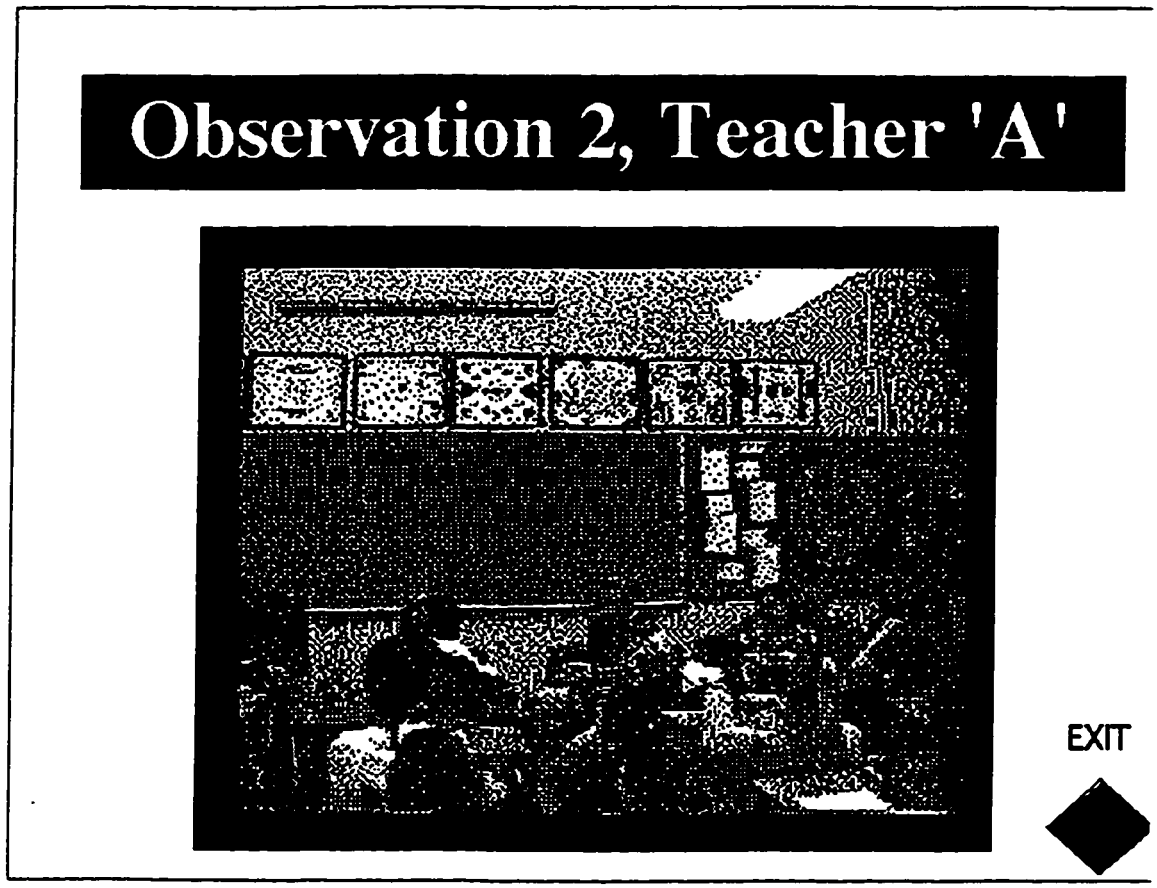
IMMEDIATELY PRIOR TO AUDIO MESSAGE FOR AN ADMINISTRATIVE PROBLEM



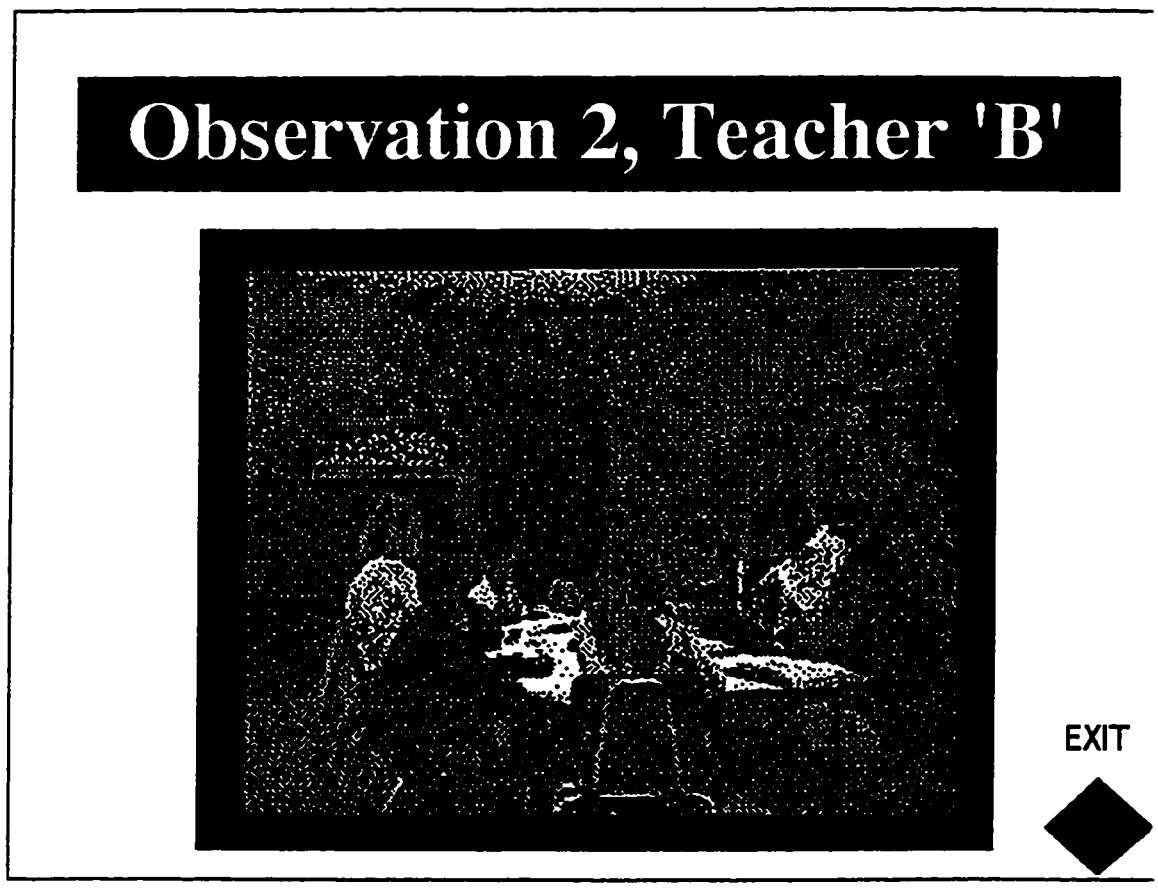
EXAMPLE GRAPHIC SCREEN SHOWN IF ADMINISTRATIVE PROBLEM IS ADDRESSED AND ONE VIDEO SEGMENT IS FORFEITED



DIGITIZED STILL OF TEACHER "A" OBSERVATION "2" VIDEO

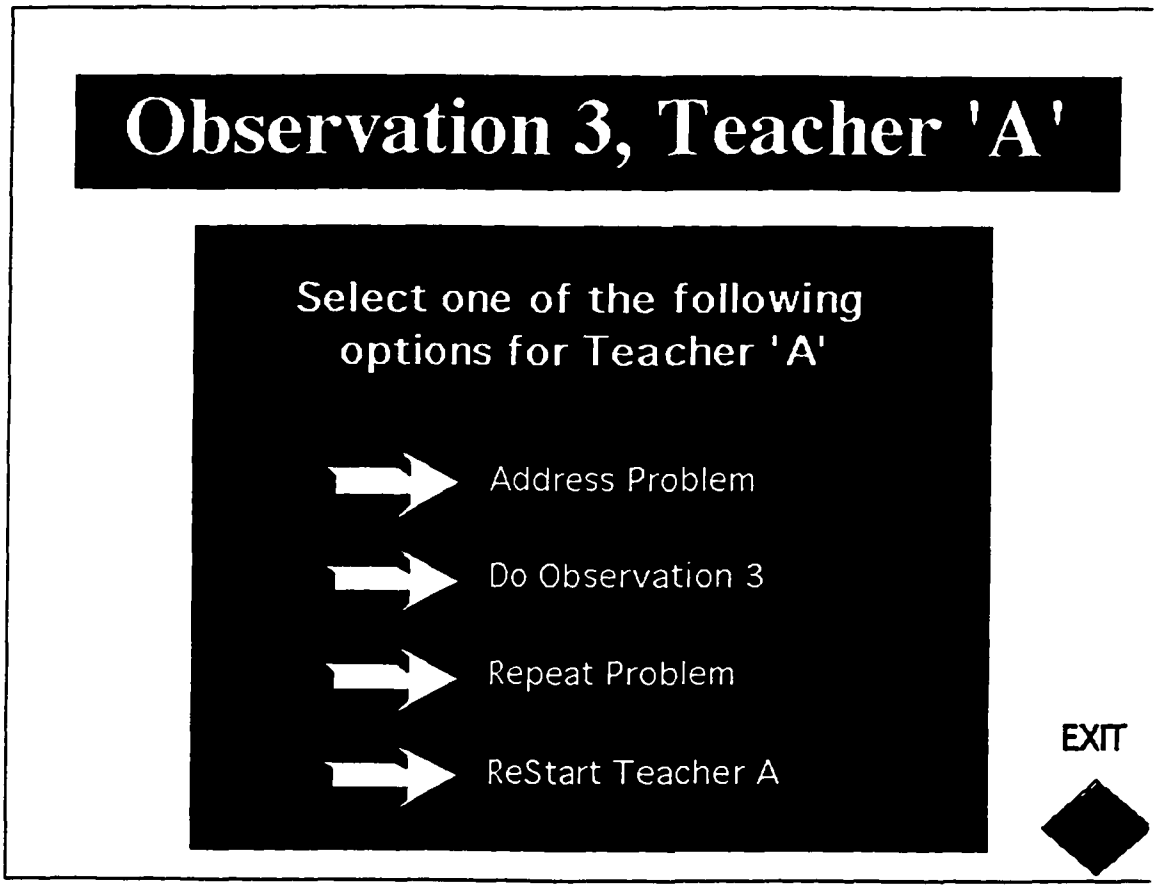


DIGITIZED STILL OF TEACHER "B" OBSERVATION "2" VIDEO

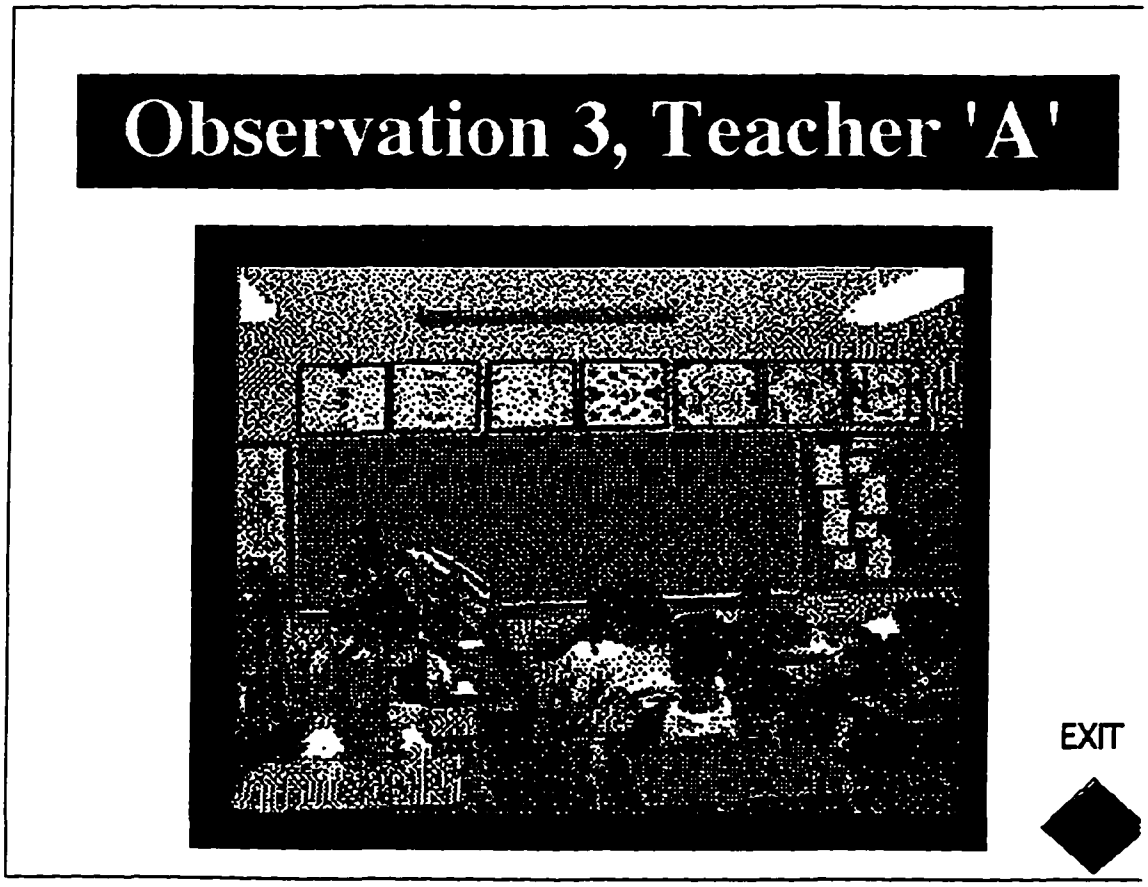


EXAMPLE OF GRAPHIC SCREEN

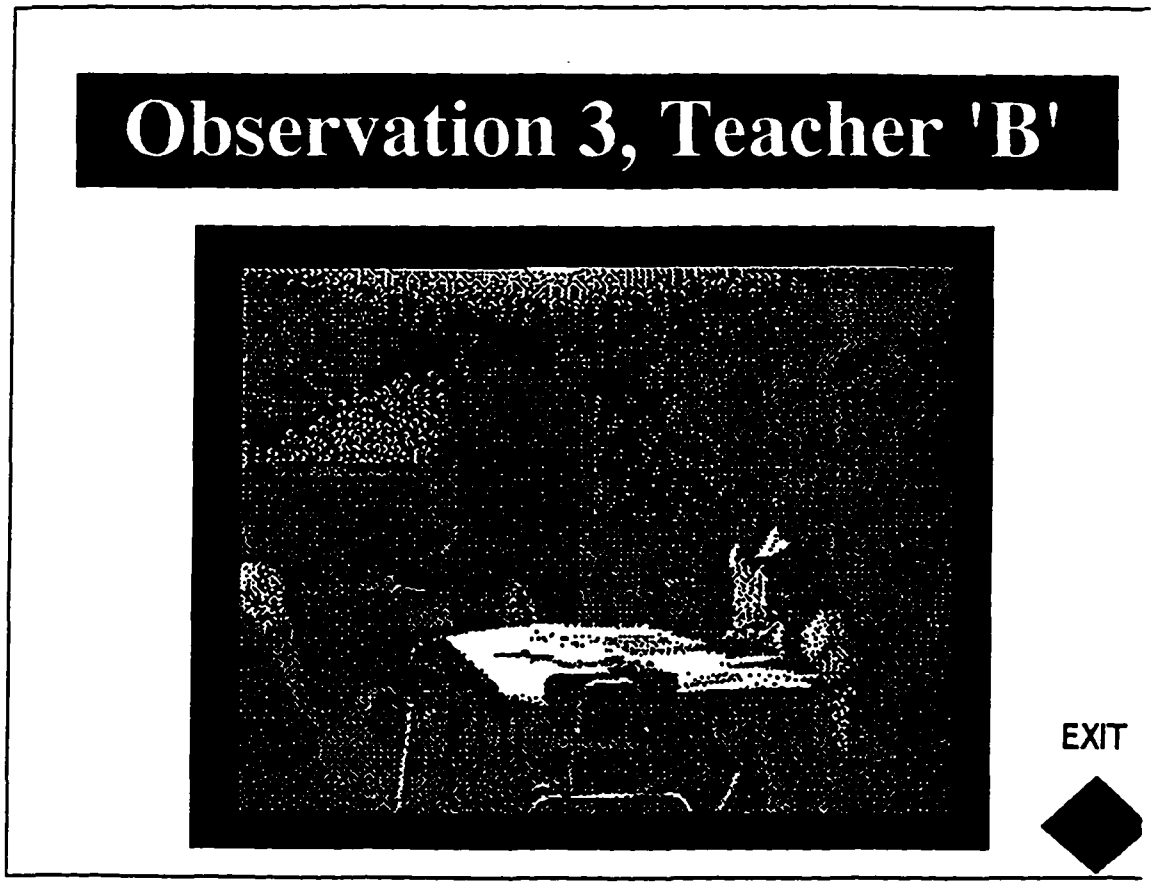
IMMEDIATELY PRIOR TO OBSERVATION "3"



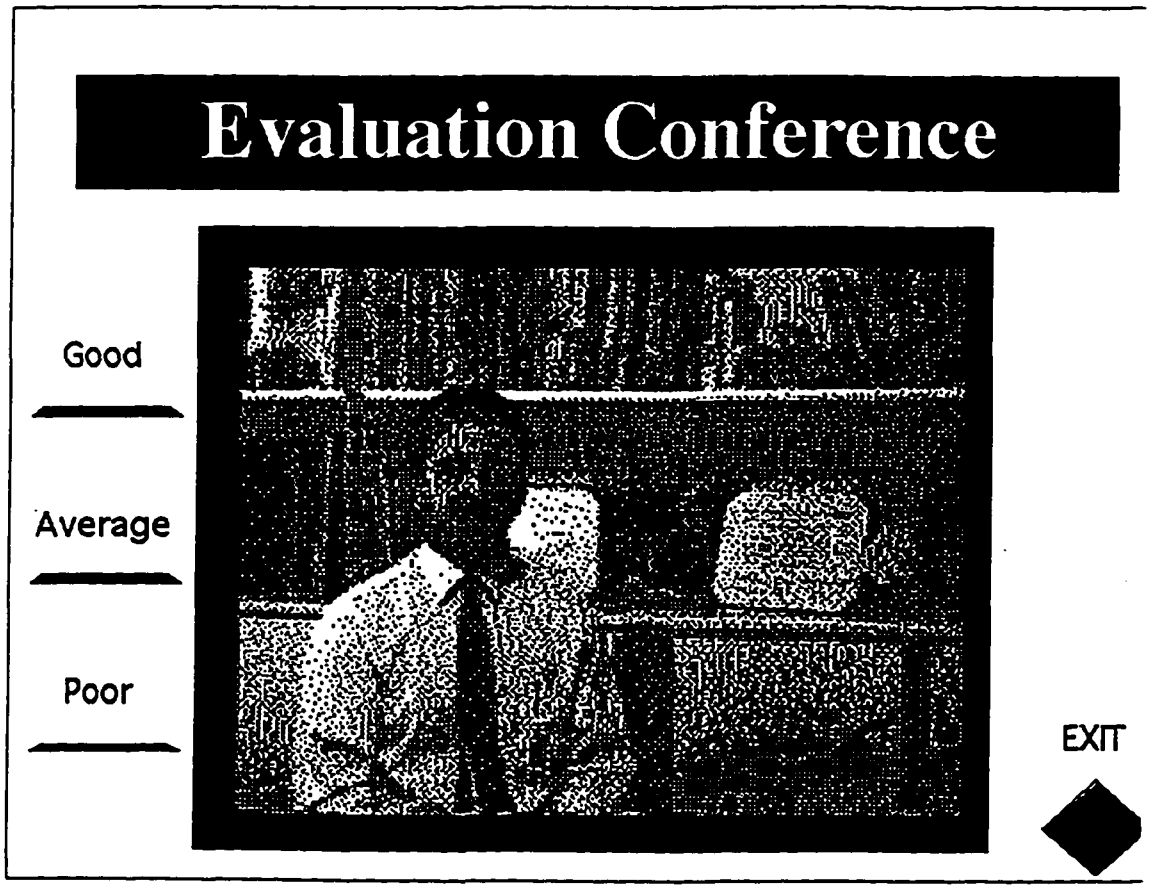
DIGITIZED STILL OF TEACHER "A" OBSERVATION "3" VIDEO



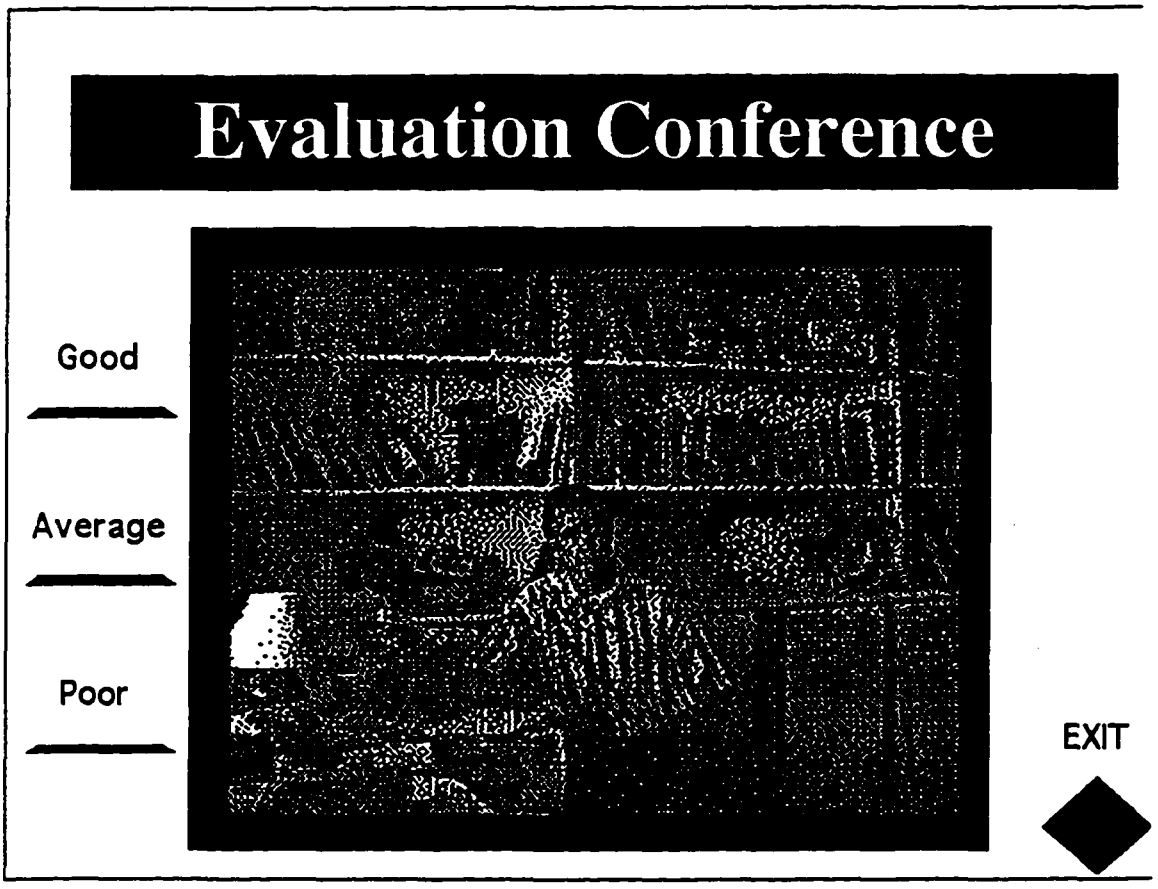
DIGITIZED STILL OF TEACHER "B" OBSERVATION "3" VIDEO



DIGITIZED STILL OF TEACHER "A" EVALUATION CONFERENCE VIDEO
AND
COMPUTER INPUT OPTIONS FOR EVALUATION RATING



DIGITIZED VIDEO OF TEACHER "B" EVALUATION CONFERENCE VIDEO
AND
COMPUTER INPUT OPTIONS FOR EVALUATION RATING



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